

TECHNICAL INFORMATION ON BOLIVIAN WOOD SPECIES

AGUAI

SPECIES IDENTIFICATION

SCIENTIFIC NAME	<i>Pradosia</i> sp.
FAMILY	SAPOTACEAE
COMMERCIAL NAME	Chupón
OTHER NAMES	Abihy, Burahem, Parachuhuba (Brazil), Chupón torito (Venezuela)
DISTRIBUTION AREA	Forests in Departament of La Paz
REGION AND FREQUENCY	

TREE DESCRIPTION

TREETOP

TRUNK Reaches commercial heights up to 30 m and diameters up to 1 m.

BARK

GENERAL CHARACTERISTICS

SAPWOOD COLOR	Light brown yellowish	HEARTHWOOD COLOR	Brown yellowish
ODOR	Indistinct	TASTE	Bitter
LUSTER	Faint	GRAIN	Straight to interlocked
STRIPED		TEXTURE	

ANATOMIC DESCRIPTION

ANNUAL GROWTH RINGS

Visibility Average Number

PORES

Visibility Porosity

Type Shape

PARENCHYMA

Visibility Quantity

Type

RADIUS

Visibility Contrast

Stratification

Source: MDSP, FAO PAF-BOL, IBAMA, LPF “[Información Técnica para el Procesamiento Industrial de 134 especies maderables de Bolivia](#)”. Serie Técnica XI. 2002. (Translated by Fernando Aguilar CADEFOR)

PHYSICAL PROPERTIES

MOISTURE CONTENT (GREEN LUMBER)	%
BASIC DENSITY	0,68 g/cm ³
DENSITY (12% MOISTURE CONTENT)	g/cm ³
RADIAL SHRINKAGE	4,4 %
TANGENTIAL SHRINKAGE	10,5 %
VOLUMETRIC SHRINKAGE	14,8 %
RATE T/R	2,38

MECHANICAL RESISTANCE

MODULUS OF ELASTICITY	2320 1000 Kg/cm ²
MODULUS OF RUPTURE	17770 Kg/cm ²
COMPRESSION PARALELL TO GRAIN	7660 Kg/cm ²
QUARTEREDSAWED	Kg/cm ²
LATERAL HARDNESS	1880 Kg
IMPACT BENDING	Kg-m

TECHNNICAL CONDITIONS FOR PROCESSING

MACHINING	Easy sawing, planing and moulding. Good finishing
PRESERVATION	Impermeable
NATURAL DURABILITY	Moderate, specially when not in contact with soul
DRYING	Dries rather quickly. There is a risk of twisting and cracking. A soft kiln schedule is recommended.

END USES

Construction	Flooring
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Source: MDSP, FAO PAF-BOL, IBAMA, LPF “[Información Técnica para el Procesamiento Industrial de 134 especies maderables de Bolivia](#)”. Serie Técnica XI. 2002. (Translated by Fernando Aguilar . Marketing - CADEFOR)

AGUAI CHICO

SPECIES IDENTIFICATION

SCIENTIFIC NAME	<i>Chrysophyllum ponocarpum</i> (Mart & Eich) - Engler
FAMILY	SAPOTACEAE
COMMERCIAL NAME	Caimito, Star-apple
OTHER NAMES	Aguay, Carne de Vaca (Argentina), Massarandubarana (Brazil), Balata blanca (Peru), Caimito white (Venezuela)
DISTRIBUTION AREA	Forest of yungas in transition to Chaco. Departments of Chuquisaca, Tarija and Santa Cruz
REGION AND FREQUENCY	Especie frequent in Amazonian foothills, Choré and Guarayos

TREE DESCRIPTION

TREETOP

TRUNK Straight and uniform. Commercial heights up to 20 - 30 m

BARK

GENERAL CHARACTERISTICS

SAPWOOD COLOR	Light brown to pink	HEARTHWOOD COLOR	Light brown to pink
ODOR	Indistinct	TASTE	Indistinct
LUSTER	Faint	GRAIN	Straight
STRIPED		TEXTURE	

ANATOMIC DESCRIPTION

ANNUAL GROWTH RINGS

Visibility Average Number

PORES

Visibility Porosity

Type Shape

PARENCHYMA

Visibility Quantity

Type

RADIUS

Visibility Contrast

Stratification

Source: MDSP, FAO PAF-BOL, IBAMA, LPF “[Información Técnica para el Procesamiento Industrial de 134 especies maderables de Bolivia](#)”. Serie Técnica XI. 2002. (Translated by Fernando Aguilar . Marketing - CADEFOR)

PHYSICAL PROPERTIES

MOISTURE CONTENT (GREEN LUMBER)	%
BASIC DENSITY	0.6-0.9 g/cm ³
DENSITY (12% MOISTURE CONTENT)	g/cm ³
RADIAL SHRINKAGE	6,4 %
TANGENTIAL SHRINKAGE	8,6 %
VOLUMETRIC SHRINKAGE	15,2 %
RATE T/R	1,34

MECHANICAL RESISTANCE

MODULUS OF ELASTICITY	235 1000 Kg/cm ²
MODULUS OF RUPTURE	1654 Kg/cm ²
COMPRESSION PARALELL TO GRAIN	898 Kg/cm ²
QUARTEREDSAWED	Kg/cm ²
LATERAL HARDNESS	865 Kg
IMPACT BENDING	Kg-m

TECHNNICAL CONDITIONS FOR PROCESSING

MACHINING	Difficult machining due to high content of silica. Good finishing
PRESERVATION	Sapwood rather permeable . Heartwood impermeable.
NATURAL DURABILITY	Low durability. The wood is susceptible to attack of fungi and termites
DRYING	Air drying is slow and steady.

END USES

Construction

Source: MDSP, FAO PAF-BOL, IBAMA, LPF “[Información Técnica para el Procesamiento Industrial de 134 especies maderables de Bolivia](#)”. Serie Técnica XI. 2002. (Translated by Fernando Aguilar . Marketing - CADEFOR)

AJO AJO

SPECIES IDENTIFICATION

SCIENTIFIC NAME	<i>Gallesia integrifolia</i> (Sprengel) Harms
FAMILY	PHYTOLACCACEAE
COMMERCIAL NAME	AJO
OTHER NAMES	Guararema, Pau d'alho (Brazil), Palo cebolla (Peru)
DISTRIBUTION AREA	Humid and montane forest in Departments of Beni, Santa Cruz, Chuquisaca and La Paz
REGION AND FREQUENCY	Frequent in Chiquitanía, Guarayos, Choré and Amazonian foothills

TREE DESCRIPTION

TREETOP	Small, with simple leaves
TRUNK	Irregular shape, commercial heights up to 20 m
BARK	Light brown color. Thin bark

GENERAL CHARACTERISTICS

SAPWOOD COLOR	White yellowish	HEARTHWOOD COLOR	Yellow
ODOR	Similar to garlic	TASTE	Spicy
LUSTER	Medium	GRAIN	Interlocked
STRIPED	Tenuous	TEXTURE	Fine

ANATOMIC DESCRIPTION

ANNUAL GROWTH RINGS

Visibility	Visible at sight	Average Number	36 rings in a 10 cm radius
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PORES

Visibility	With magnifying glass 10 x	Porosity	Diffuse
Type	Solitaries	Shape	Round to oval

PARENCHYMA

Visibility	Visible at sight	Quantity	Abundant
Type	Apotraqueal		

RADIUS

Visibility	Visible at sight	Contrast	Absent
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Stratification	Absent
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Source: MDSP, FAO PAF-BOL, IBAMA, LPF “[Información Técnica para el Procesamiento Industrial de 134 especies maderables de Bolivia](#)”. Serie Técnica XI. 2002. (Translated by Fernando Aguilar . Marketing - CADEFOR)

PHYSICAL PROPERTIES

MOISTURE CONTENT (GREEN LUMBER)	99 %
BASIC DENSITY	0,52 g/cm ³
DENSITY (12% MOISTURE CONTENT)	0,64 g/cm ³
RADIAL SHRINKAGE	5,5 %
TANGENTIAL SHRINKAGE	8,9 %
VOLUMETRIC SHRINKAGE	13,8 %
RATE T/R	1,6

MECHANICAL RESISTANCE

MODULUS OF ELASTICITY	98 1000 Kg/cm ²
MODULUS OF RUPTURE	695 Kg/cm ²
COMPRESSION PARALELL TO GRAIN	380 Kg/cm ²
QUARTEREDSAWED	75 Kg/cm ²
LATERAL HARDNESS	403 Kg
IMPACT BENDING	1,33 Kg-m

TECHNNICAL CONDITIONS FOR PROCESSING

MACHINING	Easy sawing, planing and moulding. Good finishing
PRESERVATION	Permeable
NATURAL DURABILITY	Low durability. The wood is susceptible to blue stain
DRYING	Air drying with tendency to check and twist.

END USES

Construction

Source: MDSP, FAO PAF-BOL, IBAMA, LPF “[Información Técnica para el Procesamiento Industrial de 134 especies maderables de Bolivia](#)”. Serie Técnica XI. 2002. (Translated by Fernando Aguilar . Marketing - CADEFOR)

AJUNAO

SPECIES IDENTIFICATION

SCIENTIFIC NAME	<i>Pterogyne nitens</i> Tul
FAMILY	LEG. CAESALPINIODEAE
COMMERCIAL NAME	Amendoim
OTHER NAMES	Viraro (Argentina), Pau fava (Brazil)
DISTRIBUTION AREA	Humid, dry, deciduous and secondary forest in Departments of Tarija, Chuquisaca, Santa Cruz.
REGION AND FREQUENCY	Very frequent in Chiquitanía and Guarayos

TREE DESCRIPTION

TREETOP	Irregular, open with composite leaves
TRUNK	Straight and cylindrical, heights up to 25 m
BARK	Grayish color, smooth texture. Astringent taste

GENERAL CHARACTERISTICS

SAPWOOD COLOR	Brown yellowish	HEARTHWOOD COLOR	Brown redish
ODOR	Distinctive	TASTE	Indistinct and slightly bitter
LUSTER	Bright	GRAIN	Interlocked
STRIPED	Tenuous	TEXTURE	Medium

ANATOMIC DESCRIPTION

ANNUAL GROWTH RINGS

Visibility	Visible at sight	Average Number	
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PORES

Visibility	With magnifying glass 10 x	magnifying Porosity	Diffuse
Type	Solitaries and multiples	Shape	Closed

PARENCHYMA

Visibility	Visible at sight	Quantity	Scarce
Type	Paratraqueal and apotraqueal		

RADIUS

Visibility	With magnifying glass 10 x	magnifying Contrast	Present
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Stratification	Present
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PHYSICAL PROPERTIES

MOISTURE CONTENT (GREEN LUMBER)	%
BASIC DENSITY	0,68 g/cm ³
DENSITY (12% MOISTURE CONTENT)	0,81 g/cm ³
RADIAL SHRINKAGE	4,6 %
TANGENTIAL SHRINKAGE	6,5 %
VOLUMETRIC SHRINKAGE	11,2 %
RATE T/R	1,4

MECHANICAL RESISTANCE

MODULUS OF ELASTICITY	123 - 143 1000 Kg/cm ²
MODULUS OF RUPTURE	972 Kg/cm ²
COMPRESSION PARALELL TO GRAIN	510 Kg/cm ²
QUARTEREDSAWED	134 - 184 Kg/cm ²
LATERAL HARDNESS	836 Kg
IMPACT BENDING	345 Kg-m

TECHNNICAL CONDITIONS FOR PROCESSING

MACHINING	Easy sawing and planing. Good finishing
PRESERVATION	Permeable
NATURAL DURABILITY	Low durability. , specially in contact with soil.
DRYING	Drying is slow but steady.

END USES

Construction	Decorative Veneer
Flooring	Furniture

Source: MDSP, FAO PAF-BOL, IBAMA, LPF “Información Técnica para el Procesamiento Industrial de 134 especies maderables de Bolivia”. Serie Técnica XI. 2002. (Translated by Fernando Aguilar . Marketing - CADEFOR)

ALGARROBO

SPECIES IDENTIFICATION

SCIENTIFIC NAME	<i>Prosopis chimagnifying glassis</i> (Molina) Stuntz
FAMILY	LEG. MIMOSOIDEAE
COMMERCIAL NAME	Mesquite/ Algarrobo
OTHER NAMES	
DISTRIBUTION AREA	Semideciduos forests. Department of Santa Cruz
REGION AND FREQUENCY	

TREE DESCRIPTION

TREETOP	Wide, round and dense
TRUNK	Short and twisted. Heights up to 20 m
BARK	Grayish – Darkish color, with deep and interlocked fissures.

GENERAL CHARACTERISTICS

SAPWOOD COLOR	Pale Yellow	HEARTHWOOD COLOR	Dark brown
ODOR		TASTE	
LUSTER	Brigth	GRAIN	Straight
STRIPED		TEXTURE	

ANATOMIC DESCRIPTION

ANNUAL GROWTH RINGS

Visibility	Average Number
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PORES

Visibility	Porosity
Type	Shape

PARENCHYMA

Visibility	Quantity
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Type

RADIUS

Visibility	Contrast
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Stratification

PHYSICAL PROPERTIES

MOISTURE CONTENT (GREEN LUMBER)	%
BASIC DENSITY	0.72 - 0.84 g/cm ³

DENSITY (12% MOISTURE CONTENT)	g/cm3
RADIAL SHRINKAGE	3,5 %
TANGENTIAL SHRINKAGE	6 %
VOLUMETRIC SHRINKAGE	%
RATE T/R	1,71

MECHANICAL RESISTANCE

MODULUS OF ELASTICITY	103 - 122 1000 Kg/cm2
MODULUS OF RUPTURE	1234 - 1785 Kg/cm2
COMPRESSION PARALELL TO GRAIN	Kg/cm2
QUARTEREDSAWED	571 - 867 Kg/cm2
LATERAL HARDNESS	919 - 1224 Kg
IMPACT BENDING	Kg-m

TECHNNICAL CONDITIONS FOR PROCESSING

MACHINING	Easy sawing and planing. Good finishing
PRESERVATION	
NATURAL DURABILITY	Durable to very durable
DRYING	

END USES

Rustic furniture	Construction
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Source: MDSP, FAO PAF-BOL, IBAMA, LPF “[Información Técnica para el Procesamiento Industrial de 134 especies maderables de Bolivia](#)”. Serie Técnica XI. 2002. (Translated by Fernando Aguilar . Marketing - CADEFOR)

ALISO

SPECIES IDENTIFICATION

SCIENTIFIC NAME	<i>Alnus acuminata</i> - Kunth in H.B.K.
FAMILY	BETULACEAE
COMMERCIAL NAME	Alder
OTHER NAMES	Aliso cerezo, Chaquiro (Colombia), Aliso Montano (Argentina), Aliso (Ecuador and Venezuela), Lambrán (Peru)
DISTRIBUTION AREA	Typically on riverbanks on dry river beds and humid slopes. Departments of La Paz, Cochabamba, Potosí, Santa Cruz, Tarija
REGION AND FREQUENCY	

TREE DESCRIPTION

TREETOP	Narrow, with simple alternate leaves. Intense green foliage
TRUNK	Slightly elliptic. Reaches commercial heights up to 30 m.
BARK	Scally. Grayish color

GENERAL CHARACTERISTICS

SAPWOOD COLOR	Chesnut to pink	HEARTHWOOD COLOR	Chesnut to pink
ODOR	Indistinct	TASTE	Indistinct
LUSTER	Medium	GRAIN	Straight to slightly undulate
STRIPED		TEXTURE	Medium

ANATOMIC DESCRIPTION

ANNUAL GROWTH RINGS

Visibility	Average Number
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PORES

Visibility	Porosity
Type	Shape

PARENCHYMA

Visibility	Quantity
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RADIUS

Visibility	Contrast
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Stratification

PHYSICAL PROPERTIES

MOISTURE CONTENT (GREEN LUMBER)	%
BASIC DENSITY	0,35 g/cm ³
DENSITY (12% MOISTURE CONTENT)	0,41 g/cm ³
RADIAL SHRINKAGE	3,9 %
TANGENTIAL SHRINKAGE	6,28 %
VOLUMETRIC SHRINKAGE	10,42 %
RATE T/R	1,61

MECHANICAL RESISTANCE

MODULUS OF ELASTICITY	79,9 1000 Kg/cm ²
MODULUS OF RUPTURE	611,4 Kg/cm ²
COMPRESSION PARALELL TO GRAIN	274 Kg/cm ²
QUARTEREDSAWED	68,9 Kg/cm ²
LATERAL HARDNESS	197 Kg
IMPACT BENDING	1,9 Kg-m

TECHNNICAL CONDITIONS FOR PROCESSING

MACHINING	Easy sawing, planing and moulding. Good finishing
PRESERVATION	Permeable, easy to preserve
NATURAL DURABILITY	Low durability. , specially in contact with soil
DRYING	Air drying rather quickly and steady. A severe kiln schedule is recommended.

END USES

Furniture	Plywood
Doors	Particle board
Windows	

Source: MDSP, FAO PAF-BOL, IBAMA, LPF “[Información Técnica para el Procesamiento Industrial de 134 especies maderables de Bolivia](#)”. Serie Técnica XI. 2002. (Translated by Fernando Aguilar . Marketing - CADEFOR)

ALMENDRILLO

SPECIES IDENTIFICATION

SCIENTIFIC NAME	<i>Dipteryx odorata</i> (Aublet) Willd.
FAMILY	LEGUMINOSAE (Fabaceae)*. LEG. PAPILIONOIDEAE
COMMERCIAL NAME	Cumarú, Tonka, Odorata Aublet
OTHER NAMES	Cumarú (Brazil)* Champagne (Brazil), Sarrapia (Venezuela*), Sarrapia (Colombia), Charrapilla murcielago (Peru), Shihuahuaco (Peru)*
DISTRIBUTION AREA	Common in humid tropical forests in transition to subtropical forests* Departments of Cochabamba, Santa Cruz, Pando and Beni
REGION AND FREQUENCY	

TREE DESCRIPTION

TREETOP	Wide and open with pinnate composite leaves
TRUNK	Straight. Reaches heights up to 35 m and 150 cm diameter
BARK	Coarse, scaly and thick. Brown color.

GENERAL CHARACTERISTICS

SAPWOOD COLOR	Pale brown	HEARTHWOOD COLOR	Yellow to Brown yellowish
ODOR	Distinctive	TASTE	Distinctive and astringent
LUSTER	Medium	GRAIN	Interlocked
STRIPED	Tenuous	TEXTURE	Medium to Fine

ANATOMIC DESCRIPTION

ANNUAL GROWTH RINGS

Visibility	Visible at sight	Average Number	
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PORES

Visibility	Visible at sight	Porosity	Diffuse
Type	Solitaires	Shape	Round

PARENCHYMA

Visibility	With magnifying glass 10 x	magnifying	Quantity
Type	Paratraqueal aliform		

RADIUS

Visibility	With magnifying glass 10 x	magnifying	Contrast	Absent
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Stratification	Regular
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PHYSICAL PROPERTIES

MOISTURE CONTENT (GREEN LUMBER)	44 %
BASIC DENSITY	0,8* - 0,91 g/cm ³
DENSITY (12% MOISTURE CONTENT)	0,96* - 0,97 g/cm ³
RADIAL SHRINKAGE	5,4 – 5,5* %
TANGENTIAL SHRINKAGE	8,2* - 8,4 %
VOLUMETRIC SHRINKAGE	13,5 – 13,6* %
RATE T/R	1,5* - 1,6

MECHANICAL RESISTANCE

MODULUS OF ELASTICITY	183 1000 Kg/cm ²
MODULUS OF RUPTURE	1764 Kg/cm ²
COMPRESSION PARALELL TO GRAIN	987 – 884* Kg/cm ²
QUARTEREDSAWED	224 Kg/cm ²
LATERAL HARDNESS	1601- 1628* Kg
IMPACT BENDING	Kg-m

TECHNNICAL CONDITIONS FOR PROCESSING

MACHINING	Moderately easy. Good to excelent planing, good moulding, boring, sanding, turning and finishing. Medium blunting effect*
PRESERVATION	Impermeable
NATURAL DURABILITY	Durable
DRYING	Moderate drying time. There is a risk of twisting and bending*. A severe kiln schedule is recommended

END USES

Construction	Decorative veneer
Flooring	Naval construction
Turnery	Tongue & groove *
Truck beds*	Doors and windows frames
Stairways*	Panels*

Source 1: MDSP, FAO PAF-BOL, IBAMA, LPF “[Información Técnica para el Procesamiento Industrial de 134 especies maderables de Bolivia](#)”. Serie Técnica XI. 2002. (Translated by Fernando Aguilar . Marketing - CADEFOR)

(*) Source 2. CFB, PROMABOSQUE, BOLFOR, SCC, FAO PAF-BOL. [Bolivian Woods](#). 1999.

ALMENDRILLO AMARILLO

SPECIES IDENTIFICATION

SCIENTIFIC NAME	<i>Apuleia mollaris</i> Spruce ex Benth.
FAMILY	LEG. CAESALPINIOIDEAE
COMMERCIAL NAME	Pau mulato, Mirajuba
OTHER NAMES	Amarelão, Garapeira (Brazil)
DISTRIBUTION AREA	Amazonian forests, Department of Pando
REGION AND FREQUENCY	

TREE DESCRIPTION

TREETOP

TRUNK Straight. Heights up to 12 m

BARK Smooth texture

GENERAL CHARACTERISTICS

SAPWOOD COLOR	Yellow	HEARTHWOOD COLOR	Yellow
ODOR	Indistinct	TASTE	Slightly bitter
LUSTER	Moderate	GRAIN	Interlocked
STRIPED	Tangential "V" shape	TEXTURE	Medium

ANATOMIC DESCRIPTION

ANNUAL GROWTH RINGS

Visibility Indistincts Average Number

PORES

Visibility	With magnifying glass 10 x	magnifying Porosity	Diffuse
Type	Solitaries, sometimes in multiples of 2 and 3	Shape	Slightly oval

PARENCHYMA

Visibility	With magnifying glass 10 x	magnifying Quantity	Abundant
Type	Paratraqueal confluent		

RADIUS

Visibility	With magnifying glass 10 x	magnifying Contrast	Absent
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Stratification Absent

PHYSICAL PROPERTIES

MOISTURE CONTENT (GREEN LUMBER)	63,3 %
BASIC DENSITY	0,75 g/cm ³
DENSITY (12% MOISTURE CONTENT)	0,88 g/cm ³
RADIAL SHRINKAGE	6,5 %
TANGENTIAL SHRINKAGE	10,1 %
VOLUMETRIC SHRINKAGE	15,9 %
RATE T/R	1,6

MECHANICAL RESISTANCE

MODULUS OF ELASTICITY	129 1000 Kg/cm ²
MODULUS OF RUPTURE	1272 Kg/cm ²
COMPRESSION PARALELL TO GRAIN	644 Kg/cm ²
QUARTEREDSAWED	131 Kg/cm ²
LATERAL HARDNESS	745 Kg
IMPACT BENDING	Kg-m

TECHNNICAL CONDITIONS FOR PROCESSING

MACHINING	Moderately easy for sawing and planing. Difficult sSanding and moulding.
PRESERVATION	Impermeable
NATURAL DURABILITY	Very durable, resistantt to attack of fungi and insects, even in contact with soil
DRYING	Very quick. There is a tendency to warp and check. A severe kiln schedule is recommended

END USES

Construction	Decorative Veneer
Sleepers	Flooring
Naval construction	Furniture

Source: MDSP, FAO PAF-BOL, IBAMA, LPF “Información Técnica para el Procesamiento Industrial de 134 especies maderables de Bolivia”. Serie Técnica XI. 2002. (Translated by Fernando Aguilar . Marketing - CADEFOR)

ALMENDRILLO MACHO

SPECIES IDENTIFICATION

SCIENTIFIC NAME	<i>Taralea oppositolia</i> -(Aublet)
FAMILY	LEG. PAPILIONOIDEAE
COMMERCIAL NAME	Cumarurana
OTHER NAMES	Shihuahuanco (Peru)
DISTRIBUTION AREA	Common in humid tropical forests in transition to subtropical forests. Departments of Cochabamba, Santa Cruz, Pando and Beni
REGION AND FREQUENCY	Frequent in Choré, Bajo Paraguá, Amazonian foothill and Amazonia

TREE DESCRIPTION

TREETOP	Wide and open. Parasol- shaped. Intense green foliage.
TRUNK	Conical and uniform. Reaches heights up to 30 m
BARK	Smooth, corky texture. Brown white to redish color.

GENERAL CHARACTERISTICS

SAPWOOD COLOR	Pale orange	HEARTHWOOD COLOR	Dark to Brown
ODOR	Distinctive. Similar to rubber	TASTE	Indistinctive
LUSTER	Medium to bright	GRAIN	Interlocked
STRIPED	Dark	TEXTURE	Medium

ANATOMIC DESCRIPTION

ANNUAL GROWTH RINGS

Visibility	Visible at sight	Average Number	33 rings
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PORES

Visibility	Visible at sight	Porosity	Diffuse
Type	Solitaires and mostly triserial	Shape	Radial arrangement

PARENCHYMA

Visibility	Visible at sight	Quantity	Abundant
Type	Paratraqueal		

RADIUS

Visibility	With magnifying glass 10 x	magnifying Contrast	Absent
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Stratification	Present
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PHYSICAL PROPERTIES

MOISTURE CONTENT (GREEN LUMBER)	41 %
BASIC DENSITY	0,8 g/cm3
DENSITY (12% MOISTURE CONTENT)	0,95 g/cm3
RADIAL SHRINKAGE	5,5 %
TANGENTIAL SHRINKAGE	8,2 %
VOLUMETRIC SHRINKAGE	13,6 %
RATE T/R	1,5

MECHANICAL RESISTANCE

MODULUS OF ELASTICITY	151 1000 Kg/cm2
MODULUS OF RUPTURE	1167 Kg/cm2
COMPRESSION PARALELL TO GRAIN	884 Kg/cm2
QUARTEREDSAWED	173 Kg/cm2
LATERAL HARDNESS	1628 Kg
IMPACT BENDING	4.23 Kg-m

TECHNNICAL CONDITIONS FOR PROCESSING

MACHINING	Easy when working with green or humid wood. Good finishing.
PRESERVATION	Impermeable to pentaclorofenol and almost impermeable to CCA
NATURAL DURABILITY	Very durable
DRYING	Moderate drying time. . There is a risk of twisting.

END USES

Construction - structures	Flooring
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Source: MDSP, FAO PAF-BOL, IBAMA, LPF “Información Técnica para el Procesamiento Industrial de 134 especies maderables de Bolivia”. Serie Técnica XI. 2002. (Translated by Fernando Aguilar . Marketing - CADEFOR)

AMARGO

SPECIES IDENTIFICATION

SCIENTIFIC NAME	<i>Simarouba amara</i> (Aublet)
FAMILY	SIMAROUBACEAE
COMMERCIAL NAME	Simarouba, Marupa
OTHER NAMES	Aceituno (Central America), Chiriguaná (Bolivia), Marupá (Brazil), Simaruba (Colombia), Cedro amargo (Ecuador), Marupa (Peru), Cedro blanco (Venezuela)
DISTRIBUTION AREA	Humid forests, Departments of Beni, La Paz, Cochabamba and Santa Cruz
REGION AND FREQUENCY	

TREE DESCRIPTION

TREETOP	Round shape with alternate, composite and pinnate leaves
TRUNK	Straight and cylindrical, commercial heights up to 35 m.
BARK	Light gray color , texture varies from almost smooth to cracked

GENERAL CHARACTERISTICS

SAPWOOD COLOR	White	HEARTHWOOD COLOR	Pale Yellow
ODOR	Indistinct	TASTE	Slightly bitter when green
LUSTER	Bright	GRAIN	Straight
STRIPED	Tenuous	TEXTURE	Coarse

ANATOMIC DESCRIPTION

ANNUAL GROWTH RINGS

Visibility	Visible at sight	Average Number	15 rings in a radium of 10 cm.
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PORES

Visibility	Visible at sight	Porosity	Diffuse
Type	Solitaires	Shape	Round to oval

PARENCHYMA

Visibility	With magnifying glass 10 x	magnifying Quantity	Regular
Type	Paratraqueal aliform		

RADIUS

Visibility	Visibles at fist sight	Contrast	Absent
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Stratification	Absent
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PHYSICAL PROPERTIES

MOISTURE CONTENT (GREEN LUMBER)	61 %
BASIC DENSITY	0,36 g/cm ³
DENSITY (12% MOISTURE CONTENT)	0,39 g/cm ³
RADIAL SHRINKAGE	2,9 %
TANGENTIAL SHRINKAGE	6,7 %
VOLUMETRIC SHRINKAGE	9,4 %
RATE T/R	2,4

MECHANICAL RESISTANCE

MODULUS OF ELASTICITY	85 1000 Kg/cm ²
MODULUS OF RUPTURE	534 Kg/cm ²
COMPRESSION PARALELL TO GRAIN	312 Kg/cm ²
QUARTEREDSAWED	67 Kg/cm ²
LATERAL HARDNESS	206 Kg
IMPACT BENDING	1,31 Kg-m

TECHNNICAL CONDITIONS FOR PROCESSING

MACHINING	Easy sawing, planing, moulding, sanding. Good finishing.
PRESERVATION	Permeable
NATURAL DURABILITY	The wood is susceptible to attack of fungi
DRYING	Very quick with small tendency to twist

END USES

Construction	Boxes
Plywood	Furniture

Source: MDSP, FAO PAF-BOL, IBAMA, LPF “[Información Técnica para el Procesamiento Industrial de 134 especies maderables de Bolivia](#)”. Serie Técnica XI. 2002. (Translated by Fernando Aguilar . Marketing - CADEFOR)

AMARILLO

SPECIES IDENTIFICATION

SCIENTIFIC NAME	<i>Aspidosperma australe</i> Müll. Argentina
FAMILY	APOCYNACEAE
COMMERCIAL NAME	Peroba
OTHER NAMES	Guatambú-branco (Brazil)
DISTRIBUTION AREA	Semideciduous and dry forest, Departments of Santa Cruz (Chaco) and Cochabamba.
REGION AND FREQUENCY	Very frequent in the Guarayos region

TREE DESCRIPTION

TREETOP	Round, dense
TRUNK	Conical and uniform. Commercial heights up to 40 m
BARK	Color: Chesnut grayish. Rather smooth texture

GENERAL CHARACTERISTICS

SAPWOOD COLOR	White yellowish	HEARTHWOOD COLOR	Yellow
ODOR	Indistinct	TASTE	Indistinct
LUSTER		GRAIN	Straight
STRIPED		TEXTURE	

ANATOMIC DESCRIPTION

ANNUAL GROWTH RINGS

Visibility	Visible at sight	Average Number	
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PORES

Visibility	With magnifying glass 10 x	magnifying Porosity	Diffuse
Type	Solitaires, numerous	Shape	

PARENCHYMA

Visibility	With magnifying glass 10 x	magnifying Quantity	Scarce
Type	Paratraqueal		

RADIUS

Visibility	With magnifying glass 10 x	magnifying Contrast	Absent
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Stratification	Absent
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PHYSICAL PROPERTIES

MOISTURE CONTENT (GREEN LUMBER)	%
BASIC DENSITY	0,61 g/cm ³
DENSITY (12% MOISTURE CONTENT)	0,73 g/cm ³
RADIAL SHRINKAGE	4,5 %
TANGENTIAL SHRINKAGE	7,7 %
VOLUMETRIC SHRINKAGE	12,2 %
RATE T/R	1,7

MECHANICAL RESISTANCE

MODULUS OF ELASTICITY	1000 Kg/cm ²
MODULUS OF RUPTURE	1171 Kg/cm ²
COMPRESSION PARALELL TO GRAIN	583 Kg/cm ²
QUARTEREDSAWED	Kg/cm ²
LATERAL HARDNESS	854 Kg
IMPACT BENDING	Kg-m

TECHNNICAL CONDITIONS FOR PROCESSING

MACHINING	Easy machining when working with green wood. Good finishing.
PRESERVATION	Rather permeable
NATURAL DURABILITY	Durable, specially when not in contact with soil
DRYING	

END USES

Construction	Flooring
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Source: MDSP, FAO PAF-BOL, IBAMA, LPF “[Información Técnica para el Procesamiento Industrial de 134 especies maderables de Bolivia](#)”. Serie Técnica XI. 2002. (Translated by Fernando Aguilar . Marketing - CADEFOR)

ARRAIGAN

SPECIES IDENTIFICATION

SCIENTIFIC NAME	<i>Pithecellobium pedicellare</i> (D.C.) Benth.
FAMILY	LEG. MIMOSOIDEAE
COMMERCIAL NAME	Jarquilla
OTHER NAMES	Inga-de-porco (Brazil)
DISTRIBUTION AREA	Humid plain forests in Department of Cochabamba
REGION AND FREQUENCY	

TREE DESCRIPTION

TREETOP

TRUNK	Straight, commercial heights up to 40 m
BARK	Gray brown color, sweet taste, coarse texture

GENERAL CHARACTERISTICS

SAPWOOD COLOR	Pale Yellow	HEARTHWOOD COLOR	Pale chesnut redish
ODOR	Distinctive	TASTE	Indistinct
LUSTER	Medium	GRAIN	Interlocked
STRIPED	Narrow strips	TEXTURE	Medium

ANATOMIC DESCRIPTION

ANNUAL GROWTH RINGS

Visibility	Visible at sight	Average Number	
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PORES

Visibility	Visible at sight	Porosity	Diffuse
Type	Solitaries and multiples	Shape	

PARENCHYMA

Visibility	Visible at sight	Quantity	
Type	Paratraqueal aliform		

RADIUS

Visibility	Non visible even with magnifying glass 10x	Contrast	Present
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Stratification	Absent
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PHYSICAL PROPERTIES

MOISTURE CONTENT (GREEN LUMBER)	%
BASIC DENSITY	0.4 - 0.55 g/cm3

DENSITY (12% MOISTURE CONTENT)	0,55 g/cm3
RADIAL SHRINKAGE	%
TANGENTIAL SHRINKAGE	%
VOLUMETRIC SHRINKAGE	%
RATE T/R	

MECHANICAL RESISTANCE

MODULUS OF ELASTICITY	1000 Kg/cm2
MODULUS OF RUPTURE	Kg/cm2
COMPRESSION PARALELL TO GRAIN	Kg/cm2
QUARTEREDSAWED	Kg/cm2
LATERAL HARDNESS	Kg
IMPACT BENDING	Kg-m

TECHNNICAL CONDITIONS FOR PROCESSING

MACHINING

PRESERVATION

NATURAL DURABILITY

DRYING

END USES

Source: MDSP, FAO PAF-BOL, IBAMA, LPF “[Información Técnica para el Procesamiento Industrial de 134 especies maderables de Bolivia](#)”. Serie Técnica XI. 2002. (Translated by Fernando Aguilar . Marketing - CADEFOR)

AZUCARÓ

SPECIES IDENTIFICATION

SCIENTIFIC NAME	<i>Spondias mombin</i> L.
FAMILY	ANACARDIACEAE
COMMERCIAL NAME	Jobo, Ubos
OTHER NAMES	Ciruelo hobo, Hobo colorado, Jobo (Colombia), Hobo, Ajuelotsuyacho (Ecuador), Ubos, Shungu (Peru), Marapa, Coropa (Venezuela)
DISTRIBUTION AREA	Humid plain forests and secondary forests in Departments of Beni, La Paz and Santa Cruz
REGION AND FREQUENCY	Very frequent in Bajo Paraguá and Choré

TREE DESCRIPTION

TREETOP	Espherical shape, scarce branches with green yellowish foliage
TRUNK	Straight and cylindrical. Average height around 10 m
BARK	Grayish color with white spots

GENERAL CHARACTERISTICS

SAPWOOD COLOR	White yellowish	HEARTHWOOD COLOR	Pale Yellow
ODOR	Indistinct	TASTE	Distinctive and astringent
LUSTER	Medium	GRAIN	Straight
STRIPED	Jaspered	TEXTURE	Medium

ANATOMIC DESCRIPTION

ANNUAL GROWTH RINGS

Visibility	With magnifying glass 10 x	Average Number	20 rings in a radium of 10 cm
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PORES

Visibility	Visible at sight	Porosity	Diffuse
Type	Solitaires and radial multiples	Shape	Round and oval

PARENCHYMA

Visibility	Indistinguishable aun con lupa	Quantity	Scarce
Type	No visible		

RADIUS

Visibility	With magnifying glass 10 x	Contrast	Absent
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Stratification	Absent
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PHYSICAL PROPERTIES

MOISTURE CONTENT (GREEN LUMBER)	85 %
BASIC DENSITY	0,31 g/cm ³
DENSITY (12% MOISTURE CONTENT)	0,34 g/cm ³
RADIAL SHRINKAGE	3,1 %
TANGENTIAL SHRINKAGE	5,1 %
VOLUMETRIC SHRINKAGE	8 %
RATE T/R	1,7

MECHANICAL RESISTANCE

MODULUS OF ELASTICITY	73 1000 Kg/cm ²
MODULUS OF RUPTURE	487 Kg/cm ²
COMPRESSION PARALELL TO GRAIN	295 Kg/cm ²
QUARTEREDSAWED	59 Kg/cm ²
LATERAL HARDNESS	142 Kg
IMPACT BENDING	1,15 Kg-m

TECHNNICAL CONDITIONS FOR PROCESSING

MACHINING	Easy machining.
PRESERVATION	Permeable
NATURAL DURABILITY	Low durability. The wood is susceptible to attack of fungi and insects
DRYING	Air drying time is moderate, with tendency to warp. A severe kiln schedule is recommended

END USES

Construction	Plywood
Furniture	Boxes and crates

Source: MDSP, FAO PAF-BOL, IBAMA, LPF “Información Técnica para el Procesamiento Industrial de 134 especies maderables de Bolivia”. Serie Técnica XI. 2002. (Translated by Fernando Aguilar . Marketing - CADEFOR)

BALATA

SPECIES IDENTIFICATION

SCIENTIFIC NAME	<i>Pouteria guianensis</i> - Aublet
FAMILY	SAPOTACEAE
COMMERCIAL NAME	Abiu
OTHER NAMES	Abiurana (Brazil)
DISTRIBUTION AREA	Amazonian forest in Department of Pando
REGION AND FREQUENCY	

TREE DESCRIPTION

TREETOP	
TRUNK	Cylindrical and uniform.
BARK	Thickness around 0,5 cm. Brown – redish color

GENERAL CHARACTERISTICS

SAPWOOD COLOR	Pale brown	HEARTHWOOD COLOR	Ligth brown
ODOR	Indistinct	TASTE	Indistinct
LUSTER	Absent	GRAIN	Straight
STRIPED		TEXTURE	n.a.

ANATOMIC DESCRIPTION

ANNUAL GROWTH RINGS	
Visibility	Average Number
PORES	
Visibility	Porosity
Type	Shape
PARENCHYMA	
Visibility	Quantity
Type	
RADIUS	
Visibility	Contrast
Stratification	

PHYSICAL PROPERTIES

MOISTURE CONTENT (GREEN LUMBER)	%
BASIC DENSITY	0,9 g/cm ³
DENSITY (12% MOISTURE CONTENT)	g/cm ³
RADIAL SHRINKAGE	7,6 %
TANGENTIAL SHRINKAGE	9,36 %
VOLUMETRIC SHRINKAGE	17,99 %
RATE T/R	1,23

MECHANICAL RESISTANCE

MODULUS OF ELASTICITY	156 1000 Kg/cm ²
MODULUS OF RUPTURE	1570 Kg/cm ²
COMPRESSION PARALELL TO GRAIN	961 Kg/cm ²
QUARTEREDSAWED	143 Kg/cm ²
LATERAL HARDNESS	1169 Kg
IMPACT BENDING	Kg-m

TECHNNICAL CONDITIONS FOR PROCESSING

MACHINING	Silica content makes difficultl to saw. Planing is moderately easy.
PRESERVATION	Rather permeable .
NATURAL DURABILITY	Durable. Resistent to attack of fungi and insects
DRYING	Is is recommended to dry with caution, starting with low temperatures in the kiln.

END USES

Construction

Source: MDSP, FAO PAF-BOL, IBAMA, LPF “[Información Técnica para el Procesamiento Industrial de 134 especies maderables de Bolivia](#)”. Serie Técnica XI. 2002. (Translated by Fernando Aguilar . Marketing - CADEFOR)

BALSA

SPECIES IDENTIFICATION

SCIENTIFIC NAME	<i>Ochroma lagopus</i> Sw.
FAMILY	BOMBACACEAE
COMMERCIAL NAME	Balsa
OTHER NAMES	Pau de Balsa (Brazil), Lanu (Colombia), Balso (Peru and Venezuela)
DISTRIBUTION AREA	Secondary Forest in Beni, Pando, Sta. Cruz, Cochabamba and La Paz
REGION AND FREQUENCY	Low frequency

TREE DESCRIPTION

TREETOP

TRUNK With buttresses . Commercial heights up to 25 m

BARK Thickness from 15 to 20 mm

GENERAL CHARACTERISTICS

SAPWOOD COLOR	Whitish	HEARTHWOOD COLOR	Ligth brown
ODOR	Indistinct	TASTE	Indistinct
LUSTER	Bright	GRAIN	Straight to slightly Interlocked
STRIPED	Tenuous	TEXTURE	Medium to coarse

ANATOMIC DESCRIPTION

ANNUAL GROWTH RINGS

Visibility Non visible **Average Number**

PORES

Visibility Visible at sight **Porosity** Diffuse
Type Solitaires, sometimes in multiple of 3 **Shape**

PARENCHYMA

Visibility With magnifying glass 10 x **magnifying Quantity**

Type

RADIUS

Visibility Visible at sight **Contrast** Present

Stratification Present

PHYSICAL PROPERTIES

MOISTURE CONTENT (GREEN LUMBER)	160 %
BASIC DENSITY	0,1 g/cm ³
DENSITY (12% MOISTURE CONTENT)	0,14 g/cm ³
RADIAL SHRINKAGE	2,3 %
TANGENTIAL SHRINKAGE	5,4 %
VOLUMETRIC SHRINKAGE	10,3 %
RATE T/R	2,34

MECHANICAL RESISTANCE

MODULUS OF ELASTICITY	44 1000 Kg/cm ²
MODULUS OF RUPTURE	214 Kg/cm ²
COMPRESSION PARALELL TO GRAIN	134 Kg/cm ²
QUARTEREDSAWED	23 Kg/cm ²
LATERAL HARDNESS	46 Kg
IMPACT BENDING	0,53 Kg-m

TECHNNICAL CONDITIONS FOR PROCESSING

MACHINING	Easy sawing and planing. Difficult for turning
PRESERVATION	Permeable; suceptible to attack of fungi and termites
NATURAL DURABILITY	Low durability. . Suceptible to attack of termites
DRYING	Moderate drying time. Kiln drying is quick and steady.

END USES

Toys

Source: MDSP, FAO PAF-BOL, IBAMA, LPF “[Información Técnica para el Procesamiento Industrial de 134 especies maderables de Bolivia](#)”. Serie Técnica XI. 2002. (Translated by Fernando Aguilar . Marketing - CADEFOR)

SPECIES IDENTIFICATION

SCIENTIFIC NAME	<i>Genipa americana</i> L.
FAMILY	RUBIACEAE
COMMERCIAL NAME	Jagua, Genipa
OTHER NAMES	Jenipapeiro (Brazil), Angelina (Colombia) Jagua azul (Mexico), Palo colorado, Huitoc (Peru), Caruto (Venezuela)
DISTRIBUTION AREA	Amazonian forest and semidecuduous forest in the Chiquitania. Groves in humid savannas. Departments of Cochabamba, La Paz and Santa Cruz
REGION AND FREQUENCY	

TREE DESCRIPTION

TREETOP	
TRUNK	Straight and cylindrical, commercial heights up to 30 m
BARK	Coarse . Thickness from 20 to 25 mm

GENERAL CHARACTERISTICS

SAPWOOD COLOR	Pale Chesnut pinkish	HEARTHWOOD COLOR	Chesnut yellowish
ODOR	Indistinct	TASTE	Indistinct
LUSTER	Medium	GRAIN	Straight to irregular
STRIPED	In vascular lines	TEXTURE	Fine to moderately fine

ANATOMIC DESCRIPTION

ANNUAL GROWTH RINGS

Visibility	Average Number
PORES	
Visibility	Porosity
Type	Shape
PARENCHYMA	
Visibility	Quantity
Type	
RADIUS	
Visibility	Contrast
Stratification	

PHYSICAL PROPERTIES

MOISTURE CONTENT (GREEN LUMBER)	%
BASIC DENSITY	0,6 g/cm ³
DENSITY (12% MOISTURE CONTENT)	0,71 g/cm ³
RADIAL SHRINKAGE	5,1 %
TANGENTIAL SHRINKAGE	8,9 %
VOLUMETRIC SHRINKAGE	14 %
RATE T/R	1,7

MECHANICAL RESISTANCE

MODULUS OF ELASTICITY	125 1000 Kg/cm ²
MODULUS OF RUPTURE	1234 Kg/cm ²
COMPRESSION PARALELL TO GRAIN	531 Kg/cm ²
QUARTEREDSAWED	103 Kg/cm ²
LATERAL HARDNESS	65 Kg
IMPACT BENDING	1,6 Kg-m

TECHNNICAL CONDITIONS FOR PROCESSING

MACHINING	Good
PRESERVATION	Permeable, easy to preserve
NATURAL DURABILITY	Moderately resistant to fungi, susceptible to attack of insects
DRYING	Air drying is slow and steady. A soft kiln schedule is recommended.

END USES

Flooring	Furniture
Decorative Veneer	

Source: MDSP, FAO PAF-BOL, IBAMA, LPF “[Información Técnica para el Procesamiento Industrial de 134 especies maderables de Bolivia](#)”. Serie Técnica XI. 2002. (Translated by Fernando Aguilar . Marketing - CADEFOR)

BIBOSI

SPECIES IDENTIFICATION

SCIENTIFIC NAME	<i>Ficus glabrata</i> H.B.K.
FAMILY	MORACEAE
COMMERCIAL NAME	Fig tree
OTHER NAMES	Higuerón, Matapalo (Colombia), Renaco, Ojé* (Peru), Caxinguba*, Figueira*, Matapau* (Brazil), Ivapoy (Argentina), Cauchillo* (Ecuador), Guapoy*, Morotí* (Paraguay),
DISTRIBUTION AREA	Humid tropical forests in transition to subtropical forests. Departments of Cochabamba, Santa Cruz, Beni, La Paz and Pando
REGION AND FREQUENCY	Very frequent in Choré, Bajo Paraguá, Guarayos, Amazonian foothills

TREE DESCRIPTION

TREETOP	Large. Parasol- shaped. Light green foliage. Simple alternate leaves.
TRUNK	Conical and unifor; commercial heights up to 50* m
BARK	Gray color . Coarse texture. Exudes a white látex

GENERAL CHARACTERISTICS

SAPWOOD COLOR	Pale yellow	HEARTHWOOD COLOR	Ligth brown
ODOR	Indistinct	TASTE	Indistinct
LUSTER	Medium	GRAIN	Interlocked
STRIPED	Intense	TEXTURE	Medium

ANATOMIC DESCRIPTION

ANNUAL GROWTH RINGS

Visibility	Visible at sight	Average Number	17 rings in a radium of 10 cm.
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PORES

Visibility	Visible at sight	Porosity	Diffuse
Type	Solitaires in multiples of 2	Shape	Open

PARENCHYMA

Visibility	With magnifying glass 10 x	magnifying Quantity	Moderately scarce
Type	Paratraqueal		

RADIUS

Visibility	With magnifying glass 10 x	magnifying Contrast	Absent
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Stratification	Absent
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PHYSICAL PROPERTIES

MOISTURE CONTENT (GREEN LUMBER)	95 %
BASIC DENSITY	0,48 g/cm ³
DENSITY (12% MOISTURE CONTENT)	0,57* - 0,59 g/cm ³
RADIAL SHRINKAGE	3,6 %
TANGENTIAL SHRINKAGE	7,4 %
VOLUMETRIC SHRINKAGE	11,1 %
RATE T/R	2,1

MECHANICAL RESISTANCE

MODULUS OF ELASTICITY	72 1000 Kg/cm ²
MODULUS OF RUPTURE	475 Kg/cm ²
COMPRESSION PARALELL TO GRAIN	393 Kg/cm ²
QUARTEREDSAWED	74 Kg/cm ²
LATERAL HARDNESS	323 Kg
IMPACT BENDING	1,03 Kg-m

TECHNNICAL CONDITIONS FOR PROCESSING

MACHINING	Planing, moulding and turning is good to excellent*. Boring, sanding and finishing is good*. Blunting effect is low*
PRESERVATION	Permeable
NATURAL DURABILITY	Low durability. The wood is susceptible to attack of fungi
DRYING	Air drying is rather quick with risks of twisting. A moderate kiln schedule is recommended.

END USES

Construction	Furniture
Doors and windows*	Interior carpentry*
Mouldings*	Plywood*
Boxes*	Doors and window frames

Source 1: MDSP, FAO PAF-BOL, IBAMA, LPF “[Información Técnica para el Procesamiento Industrial de 134 especies maderables de Bolivia](#)”. Serie Técnica XI. 2002. (Translated by Fernando Aguilar . Marketing - CADEFOR)

(*) Source 2. CFB, PROMABOSQUE, BOLFOR, SCC, FAO PAF-BOL. [Bolivian Woods](#). 1999.

BITUMBO

SPECIES IDENTIFICATION

SCIENTIFIC NAME	<i>Couratari guianensis</i> Aubl.
FAMILY	LECYTHIDACEAE
COMMERCIAL NAME	Taurí, Couratari
OTHER NAMES	Cabuyo, Cococabuyo, Coco hediondo (Colombia)
DISTRIBUTION AREA	Amazonian forest. Department of Pando
REGION AND FREQUENCY	

TREE DESCRIPTION

TREETOP

TRUNK	Straight and cylindrical . Commercial heights up to 14.5 m, angular and a little corrugated with buttresses .
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BARK

GENERAL CHARACTERISTICS

SAPWOOD COLOR	White yellowish to Light Brown	HEARTHWOOD COLOR	White yellowish to Light Brown
ODOR	Distinctive	TASTE	Indistinct
LUSTER	Medium	GRAIN	Straight
STRIPED	Medium, defined by dark wide vessel lines	TEXTURE	Medium

ANATOMIC DESCRIPTION

ANNUAL GROWTH RINGS

Visibility	Difficult to see	Average Number	
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PORES

Visibility	Visible at sight	Porosity	Diffuse
Type	Solitaries	Shape	Ovalados

PARENCHYMA

Visibility	Visible at sight	Quantity	Scarce
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Type	Reticulated
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RADIUS

Visibility	With magnifying glass 10 x	Contrast	Absent
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Stratification	Present
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PHYSICAL PROPERTIES

MOISTURE CONTENT (GREEN LUMBER)	%
BASIC DENSITY	0,52 g/cm ³
DENSITY (12% MOISTURE CONTENT)	0,61 g/cm ³
RADIAL SHRINKAGE	3,6 %
TANGENTIAL SHRINKAGE	6,1 %
VOLUMETRIC SHRINKAGE	10,4 %
RATE T/R	1,7

MECHANICAL RESISTANCE

MODULUS OF ELASTICITY	117 1000 Kg/cm ²
MODULUS OF RUPTURE	1064 Kg/cm ²
COMPRESSION PARALELL TO GRAIN	550 Kg/cm ²
QUARTEREDSAWED	104 Kg/cm ²
LATERAL HARDNESS	665 Kg
IMPACT BENDING	Kg-m

TECHNNICAL CONDITIONS FOR PROCESSING

MACHINING	Easy sawing, planing and moulding. Good finishing
PRESERVATION	Permeable
NATURAL DURABILITY	The wood is susceptible to attack of fungi and insects
DRYING	Very quick and steady. A severe kiln schedule is recommended

END USES

Construction	Plywood
Furniture	

Source: MDSP, FAO PAF-BOL, IBAMA, LPF “[Información Técnica para el Procesamiento Industrial de 134 especies maderables de Bolivia](#)”. Serie Técnica XI. 2002. (Translated by Fernando Aguilar . Marketing - CADEFOR)

CACHICHIRA

SPECIES IDENTIFICATION

SCIENTIFIC NAME	<i>Sloanea obtusifolia</i> (Moric.) Schumann
FAMILY	ELAEOCARPACEAE
COMMERCIAL NAME	Sapopema
OTHER NAMES	Gindiba (Brazil)
DISTRIBUTION AREA	Humid forests in plain and preandena regions Departments of La Paz, Santa Cruz, Beni and Cochabamba
REGION AND FREQUENCY	Frequent the Choré region

TREE DESCRIPTION

TREETOP	Extended with alternate and oposite leaves.
TRUNK	Commercial heights up to 35 m with large buttresses .
BARK	

GENERAL CHARACTERISTICS

SAPWOOD COLOR	Yellow redish	HEARTHWOOD COLOR	Brown redish
ODOR	Indistincts	TASTE	Indistincts
LUSTER	Medium	GRAIN	Straight to interlocked
STRIPED	Tenuous	TEXTURE	

ANATOMIC DESCRIPTION

ANNUAL GROWTH RINGS

Visibility		Average Number	
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PORES

Visibility	Difficutl to see at first sight	Porosity	
Type	Solitaires	Shape	

PARENCHYMA

Visibility	Practically non visible	Quantity	-
Type	-		

RADIUS

Visibility	Visible at sight	Contrast	Absent
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Stratification	Absent
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PHYSICAL PROPERTIES

MOISTURE CONTENT (GREEN LUMBER)	%
BASIC DENSITY	g/cm ³
DENSITY (12% MOISTURE CONTENT)	0,88 g/cm ³
RADIAL SHRINKAGE	5,3 %
TANGENTIAL SHRINKAGE	12,8 %
VOLUMETRIC SHRINKAGE	20,1 %
RATE T/R	2,4

MECHANICAL RESISTANCE

MODULUS OF ELASTICITY	156 1000 Kg/cm ²
MODULUS OF RUPTURE	1317 Kg/cm ²
COMPRESSION PARALELL TO GRAIN	530 Kg/cm ²
QUARTEREDSAWED	129 Kg/cm ²
LATERAL HARDNESS	399 Kg
IMPACT BENDING	Kg-m

TECHNNICAL CONDITIONS FOR PROCESSING

MACHINING	Easy sawing, planing and moulding. Good finishing
PRESERVATION	Permeable to preservation treatments
NATURAL DURABILITY	Low durability.
DRYING	

END USES

Construction	Furniture
Decorative Veneer	

Source: MDSP, FAO PAF-BOL, IBAMA, LPF “Información Técnica para el Procesamiento Industrial de 134 especies maderables de Bolivia”. Serie Técnica XI. 2002. (Translated by Fernando Aguilar . Marketing - CADEFOR)

CAMBARÁ

SPECIES IDENTIFICATION

SCIENTIFIC NAME	<i>Erisma uncinatum</i> Warm.
FAMILY	VOCHYSIACEAE
COMMERCIAL NAME	Jaboty, Quarubarana*, Mureillo*
OTHER NAMES	Quarubarana, Cedrinho, Jatoby* (Brazil), Mureillo* (Venezuela)
DISTRIBUTION AREA	Subtropical humid forests in transition to subtropical forests*. Departments of La Paz, Beni, Santa Cruz and Pando
REGION AND FREQUENCY	Very frequent in Bajo Paraguá

TREE DESCRIPTION

TREETOP	Extended with simple leaves.
TRUNK	Straight and cylindrical, commercial heights up to 40* m
BARK	Scaly, Dark gray color

GENERAL CHARACTERISTICS

SAPWOOD COLOR	White yellowish	HEARTHWOOD COLOR	Ligth brown redish
ODOR	Indistinct	TASTE	Indistinct
LUSTER	Medium	GRAIN	Straight
STRIPED	Intense	TEXTURE	Coarse

ANATOMIC DESCRIPTION

ANNUAL GROWTH RINGS

Visibility	With magnifying glass 10 x	magnifying Average Number	23 rings in a radium of 10 cm.
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PORES

Visibility	Visible at sight	Porosity	Diffuse
Type	Solitaires and multiples	Shape	Round, usually closed

PARENCHYMA

Visibility	Visible at sight	Quantity	Abundant
Type	Apotraqueal en wide strips		

RADIUS

Visibility	With magnifying glass 10 x	magnifying Contrast	Absent
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Stratification	Absent
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PHYSICAL PROPERTIES

MOISTURE CONTENT (GREEN LUMBER)	105 %
BASIC DENSITY	0,46* - 0,47 g/cm ³
DENSITY (12% MOISTURE CONTENT)	0,57 g/cm ³
RADIAL SHRINKAGE	3,4* - 4,2 %
TANGENTIAL SHRINKAGE	8,9* - 9,1 %
VOLUMETRIC SHRINKAGE	12,4* - 12,9 %
RATE T/R	2,2

MECHANICAL RESISTANCE

MODULUS OF ELASTICITY	115 1000 Kg/cm ²
MODULUS OF RUPTURE	897 Kg/cm ²
COMPRESSION PARALELL TO GRAIN	348* - 524 Kg/cm ²
QUARTEREDSAWED	98 Kg/cm ²
LATERAL HARDNESS	327* - 374 Kg
IMPACT BENDING	1,03 Kg-m

TECHNNICAL CONDITIONS FOR PROCESSING

MACHINING	Good planing, moulding, sanding and turning*. Regular boring*. Good finishing*. Low blunting effect.*
PRESERVATION	Permeable
NATURAL DURABILITY	Low durability , specially in contact with soil
DRYING	Air drying is rather quick. A severe kiln schedule is recommended

END USES

Construction	Decorative Veneer
Interior carpentry*	Furniture
Doors and windows	Plywood*
Panels*	Doors and window frames

Source 1: MDSP, FAO PAF-BOL, IBAMA, LPF “[Información Técnica para el Procesamiento Industrial de 134 especies maderables de Bolivia](#)”. Serie Técnica XI. 2002. (Translated by Fernando Aguilar . Marketing - CADEFOR)

(*) Source 2. CFB, PROMABOSQUE, BOLFOR, SCC, FAO PAF-BOL. [Bolivian Woods](#). 1999.

CAMBARA MACHO

SPECIES IDENTIFICATION

SCIENTIFIC NAME	<i>Qualea paraensis</i> Ducke
FAMILY	VOCHYSIACEAE
COMMERCIAL NAME	Mandioqueira
OTHER NAMES	Mandioqueira (Brasil), Gonfolo (Guyana francesa), Florecillo (Venezuela)
DISTRIBUTION AREA	
REGION AND FREQUENCY	

TREE DESCRIPTION

TREETOP	
TRUNK	Straight
BARK	External side has smooth texture. Redish color

GENERAL CHARACTERISTICS

SAPWOOD COLOR	White grayish	HEARTHWOOD COLOR	Brown pinkish to Brown redish
ODOR	Indistinct	TASTE	Indistinct
LUSTER	Tenuous	GRAIN	Interlocked to undulate
STRIPED	Tenuous	TEXTURE	Medium

ANATOMIC DESCRIPTION

ANNUAL GROWTH RINGS

Visibility	Indistinguishable	Average Number	
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PORES

Visibility	Visible at sight	Porosity	Diffuse
Type	Solitaires and multiples of 2- 3	Shape	

PARENCHYMA

Visibility	Visible at sight	Quantity	
Type	Paratraqueal aliform		

RADIUS

Visibility	Visible at sight	Contrast	Low contrast
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Stratification	Absent
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PHYSICAL PROPERTIES

MOISTURE CONTENT (GREEN LUMBER)	%
BASIC DENSITY	0,66 g/cm ³
DENSITY (12% MOISTURE CONTENT)	0,73 g/cm ³
RADIAL SHRINKAGE	6,02 %
TANGENTIAL SHRINKAGE	11,38 %
VOLUMETRIC SHRINKAGE	18,1 %
RATE T/R	1,89

MECHANICAL RESISTANCE

MODULUS OF ELASTICITY	128 1000 Kg/cm ²
MODULUS OF RUPTURE	1190 Kg/cm ²
COMPRESSION PARALELL TO GRAIN	710 Kg/cm ²
QUARTEREDSAWED	146 Kg/cm ²
LATERAL HARDNESS	830 Kg
IMPACT BENDING	Kg-m

TECHNNICAL CONDITIONS FOR PROCESSING

MACHINING	Easy sawing, planning, moulding and sanding. Good finishing.
PRESERVATION	Rather permeable
NATURAL DURABILITY	Moderately durable, resistant to attack of some fungi but is susceptible to attack of insects.
DRYING	It is recommended to start kiln drying with low temperatures. There is a risk of twisting and cracking.

END USES

Construction	Doors
Decorative veneer	Furniture

Source: MDSP, FAO PAF-BOL, IBAMA, LPF “[Información Técnica para el Procesamiento Industrial de 134 especies maderables de Bolivia](#)”. Serie Técnica XI. 2002. (Translated by Fernando Aguilar . Marketing - CADEFOR)

CANELON

SPECIES IDENTIFICATION

SCIENTIFIC NAME	<i>Aniba canelilla</i> (H.B.K.) Mez.
FAMILY	LAURACEAE
COMMERCIAL NAME	Preciosa
OTHER NAMES	Casca-preciosa (Brazil)
DISTRIBUTION AREA	Amazonian forests. Department of Pando
REGION AND FREQUENCY	Very frequent in Bajo Paraguá and Guarayos

TREE DESCRIPTION

TREETOP

TRUNK Straight, height averages 10 m

BARK Cinnamon odor

GENERAL CHARACTERISTICS

SAPWOOD COLOR	Brown yellowish	HEARTHWOOD COLOR	Brown yellowish
ODOR	Cinnamon	TASTE	Cinnamon
LUSTER	Medium	GRAIN	Irregular
STRIPED	Strong	TEXTURE	

ANATOMIC DESCRIPTION

ANNUAL GROWTH RINGS

Visibility Low Average Number

PORES

Visibility With magnifying glass 10 x magnifying Porosity Diffuse

Type Solitaires and geminated Shape Round, obstructed by a resin

PARENCHYMA

Visibility Non visible, even with magnifying glass 10 x Quantity Scarce

Type Paravascular

RADIUS

Visibility With magnifying glass 10 x magnifying Contrast Absent

Stratification Present

PHYSICAL PROPERTIES

MOISTURE CONTENT (GREEN LUMBER)	%
BASIC DENSITY	0,92 g/cm ³
DENSITY (12% MOISTURE CONTENT)	0,98 g/cm ³
RADIAL SHRINKAGE	6,4 %
TANGENTIAL SHRINKAGE	8,2 %
VOLUMETRIC SHRINKAGE	13,6 %
RATE T/R	1,28

MECHANICAL RESISTANCE

MODULUS OF ELASTICITY	179 1000 Kg/cm ²
MODULUS OF RUPTURE	1875 Kg/cm ²
COMPRESSION PARALELL TO GRAIN	997 Kg/cm ²
QUARTEREDSAWED	188 Kg/cm ²
LATERAL HARDNESS	1528 Kg
IMPACT BENDING	Kg-m

TECHNNICAL CONDITIONS FOR PROCESSING

MACHINING	Medium. Good finishing
PRESERVATION	Sapwood and heartwood are impermeable
NATURAL DURABILITY	Durable, specially resistant to xylophagous agents
DRYING	Air Drying rather quick. A severe kiln schedule is recommended. There is a risks of cracking.

END USES

Construction	Furniture
Turnery	

Source: MDSP, FAO PAF-BOL, IBAMA, LPF “[Información Técnica para el Procesamiento Industrial de 134 especies maderables de Bolivia](#)”. Serie Técnica XI. 2002. (Translated by Fernando Aguilar . Marketing - CADEFOR)

CAPINURI

SPECIES IDENTIFICATION

SCIENTIFIC NAME	<i>Maquira coriacea</i> (Karsten) C.C. Berg
FAMILY	MORACEAE
COMMERCIAL NAME	Muiratinga
OTHER NAMES	Capinuri (Brazil)
DISTRIBUTION AREA	Riverside Forests in Departments of Pando and La Paz
REGION AND FREQUENCY	

TREE DESCRIPTION

TREETOP

TRUNK

BARK White to White yellowish

GENERAL CHARACTERISTICS

SAPWOOD COLOR	white to White yellowish	HEARTHWOOD COLOR	
ODOR		TASTE	
LUSTER		GRAIN	Generally Interlocked
STRIPED	Tenuous	TEXTURE	

ANATOMIC DESCRIPTION

ANNUAL GROWTH RINGS

Visibility Average Number

PORES

Visibility Porosity

Type Shape

PARENCHYMA

Visibility Quantity

Type

RADIUS

Visibility Contrast

Stratification

PHYSICAL PROPERTIES

MOISTURE CONTENT (GREEN LUMBER)	%
BASIC DENSITY	0,42 g/cm ³

DENSITY (12% MOISTURE CONTENT)	0,47 g/cm3
RADIAL SHRINKAGE	3,4 %
TANGENTIAL SHRINKAGE	6,7 %
VOLUMETRIC SHRINKAGE	%
RATE T/R	1,9

MECHANICAL RESISTANCE

MODULUS OF ELASTICITY	8100 1000 Kg/cm2
MODULUS OF RUPTURE	64 Kg/cm2
COMPRESSION PARALELL TO GRAIN	38 Kg/cm2
QUARTEREDSAWED	Kg/cm2
LATERAL HARDNESS	Kg
IMPACT BENDING	Kg-m

TECHNNICAL CONDITIONS FOR PROCESSING

MACHINING	Somewhat difficult. High content of silica. Good finishing.
PRESERVATION	Permeable
NATURAL DURABILITY	Low durability. The wood is susceptible to attack of fungi and insects
DRYING	A severe kiln schedule is recommended. There is a tendency to get spots.

END USES

Plywood	Furniture
Packages and crating	

Source: MDSP, FAO PAF-BOL, IBAMA, LPF “[Información Técnica para el Procesamiento Industrial de 134 especies maderables de Bolivia](#)”. Serie Técnica XI. 2002. (Translated by Fernando Aguilar . Marketing - CADEFOR)

CARAPARI

SPECIES IDENTIFICATION

SCIENTIFIC NAME	<i>Neocardenasia herzogiana</i> - Bckbg.
FAMILY	CACTACEAE
COMMERCIAL NAME	
OTHER NAMES	
DISTRIBUTION AREA	Humid temperate forests in transition to dry temperate forests. Departments of Tarija, Chuquisaca, Santa Cruz and Cochabamba
REGION AND FREQUENCY	

TREE DESCRIPTION

TRUNK	Straight, commercial heights up to 18 m. Branches arrangement look as a candelabrum. The trunk is dark green color and shows thorny "ribs".
BARK	

GENERAL CHARACTERISTICS

SAPWOOD COLOR	White yellowish	HEARTHWOOD COLOR	Ligth brown yellowish
ODOR	Smells like vinegar	TASTE	Indistinct
LUSTER		GRAIN	Straight
STRIPED		TEXTURE	

ANATOMIC DESCRIPTION

ANNUAL GROWTH RINGS

Visibility		Average Number	
PORES			
Visibility	With magnifying magnifying glass	Porosity	Diffuse
Type	Solitaries and multiples of 3	Shape	
PARENCHYMA			
Visibility		Quantity	Scarce
Type	Paratraqueal with centric vessels		
RADIUS			
Visibility		Contrast	Present
Stratification	Absent		

PHYSICAL PROPERTIES

MOISTURE CONTENT (GREEN LUMBER)	%
BASIC DENSITY	0,54 g/cm ³
DENSITY (12% MOISTURE CONTENT)	0,59 g/cm ³
RADIAL SHRINKAGE	2,0 %
TANGENTIAL SHRINKAGE	4,0 %
VOLUMETRIC SHRINKAGE	7,0 %
RATE T/R	2,0

MECHANICAL RESISTANCE

MODULUS OF ELASTICITY	90 1000 Kg/cm ²
MODULUS OF RUPTURE	100 Kg/cm ²
COMPRESSION PARALELL TO GRAIN	80 Kg/cm ²
QUARTEREDSAWED	8 Kg/cm ²
LATERAL HARDNESS	Kg
IMPACT BENDING	Kg-m

TECHNNICAL CONDITIONS FOR PROCESSING

MACHINING	Easy machining. Good finishing.
PRESERVATION	
NATURAL DURABILITY	Very durable when not in contact with soil. In humid conditions it can be attacked by blue stain.
DRYING	

END USES

Construction	Furniture
Carpentry	

Source: MDSP, FAO PAF-BOL, IBAMA, LPF “[Información Técnica para el Procesamiento Industrial de 134 especies maderables de Bolivia](#)”. Serie Técnica XI. 2002. (Translated by Fernando Aguilar . Marketing - CADEFOR)

CARI CARI

SPECIES IDENTIFICATION

SCIENTIFIC NAME	<i>Acacia polyphylla</i> A. DC.
FAMILY	LEG. MIMOSOIDEAE
COMMERCIAL NAME	Espinheiro preto
OTHER NAMES	Monjoleiro (Brazil)
DISTRIBUTION AREA	Amazonian forest, semideciduous, montane and plain forests, secondary forests. Departments of Beni, Chuquisaca, La Paz, Pando and Santa Cruz
REGION AND FREQUENCY	

TREE DESCRIPTION

TREETOP

TRUNK

Straight, commercial height averages 9 m

BARK

GENERAL CHARACTERISTICS

SAPWOOD COLOR	White	HEARTHWOOD COLOR	White
ODOR	Imperceptible	TASTE	
LUSTER	Absent	GRAIN	Straight
STRIPED		TEXTURE	Medium

ANATOMIC DESCRIPTION

ANNUAL GROWTH RINGS

Visibility

Average Number

PORES

Visibility

Porosity

Type

Shape

PARENCHYMA

Visibility

Quantity

Type

RADIUS

Visibility

Contrast

Stratification

PHYSICAL PROPERTIES

MOISTURE CONTENT (GREEN LUMBER)	96 %
BASIC DENSITY	0,6 g/cm ³
DENSITY (12% MOISTURE CONTENT)	0,74 g/cm ³
RADIAL SHRINKAGE	4,9 %
TANGENTIAL SHRINKAGE	10,1 %
VOLUMETRIC SHRINKAGE	14 %
RATE T/R	2,1

MECHANICAL RESISTANCE

MODULUS OF ELASTICITY	132 1000 Kg/cm ²
MODULUS OF RUPTURE	1066 Kg/cm ²
COMPRESSION PARALELL TO GRAIN	590 Kg/cm ²
QUARTEREDSAWED	117 Kg/cm ²
LATERAL HARDNESS	691 Kg
IMPACT BENDING	Kg-m

TECHNNICAL CONDITIONS FOR PROCESSING

MACHINING	Moderately easy. Good finishing
PRESERVATION	Permeable
NATURAL DURABILITY	
DRYING	Rather quick. Severe kiln schedule recommended. There is a risk of twisting.

END USES

Construction	Furniture
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Source: MDSP, FAO PAF-BOL, IBAMA, LPF “[Información Técnica para el Procesamiento Industrial de 134 especies maderables de Bolivia](#)”. Serie Técnica XI. 2002. (Translated by Fernando Aguilar . Marketing - CADEFOR)

CARIPE

SPECIES IDENTIFICATION

SCIENTIFIC NAME	<i>Aspidosperma cylindrocarpon</i> Müll. Arg.
FAMILY	APOCYNACEAE
COMMERCIAL NAME	Amarillo
OTHER NAMES	Canelo, costillo (Colombia), Pucaquiro, Pumaquiro (Peru), Amargo, cabo de hacha (Venezuela), Butba-osso (Brazil)
DISTRIBUTION AREA	Subtropical Forest in Departments of Cochabamba and Santa Cruz
REGION AND FREQUENCY	

TREE DESCRIPTION

TREETOP	Round and scattered. Simple and alternate leaves.
TRUNK	Irregular. Commercial heights up to 20 m
BARK	Coarse texture. Moderately fissured. Whitish color

GENERAL CHARACTERISTICS

SAPWOOD COLOR	White yellowish	HEARTHWOOD COLOR	Yellowish
ODOR	Distinctive	TASTE	Distinctive and bitter
LUSTER	Brigth	GRAIN	Interlocked
STRIPED	Tenuous	TEXTURE	Fine

ANATOMIC DESCRIPTION

ANNUAL GROWTH RINGS

Visibility	Visible at sight	Average Number	
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PORES

Visibility	With magnifying glass 10 x	magnifying Porosity	Diffuse
Type	Solitaires and multiples	Shape	

PARENCHYMA

Visibility	Visible at sight	Quantity	
Type	Narrow strips		

RADIUS

Visibility	With magnifying glass 10 x	magnifying Contrast	Present
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Stratification	Absent
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PHYSICAL PROPERTIES

MOISTURE CONTENT (GREEN LUMBER)	%
BASIC DENSITY	0.75 - 0.95 g/cm ³
DENSITY (12% MOISTURE CONTENT)	0,9 g/cm ³
RADIAL SHRINKAGE	%
TANGENTIAL SHRINKAGE	%
VOLUMETRIC SHRINKAGE	%
RATE T/R	

MECHANICAL RESISTANCE

MODULUS OF ELASTICITY	1000 Kg/cm ²
MODULUS OF RUPTURE	Kg/cm ²
COMPRESSION PARALELL TO GRAIN	Kg/cm ²
QUARTEREDSAWED	Kg/cm ²
LATERAL HARDNESS	Kg
IMPACT BENDING	Kg-m

TECHNNICAL CONDITIONS FOR PROCESSING

MACHINING

PRESERVATION

NATURAL DURABILITY

DRYING

END USES

Construction

Source: MDSP, FAO PAF-BOL, IBAMA, LPF “Información Técnica para el Procesamiento Industrial de 134 especies maderables de Bolivia”. Serie Técnica XI. 2002. (Translated by Fernando Aguilar . Marketing - CADEFOR)

CASTAÑA

SPECIES IDENTIFICATION

SCIENTIFIC NAME	<i>Bertholletia excelsa</i> H.B.K.
FAMILY	LECYTHIDACEAE
COMMERCIAL NAME	Castaña, Castanha, Castanheira, Brazil nut, Noix du Brésil, Paranuss
OTHER NAMES	Castanheira-do-Pará (Brazil), Almendro (Colombia), Iubia (Venezuela)
DISTRIBUTION AREA	Amazonian forest in Departments of Pando, northern La Paz and Northern Beni
REGION AND FREQUENCY	

TREE DESCRIPTION

TREETOP	Leafy and dominant
TRUNK	Straight, cylindrical. Commercial heights up to 50 m
BARK	Brown grayish color with superficial cracking

GENERAL CHARACTERISTICS

SAPWOOD COLOR	Light Brown redish	HEARTHWOOD COLOR	Light Brown redish
ODOR	Indistinct	TASTE	Indistinct
LUSTER	Medium	GRAIN	Straight
STRIPED	Tenuous	TEXTURE	Medium

ANATOMIC DESCRIPTION

ANNUAL GROWTH RINGS

Visibility	Visible at sight	Average Number	20 rings in a radius of 10 cm
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PORES

Visibility	Visible at sight	Porosity	Diffuse
Type	Solitaries and radial multiples of 4	Shape	

PARENCHYMA

Visibility	Visible at sight	Quantity	Scarce
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TYPE

RADIUS

Visibility	With magnifying glass 10 x	magnifying Contrast	Present
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Stratification	Absent
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PHYSICAL PROPERTIES

MOISTURE CONTENT (GREEN LUMBER)	74 %
BASIC DENSITY	0,63 g/cm ³
DENSITY (12% MOISTURE CONTENT)	0,68 g/cm ³
RADIAL SHRINKAGE	3,9 %
TANGENTIAL SHRINKAGE	8,3 %
VOLUMETRIC SHRINKAGE	11,2 %
RATE T/R	2,12

MECHANICAL RESISTANCE

MODULUS OF ELASTICITY	125 1000 Kg/cm ²
MODULUS OF RUPTURE	1033 Kg/cm ²
COMPRESSION PARALELL TO GRAIN	484 Kg/cm ²
QUARTEREDSAWED	Kg/cm ²
LATERAL HARDNESS	426 Kg
IMPACT BENDING	Kg-m

TECHNNICAL CONDITIONS FOR PROCESSING

MACHINING	Moderately easy.Good finishing.
PRESERVATION	Rather permeable
NATURAL DURABILITY	Durable, resistant to attack of fungi
DRYING	Air drying is rather quick and steady.

END USES

Decorative Veneer	Since harvesting and selling of the fruits (nuts) of this species is an important source of income, the wood is usually not utilized.
Furniture	
Cabinetry	
Construction	

Source: MDSP, FAO PAF-BOL, IBAMA, LPF “Información Técnica para el Procesamiento Industrial de 134 especies maderables de Bolivia”. Serie Técnica XI. 2002. (Translated by Fernando Aguilar . Marketing - CADEFOR)

CEDRO

SPECIES IDENTIFICATION

SCIENTIFIC NAME	<i>Cedrela odorata</i> L.
FAMILY	MELIACEAE
COMMERCIAL NAME	Cedro, Spanish – Cedar
OTHER NAMES	Cedro-rosa (Brazil), Cedro bitter, Culche (Mexico)
DISTRIBUTION AREA	Humid tropical and subtropical forests. Departments of Santa Cruz, Cochabamba, Beni, La Paz, Pando, Tarija and Chuquisaca
REGION AND FREQUENCY	Frequent in Guarayos and other regions

TREE DESCRIPTION

TREETOP	Wide, round and leafy. Composite alternate leaves
TRUNK	Straight, rather cylindrical, commercial heights up to 40 m
BARK	Corrugated, dark brown color, with redish grooves, aromatic, astringent

GENERAL CHARACTERISTICS

SAPWOOD COLOR	Yellowish	HEARTHWOOD COLOR	Ligth brown
ODOR	Fuerte Peculiar	TASTE	Astringente
LUSTER	Brigth	GRAIN	Straight
STRIPED	Tenuous	TEXTURE	Fine

ANATOMIC DESCRIPTION

ANNUAL GROWTH RINGS

Visibility	Visible at sight	Average Number	
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PORES

Visibility	Visible at sight	Porosity	Semicircular
Type	Solitaries and radial multiples	Shape	Round

PARENCHYMA

Visibility	Visible at sight	Quantity	Scarce
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Type	With centric vessels
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RADIUS

Visibility	Visible at sight	Contrast	Present
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Stratification	Absent
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PHYSICAL PROPERTIES

MOISTURE CONTENT (GREEN LUMBER)	82 %
BASIC DENSITY	0,38 g/cm ³
DENSITY (12% MOISTURE CONTENT)	0,5 g/cm ³
RADIAL SHRINKAGE	5,4 %
TANGENTIAL SHRINKAGE	8,6 %
VOLUMETRIC SHRINKAGE	14,7 %
RATE T/R	1,6

MECHANICAL RESISTANCE

MODULUS OF ELASTICITY	74 1000 Kg/cm ²
MODULUS OF RUPTURE	511 Kg/cm ²
COMPRESSION PARALELL TO GRAIN	400 Kg/cm ²
QUARTEREDSAWED	57 Kg/cm ²
LATERAL HARDNESS	697 Kg
IMPACT BENDING	0,84 Kg-m

TECHNNICAL CONDITIONS FOR PROCESSING

MACHINING	Easy machining. Good finishing.
PRESERVATION	Rather permeable
NATURAL DURABILITY	Low durability. . It needs preservarion treatment
DRYING	Kiln drying rather fast. A moderate kiln schedule is recommended.

END USES

Construction	Decorative Veneer
Doors	Furniture
Windows	Doors and window frames

Source: MDSP, FAO PAF-BOL, IBAMA, LPF “Información Técnica para el Procesamiento Industrial de 134 especies maderables de Bolivia”. Serie Técnica XI. 2002. (Translated by Fernando Aguilar . Marketing - CADEFOR)

COCO

SPECIES IDENTIFICATION

SCIENTIFIC NAME	<i>Guazuma ulmifolia</i> Lam.
FAMILY	STERCULIACE
COMMERCIAL NAME	Bay Cedar, Ajya
OTHER NAMES	Mutamba, Pau de motamba (Brazil)
DISTRIBUTION AREA	Humid plain and montane forests in Departments of Beni, Cochabamba, La Paz, Pando and Santa Cruz
REGION AND FREQUENCY	

TREE DESCRIPTION

TREETOP	Irregular, wide and leafy
TRUNK	Rather straight, strongly corrugated in the base. Commercial heights up to 25 m
BARK	Fissured. Brown color.

GENERAL CHARACTERISTICS

SAPWOOD COLOR	Pale chesnut	HEARTHWOOD COLOR	Pale chesnut
ODOR	Indistinct	TASTE	Indistinct
LUSTER	Medium	GRAIN	Straight to interlocked
STRIPED		TEXTURE	Coarse

ANATOMIC DESCRIPTION

ANNUAL GROWTH RINGS

Visibility	Average Number
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PORES

Visibility	Porosity
Type	Shape

PARENCHYMA

Visibility	Quantity
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RADIUS

Visibility	Contrast
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Stratification

PHYSICAL PROPERTIES

MOISTURE CONTENT (GREEN LUMBER)	%
BASIC DENSITY	0,57 g/cm ³
DENSITY (12% MOISTURE CONTENT)	0,59 g/cm ³
RADIAL SHRINKAGE	2,45 %
TANGENTIAL SHRINKAGE	4,55 %
VOLUMETRIC SHRINKAGE	2 %
RATE T/R	1,85

MECHANICAL RESISTANCE

MODULUS OF ELASTICITY	138 1000 Kg/cm ²
MODULUS OF RUPTURE	1085,5 Kg/cm ²
COMPRESSION PARALELL TO GRAIN	305 Kg/cm ²
QUARTEREDSAWED	Kg/cm ²
LATERAL HARDNESS	Kg
IMPACT BENDING	Kg-m

TECHNNICAL CONDITIONS FOR PROCESSING

MACHINING	Easy machining. Good finishing
PRESERVATION	Rather permeable
NATURAL DURABILITY	Los durability. The wood is susceptible to attack of termites
DRYING	

END USES

Packages and crating	Furniture
Construction	

Source: MDSP, FAO PAF-BOL, IBAMA, LPF “Información Técnica para el Procesamiento Industrial de 134 especies maderables de Bolivia”. Serie Técnica XI. 2002. (Translated by Fernando Aguilar . Marketing - CADEFOR)

COLORADILLO

SPECIES IDENTIFICATION

SCIENTIFIC NAME	<i>Licania oblongifolia</i> Standley
FAMILY	CHRYSOBALANACEAE
COMMERCIAL NAME	Marishballi, Anauta
OTHER NAMES	Macucu-chiador, parinari (Brazil), Ambure (Colombia)
DISTRIBUTION AREA	Subtropical, humid forests in Departments of Santa Cruz, Beni and Pando
REGION AND FREQUENCY	

TREE DESCRIPTION

TREETOP	Medium size. Intense green color. Simple alternate leaves
TRUNK	Straight and cylindrical with commercial heights up to 25 m
BARK	Gray color, fibrous texture. It contains a redish resin

GENERAL CHARACTERISTICS

SAPWOOD COLOR	Pink	HEARTHWOOD COLOR	Ligth brown
ODOR	Indistinct	TASTE	Indistinct
LUSTER	Medium	GRAIN	Straight to interlocked
STRIPED	Tenuous	TEXTURE	Medium

ANATOMIC DESCRIPTION

ANNUAL GROWTH RINGS

Visibility	Visible at sight	Average Number	23 rings in a radium of 10 cm.
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PORES

Visibility	Visible at sight	Porosity	Diffuse
Type	Solitaires	Shape	Round to oval

PARENCHYMA

Visibility	With magnifying glass 10 x	magnifying Quantity	Abundant
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Type	Apotraqueal diffuse in lines
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RADIUS

Visibility	With magnifying glass 10 x	magnifying Contrast	Absent
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Stratification	Absent
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PHYSICAL PROPERTIES

MOISTURE CONTENT (GREEN LUMBER)	78 %
BASIC DENSITY	0,56 g/cm3
DENSITY (12% MOISTURE CONTENT)	0,68 g/cm3
RADIAL SHRINKAGE	4,7 %
TANGENTIAL SHRINKAGE	9,3 %
VOLUMETRIC SHRINKAGE	14 %
RATE T/R	2

MECHANICAL RESISTANCE

MODULUS OF ELASTICITY	125 1000 Kg/cm2
MODULUS OF RUPTURE	1011 Kg/cm2
COMPRESSION PARALELL TO GRAIN	532 Kg/cm2
QUARTEREDSAWED	83 Kg/cm2
LATERAL HARDNESS	636 Kg
IMPACT BENDING	3.53 Kg-m

TECHNNICAL CONDITIONS FOR PROCESSING

MACHINING	Easy machining. Good finishing.
PRESERVATION	Rather permeable
NATURAL DURABILITY	Low durability. . It needs presevation treatment.
DRYING	A soft kiln schedule is recommended. There is a tendency to cracking in the board ends.

END USES

Construction	Flooring
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Source: MDSP, FAO PAF-BOL, IBAMA, LPF “Información Técnica para el Procesamiento Industrial de 134 especies maderables de Bolivia”. Serie Técnica XI. 2002. (Translated by Fernando Aguilar . Marketing - CADEFOR)

COLORADILLO DEL MONTE

SPECIES IDENTIFICATION

SCIENTIFIC NAME	<i>Byrsonima spicata</i> Rich. ex A.Juss.
FAMILY	MALPIGHIACEAE
COMMERCIAL NAME	Serrete
OTHER NAMES	Murici (Brazil), Chaparro (Colombia), Chupiraca (Peru), Candelo (Venezuela)
DISTRIBUTION AREA	Humid forests, foothills, Departments of Cochabamba, Beni and Santa Cruz
REGION AND FREQUENCY	

TREE DESCRIPTION

TREETOP

TRUNK Cylindrical, commercial heights up to 35 m

BARK Thickness from 15 to 20 mm

GENERAL CHARACTERISTICS

SAPWOOD COLOR	Brown to ligh brown	HEARTHWOOD COLOR	Brown
ODOR	Indistinct	TASTE	Indistincts
LUSTER	Medium	GRAIN	Straight to interlocked
STRIPED	Dark	TEXTURE	

ANATOMIC DESCRIPTION

ANNUAL GROWTH RINGS

Visibility Indistinct Average Number

PORES

Visibility Low Porosity Diffuse

Type Solitaires and geminated Shape

PARENCHYMA

Visibility Non visible, even with magnifying glass 10x Quantity Scarce

Type Paravascular

RADIUS

Visibility With magnifying glass 10 x magnifying Contrast Absent

Stratification Absent

PHYSICAL PROPERTIES

MOISTURE CONTENT (GREEN LUMBER)	%
BASIC DENSITY	0.6 - 0.79 g/cm ³
DENSITY (12% MOISTURE CONTENT)	0,79 g/cm ³
RADIAL SHRINKAGE	2.1 - 2.5 %
TANGENTIAL SHRINKAGE	5.1 - 6 %
VOLUMETRIC SHRINKAGE	6.6 - 8 %
RATE T/R	2,4

MECHANICAL RESISTANCE

MODULUS OF ELASTICITY	120 – 150 1000 Kg/cm ²
MODULUS OF RUPTURE	880 – 1785 Kg/cm ²
COMPRESSION PARALELL TO GRAIN	570 – 870 Kg/cm ²
QUARTEREDSAWED	13 - 18 Kg/cm ²
LATERAL HARDNESS	610 – 920 Kg
IMPACT BENDING	Kg-m

TECHNNICAL CONDITIONS FOR PROCESSING

MACHINING	Easy machining. Good finishing.
PRESERVATION	Rather permeable
NATURAL DURABILITY	Moderately durable
DRYING	

END USES

Construction	Decorative veneer
Flooring	

Source: MDSP, FAO PAF-BOL, IBAMA, LPF “Información Técnica para el Procesamiento Industrial de 134 especies maderables de Bolivia”. Serie Técnica XI. 2002. (Translated by Fernando Aguilar . Marketing - CADEFOR)

COPAIBO

SPECIES IDENTIFICATION

SCIENTIFIC NAME	<i>Copaifera reticulata</i> Ducke
FAMILY	LEG. CAESALPINIOIDEAE ou CAESALPINIACEAE
COMMERCIAL NAME	Copaiba
OTHER NAMES	Copaíba, Pau-d'óleo (Brazil), Canime (Colombia)
DISTRIBUTION AREA	Humid subtropical forests and humid temperate forests in Departments of Santa Cruz, Beni, Chuquisaca, Pando and Cochabamba
REGION AND FREQUENCY	Is considered an scarce species in Bolivian forests

TREE DESCRIPTION

TREETOP	Large and leafy. Bright foliage. Composite leaves
TRUNK	Straight and cylindrical. Commercial heights up to 30 m
BARK	Gray color. Coarse texture. Astringent taste. Aromatic and distinctive odor.

GENERAL CHARACTERISTICS

SAPWOOD COLOR	Ligth brown to whitish	HEARTHWOOD COLOR	Brown redish to dark
ODOR	Distinctive	TASTE	Astringente
LUSTER	Medium to bright	GRAIN	Straight to undulate
STRIPED	Tenuous	TEXTURE	Medium

ANATOMIC DESCRIPTION

ANNUAL GROWTH RINGS

Visibility	Visible at sight	Average Number	32 rings in a radium of 10 cm
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PORES

Visibility	Visible at sight	Porosity	Diffuse
Type	Solitaires and radial multiples	Shape	Round to oval

PARENCHYMA

Visibility	Visible at sight	Quantity	Abundant
Type	Paratraqueal with centric vessels		

RADIUS

Visibility	With magnifying glass 10 x	magnifying Contrast	Present
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Stratification	Absent
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PHYSICAL PROPERTIES

MOISTURE CONTENT (GREEN LUMBER)	55 %
BASIC DENSITY	0,6 g/cm ³
DENSITY (12% MOISTURE CONTENT)	0,73 g/cm ³
RADIAL SHRINKAGE	4,6 %
TANGENTIAL SHRINKAGE	7,5 %
VOLUMETRIC SHRINKAGE	12,1 %
RATE T/R	1,6

MECHANICAL RESISTANCE

MODULUS OF ELASTICITY	123 1000 Kg/cm ²
MODULUS OF RUPTURE	1264 Kg/cm ²
COMPRESSION PARALELL TO GRAIN	589 Kg/cm ²
QUARTEREDSAWED	114 Kg/cm ²
LATERAL HARDNESS	617 Kg
IMPACT BENDING	2,49 Kg-m

TECHNNICAL CONDITIONS FOR PROCESSING

MACHINING	Easy machining . Good finishing
PRESERVATION	Impermeable
NATURAL DURABILITY	Durable when not in contact with soil.
DRYING	A moderate kiln schedule is recommended. There is no tendency to any problem during drying, but is is important not to obstruct the pores.

END USES

Construction	Doors
Decorative veneer	Flooring
Láminas decorativas	

Source: MDSP, FAO PAF-BOL, IBAMA, LPF “[Información Técnica para el Procesamiento Industrial de 134 especies maderables de Bolivia](#)”. Serie Técnica XI. 2002. (Translated by Fernando Aguilar . Marketing - CADEFOR)

COPAL

SPECIES IDENTIFICATION

SCIENTIFIC NAME	<i>Dacryodes peruviana</i> (Loes) H. J. Lam
FAMILY	BURSERACEAE
COMMERCIAL NAME	Anime
OTHER NAMES	Gommier (Antillas), Anime and Copal (Ecuador), Tabonuco (Puerto Rico)
DISTRIBUTION AREA	Humid montane forest in Department of La Paz
REGION AND FREQUENCY	

TREE DESCRIPTION

TREETOP

TRUNK

BARK Brown redish with rounds little plaques

GENERAL CHARACTERISTICS

SAPWOOD COLOR	White grayish	HEARTHWOOD COLOR	White crema o white Pink
ODOR		TASTE	
LUSTER		GRAIN	Interlocked
STRIPED	Tenuous, almost imperceptible	TEXTURE	

ANATOMIC DESCRIPTION

ANNUAL GROWTH RINGS

Visibility Average Number

PORES

Visibility Porosity

Type Shape

PARENCHYMA

Visibility Quantity

Type

RADIUS

Visibility Contrast

Stratification

PHYSICAL PROPERTIES

MOISTURE CONTENT (GREEN LUMBER)	%
BASIC DENSITY	g/cm ³
DENSITY (12% MOISTURE CONTENT)	0,61 g/cm ³
RADIAL SHRINKAGE	5,1 %
TANGENTIAL SHRINKAGE	7,9 %
VOLUMETRIC SHRINKAGE	%
RATE T/R	1,5

MECHANICAL RESISTANCE

MODULUS OF ELASTICITY	115 1000 Kg/cm ²
MODULUS OF RUPTURE	1000 Kg/cm ²
COMPRESSION PARALELL TO GRAIN	500 Kg/cm ²
QUARTEREDSAWED	Kg/cm ²
LATERAL HARDNESS	Kg
IMPACT BENDING	Kg-m

TECHNNICAL CONDITIONS FOR PROCESSING

MACHINING	Easy sawing, but dulling problems can occur due to high silica content. Difficult machining due to interlocked grain. It requires reinforced tools. Good finishing
PRESERVATION	Impermeable
NATURAL DURABILITY	Low durability. . Susceptible to attack of insects. Resistance to fungi attack is moderate.
DRYING	A moderate kiln schedule is recommended.

END USES

Decorative veneer	Furniture
Moulding	Packages and crating

Source: MDSP, FAO PAF-BOL, IBAMA, LPF “Información Técnica para el Procesamiento Industrial de 134 especies maderables de Bolivia”. Serie Técnica XI. 2002. (Translated by Fernando Aguilar . Marketing - CADEFOR)

COQUINO

SPECIES IDENTIFICATION

SCIENTIFIC NAME	<i>Ardisia cubana</i> A.DC.
FAMILY	MYRSINACEAE
COMMERCIAL NAME	Coquino
OTHER NAMES	
DISTRIBUTION AREA	Subtropical humid subtropical forests in Departments of Santa Cruz, Cochabamba, Beni, Pando and La Paz
REGION AND FREQUENCY	Very frequent in Bajo Paraguá, Choré, Amazonian foothills and lowland Amazonia

TREE DESCRIPTION

TREETOP	Medium size. Intense green foliage. Simple alternate leaves
TRUNK	Irregular shape with protuberances. Commercial heights up to 30 m
BARK	White color with brown spots.

GENERAL CHARACTERISTICS

SAPWOOD COLOR	Pink	HEARTHWOOD COLOR	Ligth brown redish
ODOR	Indistinct	TASTE	Indistinct
LUSTER	Medium	GRAIN	Interlocked
STRIPED	Tenuous	TEXTURE	Fine

ANATOMIC DESCRIPTION

ANNUAL GROWTH RINGS

Visibility	With magnifying glass 10 x	magnifying Average Number	18 rings in a radium of 10 cm
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PORES

Visibility	With magnifying glass 10 x	magnifying Porosity	Diffuse
Type	Solitaries and multiples of 5	Shape	Open

PARENCHYMA

Visibility	With magnifying glass 10 x	magnifying Quantity	Regular
Type	Apotraqueal diffuse		

RADIUS

Visibility	With magnifying glass 10 x	magnifying Contrast	Absent
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Stratification	Absent
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PHYSICAL PROPERTIES

MOISTURE CONTENT (GREEN LUMBER)	70 %
BASIC DENSITY	0,62 g/cm ³
DENSITY (12% MOISTURE CONTENT)	0,76 g/cm ³
RADIAL SHRINKAGE	4,6 %
TANGENTIAL SHRINKAGE	10 %
VOLUMETRIC SHRINKAGE	14,5 %
RATE T/R	2,2

MECHANICAL RESISTANCE

MODULUS OF ELASTICITY	125 1000 Kg/cm ²
MODULUS OF RUPTURE	1013 Kg/cm ²
COMPRESSION PARALELL TO GRAIN	545 Kg/cm ²
QUARTEREDSAWED	104 Kg/cm ²
LATERAL HARDNESS	833 Kg
IMPACT BENDING	4,65 Kg-m

TECHNNICAL CONDITIONS FOR PROCESSING

MACHINING	Easy machining when the wood is green. Good finishing
PRESERVATION	Rather permeable
NATURAL DURABILITY	Durable when not in contact with soil.
DRYING	Air drying is rather quick. A severe kiln schedule is recommended.

END USES

Construction	Flooring
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Source: MDSP, FAO PAF-BOL, IBAMA, LPF “[Información Técnica para el Procesamiento Industrial de 134 especies maderables de Bolivia](#)”. Serie Técnica XI. 2002. (Translated by Fernando Aguilar . Marketing - CADEFOR)

CORAZON PURPURA

SPECIES IDENTIFICATION

SCIENTIFIC NAME	<i>Peltogyne heterophylla</i> M.F. Silva
FAMILY	LEG. CAESELPINIODEAE
COMMERCIAL NAME	Purpleheart
OTHER NAMES	Roxinho (Brazil), Tananeo (Colombia), Nazareno (Panamá), Zapatero (Venezuela)
DISTRIBUTION AREA	
REGION AND FREQUENCY	

TREE DESCRIPTION

TREETOP	
TRUNK	With cross circular sections.
BARK	Grayish color

GENERAL CHARACTERISTICS

SAPWOOD COLOR	Pink	HEARTHWOOD COLOR	After sawing it turns violet and afterwards it gets brown.
ODOR	Indistinct	TASTE	
LUSTER	Medium to high	GRAIN	Interlocked
STRIPED	Tenuous	TEXTURE	Fine

ANATOMIC DESCRIPTION

ANNUAL GROWTH RINGS	
Visibility	Average Number
PORES	
Visibility	Porosity
Type	Shape
PARENCHYMA	
Visibility	Quantity
Type	
RADIUS	
Visibility	Contrast
Stratification	

PHYSICAL PROPERTIES

MOISTURE CONTENT (GREEN LUMBER)	%
BASIC DENSITY	0,87 g/cm ³
DENSITY (12% MOISTURE CONTENT)	0,95 g/cm ³
RADIAL SHRINKAGE	4,8 %
TANGENTIAL SHRINKAGE	7,2 %
VOLUMETRIC SHRINKAGE	%
RATE T/R	1,5

MECHANICAL RESISTANCE

MODULUS OF ELASTICITY	166 1000 Kg/cm ²
MODULUS OF RUPTURE	1520 Kg/cm ²
COMPRESSION PARALELL TO GRAIN	774 Kg/cm ²
QUARTEREDSAWED	Kg/cm ²
LATERAL HARDNESS	Kg
IMPACT BENDING	Kg-m

TECHNNICAL CONDITIONS FOR PROCESSING

MACHINING	Somewhat difficult.
PRESERVATION	Impermeable
NATURAL DURABILITY	Durable, resistant to attack of fungi and insects.
DRYING	A moderate kiln schedule is recommended.

END USES

Flooring	Construction
Decorative veneer	Furniture

Source: MDSP, FAO PAF-BOL, IBAMA, LPF “[Información Técnica para el Procesamiento Industrial de 134 especies maderables de Bolivia](#)”. Serie Técnica XI. 2002. (Translated by Fernando Aguilar . Marketing - CADEFOR)

CUCHI

SPECIES IDENTIFICATION

SCIENTIFIC NAME	<i>Astronium urundeuva</i> (Allemão) Engl.
FAMILY	ANACARDIACEAE
COMMERCIAL NAME	Aroeira, Urunday
OTHER NAMES	Urundel (Argentina), Arocirá preta, Aroeira do sertão, chibatan, Gonçalves Alves, Urundeuva* (Brazil), Quiebra hacha, urundel (Colombia), Urundey mi (Paraguay)
DISTRIBUTION AREA	Dry temperate forest in transition to temperate humid forests*. Also in semideciduous secondary forests. Departments of Santa Cruz, Chuquisaca and Tarija
REGION AND FREQUENCY	Very frequent in the Chiquitania region

TREE DESCRIPTION

TREETOP	Narrow
TRUNK	Straight and cylindrical with little corrugation. Commercial heights up to 40* m
BARK	Dark gray to dark brown, cracked, coarse texture, hard and thick with deep fissures.

GENERAL CHARACTERISTICS

SAPWOOD COLOR	Yellowish con slightly Pinkish	HEARTHWOOD COLOR	Brown redish
ODOR	Distinctive	TASTE	Distinctive and bitter
LUSTER	Medium	GRAIN	Interlocked
STRIPED	Tenuous	TEXTURE	Fine

ANATOMIC DESCRIPTION

ANNUAL GROWTH RINGS

Visibility	Visible at sight	Average Number	
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PORES

Visibility	With magnifying magnifying glass 10 x	Porosity	Diffuse
Type	Solitaires	Shape	Closed

PARENCHYMA

Visibility	With magnifying magnifying glass 10 x	Quantity	Scarce
Type	Paratraqueal with centric vessels		

RADIUS

Visibility	Hard to see even with magnifying glass 10 x	Contrast	Present
Stratification	Present		

PHYSICAL PROPERTIES

MOISTURE CONTENT (GREEN LUMBER)	%
BASIC DENSITY	0,99 g/cm ³
DENSITY (12% MOISTURE CONTENT)	1,22 g/cm ³
RADIAL SHRINKAGE	3,7 %
TANGENTIAL SHRINKAGE	7,5 %
VOLUMETRIC SHRINKAGE	12,5 %
RATE T/R	2

MECHANICAL RESISTANCE

MODULUS OF ELASTICITY	152 1000 Kg/cm ²
MODULUS OF RUPTURE	1355 Kg/cm ²
COMPRESSION PARALELL TO GRAIN	644 (740*) Kg/cm ²
QUARTEREDSAWED	202 Kg/cm ²
LATERAL HARDNESS	1417 (1440*) Kg
IMPACT BENDING	Kg-m

TECHNNICAL CONDITIONS FOR PROCESSING

MACHINING	Regular planing*. Good moulding, sanding, turning and boring*. High blunting effect*. Good finishing.
PRESERVATION	Impermeable.
NATURAL DURABILITY	Extremely durable*. Extremely resistant to humid conditions even in contact with soil.
DRYING	Slow air drying with risks of twisting and cracking. Kiln drying T1 – B1 (USA)*. Predisposition to severe cracks and twists.*

END USES

Heavy construction*	Sleepers
Decorative veneer*	Outdoor furniture*
Flooring*	Rustic pieces of furniture*
Poles*	Carpentry works*
Wood carvings*	Truck beds*

Source 1: MDSP, FAO PAF-BOL, IBAMA, LPF “Información Técnica para el Procesamiento Industrial de 134 especies maderables de Bolivia”. Serie Técnica XI. 2002. (Translated by Fernando Aguilar . Marketing - CADEFOR)

(*) Source 2. CFB, PROMABOSQUE, BOLFOR, SCC, FAO PAF-BOL. Bolivian Woods. 1999.

CUQUI

SPECIES IDENTIFICATION

SCIENTIFIC NAME	<i>Lonchocarpus muehlbergianus</i> Hassl.
FAMILY	FABACEAE
COMMERCIAL NAME	Black cabbage - Bark, Sindjaple
OTHER NAMES	Imbira de sapo, Timbo (Brazil), Macaratú (Colombia), Marajagua (Venezuela)
DISTRIBUTION AREA	Subtropical humid forests in Departments of Santa Cruz and Beni
REGION AND FREQUENCY	

TREE DESCRIPTION

TREETOP	Parasol- shaped. Composite alternate leaves
TRUNK	Straight and cylindrical with commercial heights up to 30 m
BARK	Grayish color, rather smooth, thin bark.

GENERAL CHARACTERISTICS

SAPWOOD COLOR	White yellowish	HEARTHWOOD COLOR	Yellow
ODOR	Indistinct	TASTE	Indistinct
LUSTER	Faint to Medium	GRAIN	Straight to interlocked
STRIPED	Tenuous	TEXTURE	

ANATOMIC DESCRIPTION

ANNUAL GROWTH RINGS

Visibility	Average Number
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PORES

Visibility	Visible at sight	Porosity	Diffuse
Type	Solitaires and radial multiples	Shape	

PARENCHYMA

Visibility	Quantity
Type	Paratraqueal with centric vessels

RADIUS

Visibility	With magnifying glass 10 x	magnifying Contrast
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Stratification	Present
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PHYSICAL PROPERTIES

MOISTURE CONTENT (GREEN LUMBER)	%
BASIC DENSITY	0,54 g/cm ³
DENSITY (12% MOISTURE CONTENT)	0,66 g/cm ³
RADIAL SHRINKAGE	4,4 %
TANGENTIAL SHRINKAGE	8,9 %
VOLUMETRIC SHRINKAGE	13,9 %
RATE T/R	2,1

MECHANICAL RESISTANCE

MODULUS OF ELASTICITY	214 1000 Kg/cm ²
MODULUS OF RUPTURE	798 Kg/cm ²
COMPRESSION PARALELL TO GRAIN	497 Kg/cm ²
QUARTEREDSAWED	Kg/cm ²
LATERAL HARDNESS	649 Kg
IMPACT BENDING	Kg-m

TECHNNICAL CONDITIONS FOR PROCESSING

MACHINING	Usually easy sawing and planing , moulding and finishing. Some difficulties may ocur in sections with interlocked grain.
PRESERVATION	Permeable
NATURAL DURABILITY	Low durability. The wood is susceptible to blue stain when green
DRYING	Slow air drying. A soft kiln drying is recommended.

END USES

Construction	Furniture
Decorative veneer	

Source: MDSP, FAO PAF-BOL, IBAMA, LPF “[Información Técnica para el Procesamiento Industrial de 134 especies maderables de Bolivia](#)”. Serie Técnica XI. 2002. (Translated by Fernando Aguilar . Marketing - CADEFOR)

CURUPAU

SPECIES IDENTIFICATION

SCIENTIFIC NAME	<i>Anadenanthera colubrina</i> (Vell.) Brenan
FAMILY	LEG. MIMOSOIDEAE (Leguminosae – Mimosaceae*)
COMMERCIAL NAME	Curupay
OTHER NAMES	Cebil colorado (Argentina), Acacia (Bolivia), Angico-preto (Brazil), Kurupay* (Paraguay)
DISTRIBUTION AREA	Curupay is found in forests ranging from humid subtropical to dry temperate forests*. Departments of Santa Cruz, Beni, Cochabamba, Chuquisaca, Tarija and La Paz
REGION AND FREQUENCY	Very frequent in Chiquitanía, Guarayos and Choré

TREE DESCRIPTION

TREETOP	Open and sparsed, medium size, green yellowish foliage, composite and alternate leaves
TRUNK	Straight. It reaches commercial heights up to 30* m
BARK	Grayish color, coarse texture, fissured and cracked.

GENERAL CHARACTERISTICS

SAPWOOD COLOR	Pale pink	HEARTHWOOD COLOR	Darkish-brown*
ODOR	Indistinct	TASTE	Distinctive and astringent
LUSTER	Medium to bright	GRAIN	Interlocked
STRIPED	Tenuous	TEXTURE	Medium to Fine

ANATOMIC DESCRIPTION

ANNUAL GROWTH RINGS

Visibility	Visible at sight	Average Number	26 rings in a radium of 10 cm
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PORES

Visibility	Visible at sight	Porosity	Diffuse
Type	Solitaires and numerous	Shape	Round to oval

PARENCHYMA

Visibility	Visible at sight	Quantity	Abundant
Type	Paratraqueal with centric vessels		

RADIUS

Visibility	With magnifying glass 10 x	magnifying Contrast	Absent
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Stratification	Absent
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PHYSICAL PROPERTIES

MOISTURE CONTENT (GREEN LUMBER)	40 %
BASIC DENSITY	0,85 g/cm ³
DENSITY (12% MOISTURE CONTENT)	1,03 g/cm ³
RADIAL SHRINKAGE	4,2 %
TANGENTIAL SHRINKAGE	8,4 %
VOLUMETRIC SHRINKAGE	12,7 %
RATE T/R	2

MECHANICAL RESISTANCE

MODULUS OF ELASTICITY	192 1000 Kg/cm ²
MODULUS OF RUPTURE	1672 Kg/cm ²
COMPRESSION PARALELL TO GRAIN	839 Kg/cm ²
QUARTEREDSAWED	163 Kg/cm ²
LATERAL HARDNESS	1990 Kg
IMPACT BENDING	6,43 Kg-m

TECHNNICAL CONDITIONS FOR PROCESSING

MACHINING	Good planing when cut with and angle of 15° . Regular moulding and boring*, excellent sanding; good turning and finishing*. High blunting effect*.
PRESERVATION	Impermeable to preservation treatments
NATURAL DURABILITY	Very durable, even in contact with soil.
DRYING	Air drying time is rather quickly*, with tendency to twist and crack*. Kiln schedule T8 – B3 and T5 – B1 (USA)*

END USES

Heavy construction*	Sleepers
Doors and windows frames	Flooring
Garden furniture*	Stairways*
Decking*	Wood carvings*
Decorative veneer*	Truck beds*
Turnery*	

Source 1: MDSP, FAO PAF-BOL, IBAMA, LPF “[Información Técnica para el Procesamiento Industrial de 134 especies maderables de Bolivia](#)”. Serie Técnica XI. 2002. (Translated by Fernando Aguilar . Marketing - CADEFOR)

(*) Source 2. CFB, PROMABOSQUE, BOLFOR, SCC, FAO PAF-BOL. [Bolivian Woods](#). 1999.

CUTA

SPECIES IDENTIFICATION

SCIENTIFIC NAME	<i>Phyllostylon rhamnoides</i> (Poisson) Taubert
FAMILY	ULMACEAE
COMMERCIAL NAME	San Domingo - Boxwood
OTHER NAMES	Ibirá Catú (Argentina), Juasy Guasu (Paraguay)
DISTRIBUTION AREA	Cuta is found in forests ranging from humid subtropical to dry temperate forests*. Departments of La Paz and Santa Cruz
REGION AND FREQUENCY	Frequent in Chiquitania, Bajo Paraguá, Guarayos, Amazonian foothills and lowland Amazonia

TREE DESCRIPTION

TREETOP	Narrow. Simple and alternate leaves.
TRUNK	Conical with buttresses . Commercial heights up to 30 m*
BARK	White Grayish color, corrugated.

GENERAL CHARACTERISTICS

SAPWOOD COLOR	White yellowish to Yellow	HEARTHWOOD COLOR	White yellowish to intense yellow
ODOR	Indistinct	TASTE	Indistinct
LUSTER		GRAIN	Straight
STRIPED	Very tenuous	TEXTURE	Fine

ANATOMIC DESCRIPTION

ANNUAL GROWTH RINGS

Visibility			Average Number	
PORES				
Visibility	With magnifying glass 10 x	magnifying	Porosity	Diffuse
Type	Solitaires and multiples of 5		Shape	Open
PARENCHYMA				
Visibility			Quantity	Scarce
Type	Paratraqueal with centric vessels confluent			
RADIUS				
Visibility			Contrast	Present
Stratification	Present			

PHYSICAL PROPERTIES

MOISTURE CONTENT (GREEN LUMBER)	%
BASIC DENSITY	0,72 (0,79*) g/cm ³
DENSITY (12% MOISTURE CONTENT)	0,95 g/cm ³
RADIAL SHRINKAGE	3,3 %
TANGENTIAL SHRINKAGE	7,3 (8,2*) %
VOLUMETRIC SHRINKAGE	12,6 %
RATE T/R	2,2

MECHANICAL RESISTANCE

MODULUS OF ELASTICITY	130 1000 Kg/cm ²
MODULUS OF RUPTURE	1024 Kg/cm ²
COMPRESSION PARALELL TO GRAIN	615 (509*) Kg/cm ²
QUARTEREDSAWED	Kg/cm ²
LATERAL HARDNESS	1230 (1364*) Kg
IMPACT BENDING	Kg-m

TECHNNICAL CONDITIONS FOR PROCESSING

MACHINING	Good planing, moulding, boring, sanding*. Excellent turning*. Medium blunting effect*. Good finishing*
PRESERVATION	Impermeable to preservation treatment
NATURAL DURABILITY	Durable, specially for parts non in contact with soil
DRYING	Air drying is rather quick, with riks of twisting and cracking*. Kiln drying T2-B2 (USA)*

END USES

Construction	Decorative veneer
Flooring	Mouldings*
Tool handles*	Turnery*
Panels*	

Source 1: MDSP, FAO PAF-BOL, IBAMA, LPF “[Información Técnica para el Procesamiento Industrial de 134 especies maderables de Bolivia](#)”. Serie Técnica XI. 2002. (Translated by Fernando Aguilar . Marketing - CADEFOR)

(*) Source 2. CFB, PROMABOSQUE, BOLFOR, SCC, FAO PAF-BOL. [Bolivian Woods](#). 1999.

CUTA DEL BAJO PARAGUA

SPECIES IDENTIFICATION

SCIENTIFIC NAME	<i>Apuleia leiocarpa</i> (J.Vogel) J.F. Macbride
FAMILY	LEG. CAESALPINIOIDEAE ou CAESALPINIACEAE
COMMERCIAL NAME	Garapa, Almendrillo Amarillo
OTHER NAMES	Garapeira, Grapiá, Muirajuba (Brazil), Cobre (Colombia), Ana, Ana caspi (Peru), Gateado, Mapurite (Venezuela)
DISTRIBUTION AREA	Bajo Paragua, preandean region and Amazonia
REGION AND FREQUENCY	

TREE DESCRIPTION

TREETOP	Parasol- shaped. Disperse foliage, Green yellowish color. Composite alternate leaves.
TRUNK	It reaches heighths up to 30 m, and diameters from 80 to 150 cm. Cylindrical, with buttresses .
BARK	Smooth to slightly granulated

GENERAL CHARACTERISTICS

SAPWOOD COLOR	Light yellow	HEARTHWOOD COLOR	Yellow to brown Yellow
ODOR	Distinctivemendoin	TASTE	Indistinct
LUSTER	Medium	GRAIN	Interlocked
STRIPED	Tenuous	TEXTURE	Fine to media

ANATOMIC DESCRIPTION

ANNUAL GROWTH RINGS

Visibility	Visible at sight	Average Number	6 rings in a radium of 2.5 cm
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PORES

Visibility	Visbles con magnifying glass of 10 x	Porosity	Disfusa
Type	Solitaries and multiplos of 2 and 3	Shape	Round

PARENCHYMA

Visibility	Visble with magnifying glass of 10 x	Quantity	
Type	Paratraqueal aliform lineal and paratraqueal confluent		

RADIUS

Visibility	Visble with magnifying glass of 10 x	Contrast	Absent
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PHYSICAL PROPERTIES

MOISTURE CONTENT (GREEN LUMBER)	%
BASIC DENSITY	0.75-0.95 g/cm ³
DENSITY (12% MOISTURE CONTENT)	0,95 g/cm ³
RADIAL SHRINKAGE	%
TANGENTIAL SHRINKAGE	%
VOLUMETRIC SHRINKAGE	%
RATE T/R	

MECHANICAL RESISTANCE

MODULUS OF ELASTICITY	1000 Kg/cm ²
MODULUS OF RUPTURE	Kg/cm ²
COMPRESSION PARALELL TO GRAIN	Kg/cm ²
QUARTEREDSAWED	Kg/cm ²
LATERAL HARDNESS	Kg
IMPACT BENDING	Kg-m

TECHNNICAL CONDITIONS FOR PROCESSING

MACHINING	Moderately difficult to work, due to high silica content
PRESERVATION	Impermeable
NATURAL DURABILITY	Durable, resistant to attack of fungi and insects
DRYING	

END USES

Structural and Naval Construction	Truck beds
	Flooring

Source: MDSP, FAO PAF-BOL, IBAMA, LPF “[Información Técnica para el Procesamiento Industrial de 134 especies maderables de Bolivia](#)”. Serie Técnica XI. 2002. (Translated by Fernando Aguilar . Marketing - CADEFOR)

CHARI

SPECIES IDENTIFICATION

SCIENTIFIC NAME	<i>Parapiptadenia excelsa</i> (Griseb.) Burkart
FAMILY	MIMOSOIDEAE
COMMERCIAL NAME	
OTHER NAMES	
DISTRIBUTION AREA	In dry forest, region of Chaco and interandean forests. Departments of La Paz, santa Cruz and Tarija
REGION AND FREQUENCY	

TREE DESCRIPTION

TREETOP	Wide, light green color with extended branches
TRUNK	Straight and cylindrical. Commercial heights up to 15 m
BARK	Brown grayish color, corrugated. Contains tannin.

GENERAL CHARACTERISTICS

SAPWOOD COLOR	Pink	HEARTHWOOD COLOR	Ligth brown pinkish
ODOR	Indistinct	TASTE	Slightly astringent
LUSTER		GRAIN	Interlocked
STRIPED		TEXTURE	

ANATOMIC DESCRIPTION

ANNUAL GROWTH RINGS

Visibility	Average Number
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PORES

Visibility	Porosity	Diffuse
Type	Biseriates, and triserial and solitaires	Shape

PARENCHYMA

Visibility	With magnifying glass 10 x	magnifying Quantity
Type	Paratraqueal and apotraqueal	

RADIUS

Visibility	Contrast	Present
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Stratification	Present
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PHYSICAL PROPERTIES

MOISTURE CONTENT (GREEN LUMBER)	%
BASIC DENSITY	0,74 g/cm ³
DENSITY (12% MOISTURE CONTENT)	0,79 g/cm ³
RADIAL SHRINKAGE	3 %
TANGENTIAL SHRINKAGE	6,2 %
VOLUMETRIC SHRINKAGE	9,2 %
RATE T/R	2,1

MECHANICAL RESISTANCE

MODULUS OF ELASTICITY	1000 Kg/cm ²
MODULUS OF RUPTURE	1260 Kg/cm ²
COMPRESSION PARALELL TO GRAIN	650 Kg/cm ²
QUARTEREDSAWED	Kg/cm ²
LATERAL HARDNESS	1215 Kg
IMPACT BENDING	Kg-m

TECHNNICAL CONDITIONS FOR PROCESSING

MACHINING	Machining in green is recommended
PRESERVATION	Impermeable
NATURAL DURABILITY	Durable, even in contact with soil
DRYING	

END USES

Construction	Flooring
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Source : MDSP, FAO PAF-BOL, IBAMA, LPF “Información Técnica para el Procesamiento Industrial de 134 especies maderables de Bolivia”. Serie Técnica XI. 2002. (Translated by Fernando Aguilar . Marketing - CADEFOR)

CHEPEREQUE

SPECIES IDENTIFICATION

SCIENTIFIC NAME	<i>Jacaranda copaia</i> (Aubl.) D. Don
FAMILY	BIGNONIACEAE
COMMERCIAL NAME	Caroba, Parapará
OTHER NAMES	Caroba, Parapará (Brazil), Gualanday (Colombia), Arabisco (Ecuador), Chicharra caspi (Peru), Gualanday (Peru)
DISTRIBUTION AREA	In secondary forests
REGION AND FREQUENCY	

TREE DESCRIPTION

TREETOP	Formed by few branches , almost vertical orientation. Crown by a leafy crest.
TRUNK	Straight and cylindrical, with gross roots. Height averages 13 m
BARK	Grayish color. Brittle structure. Thickness varies from 0,5 to 2 cm

GENERAL CHARACTERISTICS

SAPWOOD COLOR	White yellowish	HEARTHWOOD COLOR	White yellowish
ODOR	Indistinct	TASTE	Indistinct
LUSTER	Medium	GRAIN	Straight
STRIPED	Tenuous	TEXTURE	Medium

ANATOMIC DESCRIPTION

ANNUAL GROWTH RINGS

Visibility	Indistincts	Average Number	
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PORES

Visibility	Visible at sight	Porosity	Diffuse
Type	Solitaires, multiples of 2 o 3	Shape	Round

PARENCHYMA

Visibility	With magnifying glass 10 x	magnifying Quantity	Scarce
Type	Paratraqueal aliform		

RADIUS

Visibility	Visible at sight	Contrast	Present
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Stratification	Absent
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PHYSICAL PROPERTIES

MOISTURE CONTENT (GREEN LUMBER)	%
BASIC DENSITY	0,31 g/cm ³
DENSITY (12% MOISTURE CONTENT)	0,37 g/cm ³
RADIAL SHRINKAGE	5,4 %
TANGENTIAL SHRINKAGE	8,2 %
VOLUMETRIC SHRINKAGE	13,9 %
RATE T/R	1,51

MECHANICAL RESISTANCE

MODULUS OF ELASTICITY	89 1000 Kg/cm ²
MODULUS OF RUPTURE	562 Kg/cm ²
COMPRESSION PARALELL TO GRAIN	313 Kg/cm ²
QUARTEREDSAWED	61 Kg/cm ²
LATERAL HARDNESS	336 Kg
IMPACT BENDING	Kg-m

TECHNNICAL CONDITIONS FOR PROCESSING

MACHINING	Moderately easy. Good finishing
PRESERVATION	Permeable
NATURAL DURABILITY	Low durability. , specially in contact with soil
DRYING	Very quick, with moderate tendency to twist . A soft kiln schedule is recommended.

END USES

Furniture	Plywood
Packages and crating	

Source : MDSP, FAO PAF-BOL, IBAMA, LPF “[Información Técnica para el Procesamiento Industrial de 134 especies maderables de Bolivia](#)”. Serie Técnica XI. 2002. (Translated by Fernando Aguilar . Marketing - CADEFOR)

ENCHOQUE

SPECIES IDENTIFICATION

SCIENTIFIC NAME	<i>Cariniana</i> sp.
FAMILY	LECYTHIDACEAE
COMMERCIAL NAME	Yesquero
OTHER NAMES	Jequitiba-rosa (Brazil)
DISTRIBUTION AREA	
REGION AND FREQUENCY	

TREE DESCRIPTION

TREETOP	Wide, redish color.
TRUNK	It reaches with diameter up to 1,5 m.
BARK	Grayish color

GENERAL CHARACTERISTICS

SAPWOOD COLOR	Light brown yellowish	HEARTHWOOD COLOR	Brown yellowish
ODOR	Indistinct	TASTE	Indistinct
LUSTER	Medium	GRAIN	Straight
STRIPED		TEXTURE	

ANATOMIC DESCRIPTION

ANNUAL GROWTH RINGS

Visibility		Average Number	
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PORES

Visibility	Visible at sight	Porosity	Diffuse
Type	Solitaires and multiples of 2	Shape	

PARENCHYMA

Visibility	With magnifying glass 10 x	magnifying Quantity	Abundant
Type	Sinuuous, forming a irregular reticulation		

RADIUS

Visibility	With magnifying glass 10 x	magnifying Contrast	Present in radial phase
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Stratification

PHYSICAL PROPERTIES

MOISTURE CONTENT (GREEN LUMBER)	%
BASIC DENSITY	0.55 - 0.6 g/cm ³
DENSITY (12% MOISTURE CONTENT)	g/cm ³
RADIAL SHRINKAGE	%
TANGENTIAL SHRINKAGE	%
VOLUMETRIC SHRINKAGE	%
RATE T/R	

MECHANICAL RESISTANCE

MODULUS OF ELASTICITY	1000 Kg/cm ²
MODULUS OF RUPTURE	Kg/cm ²
COMPRESSION PARALELL TO GRAIN	Kg/cm ²
QUARTEREDSAWED	Kg/cm ²
LATERAL HARDNESS	Kg
IMPACT BENDING	Kg-m

TECHNNICAL CONDITIONS FOR PROCESSING

MACHINING	Easy machining and finishing. Regular finishing
PRESERVATION	
NATURAL DURABILITY	
DRYING	

END USES

Construction	Furniture
Doors	

Source : MDSP, FAO PAF-BOL, IBAMA, LPF “Información Técnica para el Procesamiento Industrial de 134 especies maderables de Bolivia”. Serie Técnica XI. 2002. (Translated by Fernando Aguilar . Marketing - CADEFOR)

ERIZO

SPECIES IDENTIFICATION

SCIENTIFIC NAME	<i>Apeiba tibourbou</i> Aublet
FAMILY	TILIACEAE
COMMERCIAL NAME	Corho
OTHER NAMES	Pau de jangada (Brazil)
DISTRIBUTION AREA	Amazonian forest and humid montane forest in Departments of Beni, Santa Cruz, La Paz and Pando
REGION AND FREQUENCY	

TREE DESCRIPTION

TREETOP

TRUNK Cylindrical, commercial heights up to 20 m

BARK With vertically-oriented fissures

GENERAL CHARACTERISTICS

SAPWOOD COLOR	White to lighth brown	HEARTHWOOD COLOR	White to light brown
ODOR		TASTE	
LUSTER	Medium to bright	GRAIN	Straight
STRIPED		TEXTURE	

ANATOMIC DESCRIPTION

ANNUAL GROWTH RINGS

Visibility **Average Number**

PORES

Visibility **Porosity**

Type **Shape**

PARENCHYMA

Visibility **Quantity**

Type

RADIUS

Visibility **Contrast**

Stratification

PHYSICAL PROPERTIES

MOISTURE CONTENT (GREEN LUMBER)	%
BASIC DENSITY	0.2 - 0.29 g/cm ³
DENSITY (12% MOISTURE CONTENT)	g/cm ³
RADIAL SHRINKAGE	2.1 - 3 %
TANGENTIAL SHRINKAGE	3.0 - 5.0 %
VOLUMETRIC SHRINKAGE	%
RATE T/R	1.5 - 1.7

MECHANICAL RESISTANCE

MODULUS OF ELASTICITY	< 100 1000 Kg/cm ²
MODULUS OF RUPTURE	510 – 870 Kg/cm ²
COMPRESSION PARALELL TO GRAIN	210 – 350 Kg/cm ²
QUARTEREDSAWED	90 – 130 Kg/cm ²
LATERAL HARDNESS	Kg
IMPACT BENDING	Kg-m

TECHNNICAL CONDITIONS FOR PROCESSING

MACHINING	Easy machining.
PRESERVATION	
NATURAL DURABILITY	Low durability.
DRYING	

END USES

Packages and crating	Plywood
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Source: MDSP, FAO PAF-BOL, IBAMA, LPF “Información Técnica para el Procesamiento Industrial de 134 especies maderables de Bolivia”. Serie Técnica XI. 2002. (Translated by Fernando Aguilar . Marketing - CADEFOR)

EUCALIPTO

SPECIES IDENTIFICATION

SCIENTIFIC NAME	<i>Eucaliptus globulus</i> Labill.
FAMILY	MYRTACEAE
COMMERCIAL NAME	Bluegum, Eucaliptus
OTHER NAMES	Ocalito, Eucalipto plateado (Colombia), Scal, Blue-gum tree, Gommier bleu (EE.UU.)
DISTRIBUTION AREA	Low montane forest in Department of La Paz
REGION AND FREQUENCY	Is considered an scarce species in Bolivian forests

TREE DESCRIPTION

TREETOP	Elongated, with angular branches and alternate leaves
TRUNK	Straight and cylindrical, commercial heights up to 60 m
BARK	Brown grayish color in external side. Light brown color in internal side

GENERAL CHARACTERISTICS

SAPWOOD COLOR	Pale Brown	HEARTHWOOD COLOR	Pale brown to Pink grayish
ODOR	Distinctive	TASTE	Distinctive
LUSTER	Medium	GRAIN	Straight to slightly interlocked
STRIPED	Tenuous	TEXTURE	Medium

ANATOMIC DESCRIPTION

ANNUAL GROWTH RINGS

Visibility	Visible at sight	Average Number	19 rings in a radium of 10 cm
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PORES

Visibility	Visible at sight	Porosity	Diffuse
Type	Solitaires	Shape	Oval and open

PARENCHYMA

Visibility	Visible at sight	Quantity	Regular
Type	Paratraqueal with centric vessels. Aliform		

RADIUS

Visibility	With magnifying glass 10 x	magnifying Contrast	Absent
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Stratification	Absent
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PHYSICAL PROPERTIES

MOISTURE CONTENT (GREEN LUMBER)	111 %
BASIC DENSITY	0,55 g/cm ³
DENSITY (12% MOISTURE CONTENT)	0,73 g/cm ³
RADIAL SHRINKAGE	6,7 %
TANGENTIAL SHRINKAGE	14,2 %
VOLUMETRIC SHRINKAGE	19,9 %
RATE T/R	2,2

MECHANICAL RESISTANCE

MODULUS OF ELASTICITY	138 1000 Kg/cm ²
MODULUS OF RUPTURE	1068 Kg/cm ²
COMPRESSION PARALELL TO GRAIN	470 Kg/cm ²
QUARTEREDSAWED	117 Kg/cm ²
LATERAL HARDNESS	442 Kg
IMPACT BENDING	3,45 Kg-m

TECHNNICAL CONDITIONS FOR PROCESSING

MACHINING	Moderately easy when wood is dried. Difficult to machine in green. Good finishing
PRESERVATION	Sapwood is permeable and the heartwood is impermeable
NATURAL DURABILITY	Moderate durability. .The wood is susceptible to attack of insects
DRYING	There is a tendency to warping. A moderate kiln schedule is recommended

END USES

Construction	Decorative Veneer
Flooring	Furniture
Packages and crating	

Source : MDSP, FAO PAF-BOL, IBAMA, LPF “[Información Técnica para el Procesamiento Industrial de 134 especies maderables de Bolivia](#)”. Serie Técnica XI. 2002. (Translated by Fernando Aguilar . Marketing - CADEFOR)

GUAYABO

SPECIES IDENTIFICATION

SCIENTIFIC NAME	<i>Eugenia mato</i> Griseb.
FAMILY	MYRTACEAE
COMMERCIAL NAME	Ironwood, Watle, Bois Goyave
OTHER NAMES	
DISTRIBUTION AREA	Humid forests in Departments of Chuquisaca and Tarija
REGION AND FREQUENCY	

TREE DESCRIPTION

TREETOP	Rather wide. Opposite simple leaves.
TRUNK	Straight and cylindrical . Commercial heights up to 15 m
BARK	White Grayish color, smooth texture

GENERAL CHARACTERISTICS

SAPWOOD COLOR	Light brown to pink	HEARTHWOOD COLOR	Dark brown with black strips
ODOR	Indistinct	TASTE	Indistinct
LUSTER		GRAIN	Straight
STRIPED	Dark	TEXTURE	

ANATOMIC DESCRIPTION

ANNUAL GROWTH RINGS

Visibility	Average Number		
PORES			
Visibility	With magnifying glass 10 x	magnifying Porosity	Diffuse
Type	Solitaires and radial multiple	Shape	
PARENCHYMA			
Visibility			Quantity
Type	Apotraqueal diffuse		Abundant
RADIUS			
Visibility			Contrast
Stratification	Absent		Present

PHYSICAL PROPERTIES

MOISTURE CONTENT (GREEN LUMBER)	%
BASIC DENSITY	0,69 g/cm ³
DENSITY (12% MOISTURE CONTENT)	0,9 g/cm ³
RADIAL SHRINKAGE	6,3 %
TANGENTIAL SHRINKAGE	12,2 %
VOLUMETRIC SHRINKAGE	17,8 %
RATE T/R	1,9

MECHANICAL RESISTANCE

MODULUS OF ELASTICITY	1000 Kg/cm ²
MODULUS OF RUPTURE	581 Kg/cm ²
COMPRESSION PARALELL TO GRAIN	305 Kg/cm ²
QUARTEREDSAWED	Kg/cm ²
LATERAL HARDNESS	217 Kg
IMPACT BENDING	Kg-m

TECHNNICAL CONDITIONS FOR PROCESSING

MACHINING	Easy
PRESERVATION	Permeable
NATURAL DURABILITY	The wood is susceptible to attack of insects and fungi
DRYING	

END USES

Decorative veneer	Packages and crating
Construction	Flooring

Source: MDSP, FAO PAF-BOL, IBAMA, LPF "[Información Técnica para el Procesamiento Industrial de 134 especies maderables de Bolivia](#)". Serie Técnica XI. 2002. (Translated by Fernando Aguilar . Marketing - CADEFOR)

GUAYABOCHI

SPECIES IDENTIFICATION

SCIENTIFIC NAME	<i>Calycophyllum spruceanum</i> Benth.
FAMILY	RUBIACEAE
COMMERCIAL NAME	Pau mulato, Palo white
OTHER NAMES	Guayabete (Colombia), Corusicao (Ecuador), Capirona (Peru)
DISTRIBUTION AREA	Humid forests in flooded plains and foothills in Departments of Santa Cruz, Beni and La Paz
REGION AND FREQUENCY	Very frequent in Bajo Paraguá, Guarayos, Choré and Amazonian foothills

TREE DESCRIPTION

TREETOP	Narrow and open.
TRUNK	Straight and corrugated. Commercial heights up to 25 m
BARK	Smooth texture. Green redish color; thickness from 1 to 1.5 cm

GENERAL CHARACTERISTICS

SAPWOOD COLOR	White	HEARTHWOOD COLOR	Pale yellow
ODOR	Vanilla	TASTE	Indistinct
LUSTER	Medium to bright	GRAIN	Straight to interlocked
STRIPED	Tenuous	TEXTURE	Fine

ANATOMIC DESCRIPTION

ANNUAL GROWTH RINGS

Visibility	With magnifying glass 10 x	magnifying Average Number	30 rings in a radium of 10 cm
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PORES

Visibility	With magnifying glass 10 x	magnifying Porosity	Diffuse
Type	Solitaires, and biserial and triserial	Shape	Open and numerous

PARENCHYMA

Visibility	No visible even with magnifying glass of 10 x	Quantity	Indistinguishable
Type	Indistinguishable		

RADIUS

Visibility	With magnifying glass 10 x	magnifying Contrast	Present
Stratification	Absent		

PHYSICAL PROPERTIES

MOISTURE CONTENT (GREEN LUMBER)	45 %
BASIC DENSITY	0,75 g/cm ³
DENSITY (12% MOISTURE CONTENT)	0,9 g/cm ³
RADIAL SHRINKAGE	4,8 %
TANGENTIAL SHRINKAGE	9 %
VOLUMETRIC SHRINKAGE	13,8 %
RATE T/R	1,9

MECHANICAL RESISTANCE

MODULUS OF ELASTICITY	162 1000 Kg/cm ²
MODULUS OF RUPTURE	1312 Kg/cm ²
COMPRESSION PARALELL TO GRAIN	660 Kg/cm ²
QUARTEREDSAWED	141 Kg/cm ²
LATERAL HARDNESS	1374 Kg
IMPACT BENDING	4,17 Kg-m

TECHNNICAL CONDITIONS FOR PROCESSING

MACHINING	Easy working in green. Good finishing
PRESERVATION	Low permeability to preservation treatment
NATURAL DURABILITY	Durable in parts not in contact with soil. Resistant to attack of insects.
DRYING	Air drying is rather quick. A moderate kiln schedule is recommended. There is a risks of cracking in tops.

END USES

Construction	Blankery
Sleepers	Flooring

Source : MDSP, FAO PAF-BOL, IBAMA, LPF “[Información Técnica para el Procesamiento Industrial de 134 especies maderables de Bolivia](#)”. Serie Técnica XI. 2002. (Translated by Fernando Aguilar . Marketing - CADEFOR)

GUITARRERO

SPECIES IDENTIFICATION

SCIENTIFIC NAME	<i>Schefflera morototoni</i> (Aubl.) Decne. & Planchon
FAMILY	ARALIACEAE
COMMERCIAL NAME	Morototó, Cafetero
OTHER NAMES	Ambay guazu (Argentina), Yurumero (Colombia), Platanillo (Ecuador)
DISTRIBUTION AREA	Humid forests in plain and montane forests and savannas. Departments of Cochabamba, La Paz, Pando and Santa Cruz
REGION AND FREQUENCY	

TREE DESCRIPTION

TREETOP	Wide, Parasol- shaped. alternate and composite leaves.
TRUNK	Straight and cylindrical. Height averages 30 m
BARK	White grayish color in external side and yellow color in internal side

GENERAL CHARACTERISTICS

SAPWOOD COLOR	White	HEARTHWOOD COLOR	Pale Brown
ODOR	Indistinct	TASTE	Distinctive, slightly bitter
LUSTER	Medium to bright	GRAIN	Straight
STRIPED	Jaspered	TEXTURE	Medium

ANATOMIC DESCRIPTION

ANNUAL GROWTH RINGS

Visibility	Visible at sight	Average Number	24 rings in a radium of 10 cm
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PORES

Visibility	Visible at sight	Porosity	Diffuse
Type	Solitaires and radial multiples	Shape	Oval with irregular border

PARENCHYMA

Visibility	Indistinguishable even with magnifying glass 10 x	Quantity	Scarce
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Type	Indistinguishable
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RADIUS

Visibility	Visible at sight	Contrast	Present
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Stratification	Absent
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PHYSICAL PROPERTIES

MOISTURE CONTENT (GREEN LUMBER)	91 %
BASIC DENSITY	0,36 g/cm ³
DENSITY (12% MOISTURE CONTENT)	0,45 g/cm ³
RADIAL SHRINKAGE	2,6 %
TANGENTIAL SHRINKAGE	4,6 %
VOLUMETRIC SHRINKAGE	7 %
RATE T/R	1,6

MECHANICAL RESISTANCE

MODULUS OF ELASTICITY	106 1000 Kg/cm ²
MODULUS OF RUPTURE	647 Kg/cm ²
COMPRESSION PARALELL TO GRAIN	415 Kg/cm ²
QUARTEREDSAWED	76 Kg/cm ²
LATERAL HARDNESS	295 Kg
IMPACT BENDING	0,77 Kg-m

TECHNNICAL CONDITIONS FOR PROCESSING

MACHINING	Easy sawing and planing , moulding . Good finishing
PRESERVATION	Rather permeable
NATURAL DURABILITY	Low durability. The wood is susceptible to attack of fungi and insects
DRYING	Air drying is rather quick, with tendency to twist . A soft kiln schedule is recommended

END USES

Construction	Packages and crating
Decorative Veneer	

Source : MDSP, FAO PAF-BOL, IBAMA, LPF “[Información Técnica para el Procesamiento Industrial de 134 especies maderables de Bolivia](#)”. Serie Técnica XI. 2002. (Translated by Fernando Aguilar . Marketing - CADEFOR)

ISIGO

SPECIES IDENTIFICATION

SCIENTIFIC NAME	<i>Tetragastris altissima</i> Swartz
FAMILY	BURSENACEAE
COMMERCIAL NAME	Sali
OTHER NAMES	Breu manga (Brazil)
DISTRIBUTION AREA	Amazonian forests in Departments of La Paz, Pando and Beni
REGION AND FREQUENCY	Frequent in Choré, Amazonian foothills and Amazonia lowlands

TREE DESCRIPTION

TREETOP

TRUNK Straight with commercial heights up to 30 m

BARK

GENERAL CHARACTERISTICS

SAPWOOD COLOR	Indistinct	HEARTHWOOD COLOR	Indistinct
ODOR	Indistinct	TASTE	Indistinct
LUSTER	Medium	GRAIN	Interlocked
STRIPED	Tenuous	TEXTURE	

ANATOMIC DESCRIPTION

ANNUAL GROWTH RINGS

Visibility Average Number

PORES

Visibility Porosity
Type Shape

PARENCHYMA

Visibility Quantity

TYPE

RADIUS

Visibility Contrast

Stratification

PHYSICAL PROPERTIES

MOISTURE CONTENT (GREEN LUMBER)	%
BASIC DENSITY	0,74 g/cm ³

DENSITY (12% MOISTURE CONTENT)	0,79 g/cm ³
RADIAL SHRINKAGE	4,6 %
TANGENTIAL SHRINKAGE	9 %
VOLUMETRIC SHRINKAGE	13 %
RATE T/R	1,95

MECHANICAL RESISTANCE

MODULUS OF ELASTICITY	135 1000 Kg/cm ²
MODULUS OF RUPTURE	1147 Kg/cm ²
COMPRESSION PARALELL TO GRAIN	598 Kg/cm ²
QUARTEREDSAWED	Kg/cm ²
LATERAL HARDNESS	814 Kg
IMPACT BENDING	3,12 Kg-m

TECHNNICAL CONDITIONS FOR PROCESSING

MACHINING	Moderately easy. Good finishing
PRESERVATION	Semipermeable
NATURAL DURABILITY	Medium
DRYING	Air drying es very slow.

END USES

Construction	Flooring
Decorative Veneer	Naval construction

Source : MDSP, FAO PAF-BOL, IBAMA, LPF “[Información Técnica para el Procesamiento Industrial de 134 especies maderables de Bolivia](#)”. Serie Técnica XI. 2002. (Translated by Fernando Aguilar . Marketing - CADEFOR)

ISIGO BLANCO

SPECIES IDENTIFICATION

SCIENTIFIC NAME	<i>Protium carnosum</i> (A. C. Smith)
FAMILY	BURSERACEAE
COMMERCIAL NAME	Kurokai, Copal
OTHER NAMES	Breu Branco (Brazil), Caraño (Colombia), Bálsamo, Tacamahaco (Venezuela)
DISTRIBUTION AREA	
REGION AND FREQUENCY	

TREE DESCRIPTION

TREETOP	
TRUNK	Straight, commercial heights up to 30 m.
BARK	

GENERAL CHARACTERISTICS

SAPWOOD COLOR	Pale brown to Pink	HEARTHWOOD COLOR	Brown to brown redish
ODOR	Indistinct	TASTE	Indistinct
LUSTER	Brigth	GRAIN	Straight to irregular
STRIPED	Distinguishable in heartwood	TEXTURE	Medium

ANATOMIC DESCRIPTION

ANNUAL GROWTH RINGS	
Visibility	Average Number
PORES	
Visibility	Porosity
Type	Shape
PARENCHYMA	
Visibility	Quantity
Type	
RADIUS	
Visibility	Contrast
Stratification	

PHYSICAL PROPERTIES

MOISTURE CONTENT (GREEN LUMBER)	%
BASIC DENSITY	0,45 g/cm ³
DENSITY (12% MOISTURE CONTENT)	0,51 g/cm ³
RADIAL SHRINKAGE	4,2 %
TANGENTIAL SHRINKAGE	6,8 %
VOLUMETRIC SHRINKAGE	10,7 %
RATE T/R	1,62

MECHANICAL RESISTANCE

MODULUS OF ELASTICITY	118 1000 Kg/cm ²
MODULUS OF RUPTURE	841 Kg/cm ²
COMPRESSION PARALELL TO GRAIN	496 Kg/cm ²
QUARTEREDSAWED	Kg/cm ²
LATERAL HARDNESS	331 Kg
IMPACT BENDING	2.34 Kg-m

TECHNNICAL CONDITIONS FOR PROCESSING

MACHINING	Is is necessary to extract the bark before machining to avoid problems with resins. Easy machining. Good finishing.
PRESERVATION	Heartwood is impermeable. Sapwood is permeable
NATURAL DURABILITY	Moderate. Resistant to attack of fungi. Susceptible to attack of marine borer
DRYING	Air drying is moderately easy

END USES

Decorative veneer	Furniture
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Source : MDSP, FAO PAF-BOL, IBAMA, LPF “[Información Técnica para el Procesamiento Industrial de 134 especies maderables de Bolivia](#)”. Serie Técnica XI. 2002. (Translated by Fernando Aguilar . Marketing - CADEFOR)

ISIGO COLORADO

SPECIES IDENTIFICATION

SCIENTIFIC NAME	<i>Protium heptaphyllum</i> (Aubl.) Marchand
FAMILY	BURSERACEAE
COMMERCIAL NAME	Breu (Brazil)
OTHER NAMES	Carano (Central America), Anime (Ecuador-Colombia-Venezuela)
DISTRIBUTION AREA	Humid montane forests in plains. Departments of Beni, Santa Cruz and La Paz
REGION AND FREQUENCY	

TREE DESCRIPTION

TREETOP	
TRUNK	Straight, with heights averaging 21 m
BARK	

GENERAL CHARACTERISTICS

SAPWOOD COLOR	Ligth brown	HEARTHWOOD COLOR	Ligth brown
ODOR	Indistinct	TASTE	Indistinct
LUSTER	Medium	GRAIN	Irregular
STRIPED	Tenuous but distinguishable	TEXTURE	Medium

ANATOMIC DESCRIPTION

ANNUAL GROWTH RINGS	
Visibility	Average Number
PORES	
Visibility	Porosity
Type	Shape
PARENCHYMA	
Visibility	Quantity
Type	
RADIUS	
Visibility	Contrast
Stratification	

PHYSICAL PROPERTIES

MOISTURE CONTENT (GREEN LUMBER)	%
BASIC DENSITY	0,76 g/cm ³
DENSITY (12% MOISTURE CONTENT)	0,53 g/cm ³
RADIAL SHRINKAGE	5,9 %
TANGENTIAL SHRINKAGE	11,1 %
VOLUMETRIC SHRINKAGE	15 %
RATE T/R	1,88

MECHANICAL RESISTANCE

MODULUS OF ELASTICITY	119 1000 Kg/cm ²
MODULUS OF RUPTURE	1128 Kg/cm ²
COMPRESSION PARALELL TO GRAIN	559 Kg/cm ²
QUARTEREDSAWED	Kg/cm ²
LATERAL HARDNESS	Kg
IMPACT BENDING	Kg-m

TECHNNICAL CONDITIONS FOR PROCESSING

MACHINING	Moderately easy to work. Good finishing
PRESERVATION	Impermeable
NATURAL DURABILITY	Low durability. The wood is susceptible to attack of fungi e insects
DRYING	A soft and cautious kiln schedule is recommended. There is a risks of warping and pores occlusion.

END USES

Construction	Decorative veneer
Furniture	

Source : MDSP, FAO PAF-BOL, IBAMA, LPF “[Información Técnica para el Procesamiento Industrial de 134 especies maderables de Bolivia](#)”. Serie Técnica XI. 2002. (Translated by Fernando Aguilar . Marketing - CADEFOR)

ITAUBA AMARILLA

SPECIES IDENTIFICATION

SCIENTIFIC NAME	<i>Mezilaurus itauba</i> (Meisn.) Taubert ex Mez
FAMILY	LAURACEAE
COMMERCIAL NAME	Itauba
OTHER NAMES	Louro-itauba (Brazil), Taub jaune (Guyana Francesa), Kaneelhout (Surinam)
DISTRIBUTION AREA	Humid tropical and subtropical forests in Departments of La Paz, Santa Cruz, Cochabamba, Pando and Beni
REGION AND FREQUENCY	

TREE DESCRIPTION

TREETOP

TRUNK Straight and cylindrical with heights averaging 14 m

BARK Redish color, fissured with plaques and thickness around 1,5 cm.

GENERAL CHARACTERISTICS

SAPWOOD COLOR	Not differentiated	HEARTHWOOD COLOR	Yellowish to lustrous dark brown
ODOR	Indistinct	TASTE	Distinctive
LUSTER	Brigth	GRAIN	Straight to interlocked
STRIPED	Tenuous	TEXTURE	Medium to Fine

ANATOMIC DESCRIPTION

ANNUAL GROWTH RINGS

Visibility **Average Number**

PORES

Visibility	Visible at sight	Porosity	Diffuse
Type	Solitaires and geminated	Shape	Oval to irregular

PARENCHYMA

Visibility	Indistinguishable even with magnifying glass 10 x	Quantity	
Type	Paratraqueal with centric vessels , irregular		

RADIUS

Visibility	With magnifying glass 10 x	magnifying Contrast	Present
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Stratification Absent

PHYSICAL PROPERTIES

MOISTURE CONTENT (GREEN LUMBER)	%
BASIC DENSITY	0,7 g/cm ³
DENSITY (12% MOISTURE CONTENT)	0,74 g/cm ³
RADIAL SHRINKAGE	2,6 %
TANGENTIAL SHRINKAGE	7,9 %
VOLUMETRIC SHRINKAGE	10,5 %
RATE T/R	3

MECHANICAL RESISTANCE

MODULUS OF ELASTICITY	123 1000 Kg/cm ²
MODULUS OF RUPTURE	1144 Kg/cm ²
COMPRESSION PARALELL TO GRAIN	583 Kg/cm ²
QUARTEREDSAWED	103 Kg/cm ²
LATERAL HARDNESS	591 Kg
IMPACT BENDING	Kg-m

TECHNNICAL CONDITIONS FOR PROCESSING

MACHINING	Moderately difficult. Good finishing
PRESERVATION	Impermeable
NATURAL DURABILITY	Durable. Resistant to attack of fungi and termites
DRYING	A moderate kiln schedule is recommended.

END USES

Construction	Doors and window frames
Flooring	

Source : MDSP, FAO PAF-BOL, IBAMA, LPF “Información Técnica para el Procesamiento Industrial de 134 especies maderables de Bolivia”. Serie Técnica XI. 2002. (Translated by Fernando Aguilar . Marketing - CADEFOR)

JICHITURIQUI

SPECIES IDENTIFICATION

SCIENTIFIC NAME	<i>Aspidosperma polyneuron</i> Müll. Argentina
FAMILY	APOCYNACEAE
COMMERCIAL NAME	Butba rosa, Jichituriqui, Amarillo, Gabetillo*
OTHER NAMES	Guatambú-amarelo, Peroba (Brazil)
DISTRIBUTION AREA	Humid subtropical and temperate forests*. Departments of Chuquisaca, Beni and Santa Cruz.
REGION AND FREQUENCY	Very frequent in Chiquitania, Bajo Paraguá and Guarayos

TREE DESCRIPTION

TREETOP	Medium size and round shape
TRUNK	Straight and cylindrical with con spaced rings. Commercial heights up to 35 m
BARK	Yellowish color. Longitudinal cracks.

GENERAL CHARACTERISTICS

SAPWOOD COLOR	Ligth brown	HEARTHWOOD COLOR	Redish-brown
ODOR	Indistinct	TASTE	Indistinct
LUSTER	Brigth	GRAIN	Straight to interlocked
STRIPED	Tenuous	TEXTURE	Fine

ANATOMIC DESCRIPTION

ANNUAL GROWTH RINGS

Visibility	Visible at sight	Average Number
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PORES

Visibility	With magnifying glass 10 x	magnifying Porosity	Diffuse
Type	Solitaires and radial multiples of 3	Shape	Open and numerous

PARENCHYMA

Visibility	Indistinguishable even with magnifying glass of 10 x	Quantity	Scarce
Type	Paratraqueal with centric vessels		

RADIUS

Visibility	With magnifying glass 10 x	magnifying Contrast	Present
Stratification	Absent		

PHYSICAL PROPERTIES

MOISTURE CONTENT (GREEN LUMBER)	%
BASIC DENSITY	0,73 g/cm ³
DENSITY (12% MOISTURE CONTENT)	0,89 g/cm ³
RADIAL SHRINKAGE	5,5 %
TANGENTIAL SHRINKAGE	8,7 %
VOLUMETRIC SHRINKAGE	13,9 %
RATE T/R	1,6

MECHANICAL RESISTANCE

MODULUS OF ELASTICITY	130 1000 Kg/cm ²
MODULUS OF RUPTURE	1192 Kg/cm ²
COMPRESSION PARALELL TO GRAIN	691 Kg/cm ²
QUARTEREDSAWED	Kg/cm ²
LATERAL HARDNESS	1302 Kg
IMPACT BENDING	3,4 Kg-m

TECHNNICAL CONDITIONS FOR PROCESSING

MACHINING	Good planing, boring, sanding and turning*. Regular moulding*. Medium blunting effect*. Good finishing*.
PRESERVATION	Rather permeable*
NATURAL DURABILITY	Durable in parts not in contact with soil.
DRYING	Moderate drying time, with tendency to twist and crack. Kiln drying T6 – D2 and T3 – D1 (USA)*

END USES

Heavy construction*	Mouldings*
Doors and windows frames*	Outdoor furniture
Carpentry*	Naval construction
Flooring*	Truck beds*
Decorative veneer*	Turnery*

Source 1: MDSP, FAO PAF-BOL, IBAMA, LPF “Información Técnica para el Procesamiento Industrial de 134 especies maderables de Bolivia”. Serie Técnica XI. 2002. (Translated by Fernando Aguilar . Marketing - CADEFOR)

(*) Source 2. CFB, PROMABOSQUE, BOLFOR, SCC, FAO PAF-BOL. Bolivian Woods. 1999.

JORORI

SPECIES IDENTIFICATION

SCIENTIFIC NAME	<i>Swartzia jorori</i> Harms.
FAMILY	PAPILIONOIDEAE
COMMERCIAL NAME	
OTHER NAMES	
DISTRIBUTION AREA	Humid and semideciduous forest in Departments of La Paz, Beni and Santa Cruz
REGION AND FREQUENCY	Very frequent in Guarayos, Chorré and Amazonian foothills

TREE DESCRIPTION

TREETOP	Wide
TRUNK	Cylindrical, rather straight, with large buttresses . Trunk reaches commercial heights up to 30 m
BARK	Dark Grayish. Smooth texture along the trunk, except in the base, which shows fissures and irregular plaques

GENERAL CHARACTERISTICS

SAPWOOD COLOR	White	HEARTHWOOD COLOR	White yellowish
ODOR		TASTE	
LUSTER		GRAIN	Straight to Interlocked
STRIPED	Tenuous	TEXTURE	

ANATOMIC DESCRIPTION

ANNUAL GROWTH RINGS

Visibility	Average Number
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PORES

Visibility	Porosity
Type	Shape

PARENCHYMA

Visibility	Quantity
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Type

RADIUS

Visibility	Contrast
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Stratification

PHYSICAL PROPERTIES

MOISTURE CONTENT (GREEN LUMBER)	%
BASIC DENSITY	0,48 g/cm ³
DENSITY (12% MOISTURE CONTENT)	0,53 g/cm ³
RADIAL SHRINKAGE	%
TANGENTIAL SHRINKAGE	%
VOLUMETRIC SHRINKAGE	%
RATE T/R	

MECHANICAL RESISTANCE

MODULUS OF ELASTICITY	1000 Kg/cm ²
MODULUS OF RUPTURE	Kg/cm ²
COMPRESSION PARALELL TO GRAIN	Kg/cm ²
QUARTEREDSAWED	Kg/cm ²
LATERAL HARDNESS	305 - 610 Kg
IMPACT BENDING	Kg-m

TECHNNICAL CONDITIONS FOR PROCESSING

MACHINING	Medium
PRESERVATION	Rather permeable
NATURAL DURABILITY	Low durability.
DRYING	

END USES

Construction	Packages and crating
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Source : MDSP, FAO PAF-BOL, IBAMA, LPF "[Información Técnica para el Procesamiento Industrial de 134 especies maderables de Bolivia](#)". Serie Técnica XI. 2002. (Translated by Fernando Aguilar . Marketing - CADEFOR)

KAQUI

SPECIES IDENTIFICATION

SCIENTIFIC NAME	<i>Diospyros paralea</i> Steudel
FAMILY	EBENACEAE
COMMERCIAL NAME	Possum wood, Piriquiteira
OTHER NAMES	Ebano (Colombia), Bayuca caspi (Perú), Carboncito (Venezuela)
DISTRIBUTION AREA	Ocasionalmente flooded forests in Department of Santa Cruz
REGION AND FREQUENCY	

TREE DESCRIPTION

TREETOP	Large. Parasol- shaped, intense green foliage, simple alternate leaves.
TRUNK	Conical and uniform; commercial heights up to 27m
BARK	Light brown color. Coarse texture, thickness from 1 to 2 cm

GENERAL CHARACTERISTICS

SAPWOOD COLOR	White yellowish	HEARTHWOOD COLOR	Dark brown
ODOR	Indistinct	TASTE	Indistinct
LUSTER	Medium	GRAIN	Straight
STRIPED	Intense	TEXTURE	Medium

ANATOMIC DESCRIPTION

ANNUAL GROWTH RINGS

Visibility	With magnifying glass 10 x	magnifying Average Number	14 rings in a radium of 10 cm
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PORES

Visibility	Visible at sight	Porosity	Diffuse
Type	Solitaires and and biserial	Shape	Open

PARENCHYMA

Visibility	With magnifying glass 10 x	magnifying Quantity	Abundant
Type	Apotraqueal diffuse in short lines		

RADIUS

Visibility	With magnifying glass 10 x	magnifying Contrast	Absent
Stratification	Absent		

PHYSICAL PROPERTIES

MOISTURE CONTENT (GREEN LUMBER)	89 %
BASIC DENSITY	0,47 g/cm ³
DENSITY (12% MOISTURE CONTENT)	0,6 g/cm ³
RADIAL SHRINKAGE	5,3 %
TANGENTIAL SHRINKAGE	11,6 %
VOLUMETRIC SHRINKAGE	16 %
RATE T/R	2,2

MECHANICAL RESISTANCE

MODULUS OF ELASTICITY	109 1000 Kg/cm ²
MODULUS OF RUPTURE	785 Kg/cm ²
COMPRESSION PARALELL TO GRAIN	472 Kg/cm ²
QUARTEREDSAWED	67 Kg/cm ²
LATERAL HARDNESS	457 Kg
IMPACT BENDING	1,12 Kg-m

TECHNNICAL CONDITIONS FOR PROCESSING

MACHINING	Easy machining . Good finishing.
PRESERVATION	Permeable
NATURAL DURABILITY	Low durability. The wood is susceptible to blue stain and attack of insects, blue stain and attack of insects
DRYING	

END USES

Carpentry	Furniture
Cabinetry	

Source : MDSP, FAO PAF-BOL, IBAMA, LPF “[Información Técnica para el Procesamiento Industrial de 134 especies maderables de Bolivia](#)”. Serie Técnica XI. 2002. (Translated by Fernando Aguilar . Marketing - CADEFOR)

LAGUNERO

SPECIES IDENTIFICATION

SCIENTIFIC NAME	<i>Tetragastris panamensis</i> (Engl.) O. Kuntze
FAMILY	BURSERACEAE
COMMERCIAL NAME	Breu preto
OTHER NAMES	
DISTRIBUTION AREA	In Amazonian forest. Departments of Pando and Beni
REGION AND FREQUENCY	

TREE DESCRIPTION

TREETOP	
TRUNK	Straight. Commercial heights up to 10 m
BARK	

GENERAL CHARACTERISTICS

SAPWOOD COLOR	Light brown redish	HEARTHWOOD COLOR	Pale Brown
ODOR	Imperceptible	TASTE	Indistinct
LUSTER	Medium	GRAIN	Interlocked
STRIPED	Tenuous	TEXTURE	

ANATOMIC DESCRIPTION

ANNUAL GROWTH RINGS		
Visibility	Low	Average Number
PORES		
Visibility		Porosity
Type		Shape
PARENCHYMA		
Visibility		Quantity
Type		
RADIUS		
Visibility		Contrast
Stratification		

PHYSICAL PROPERTIES

MOISTURE CONTENT (GREEN LUMBER)	%
BASIC DENSITY	0,77 g/cm3

DENSITY (12% MOISTURE CONTENT)	0,84 g/cm ³
RADIAL SHRINKAGE	5 %
TANGENTIAL SHRINKAGE	9,8 %
VOLUMETRIC SHRINKAGE	14,9 %
RATE T/R	2

MECHANICAL RESISTANCE

MODULUS OF ELASTICITY	143 1000 Kg/cm ²
MODULUS OF RUPTURE	1260 Kg/cm ²
COMPRESSION PARALELL TO GRAIN	617 Kg/cm ²
QUARTEREDSAWED	Kg/cm ²
LATERAL HARDNESS	1415 Kg
IMPACT BENDING	Kg-m

TECHNNICAL CONDITIONS FOR PROCESSING

MACHINING	Moderately easy.
PRESERVATION	Sapwood permeable; heartwood impermeable
NATURAL DURABILITY	Durable
DRYING	Air drying is very quick. There is some risk of superficial cracking, warping and twisting. A soft kiln schedule is recommended

END USES

Construction	Decorative veneer
Furniture	

Source : MDSP, FAO PAF-BOL, IBAMA, LPF “[Información Técnica para el Procesamiento Industrial de 134 especies maderables de Bolivia](#)”. Serie Técnica XI. 2002. (Translated by Fernando Aguilar . Marketing - CADEFOR)

LAPACHO

SPECIES IDENTIFICATION

SCIENTIFIC NAME	<i>Tabebuia avellanedae</i> Lorentz ex Griseb.
FAMILY	BIGNONIACEAE
COMMERCIAL NAME	Ipe, Lapacho, Betharaba
OTHER NAMES	Ipê-rosa, Ipê-roxo (Brazil)
DISTRIBUTION AREA	Temperate humid forests and temperate dry forests in Departments of Chuquisaca, Santa Cruz and Tarija
REGION AND FREQUENCY	Very frequent in la Chiquitanía and Bajo Paraguá

TREE DESCRIPTION

TREETOP	Wide, deciduous foliage. Composite leaves.
TRUNK	Conical and uniform , commercial heights up to 30 m
BARK	Coarse texture , chesnut- brown grayish color with longitudinal fissures

GENERAL CHARACTERISTICS

SAPWOOD COLOR	White yellowish	HEARTHWOOD COLOR	Dark brown greenish
ODOR	Fragrant	TASTE	Indistinct
LUSTER		GRAIN	Irregular
STRIPED	Dark	TEXTURE	

ANATOMIC DESCRIPTION

ANNUAL GROWTH RINGS

Visibility	Visible at sight	Average Number	
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PORES

Visibility	Visible at sight	Porosity	Diffuse
Type	Solitaires and geminated	Shape	

PARENCHYMA

Visibility	Visible with magnifying glass of 10 x	Quantity	
Type	Paratraqueal with centric vessels		

RADIUS

Visibility	Visible at sight	Contrast	Present
Stratification	Present		

PHYSICAL PROPERTIES

MOISTURE CONTENT (GREEN LUMBER)	%
BASIC DENSITY	0,81 g/cm ³
DENSITY (12% MOISTURE CONTENT)	0,96 g/cm ³
RADIAL SHRINKAGE	4,2 %
TANGENTIAL SHRINKAGE	5,8 %
VOLUMETRIC SHRINKAGE	9,7 %
RATE T/R	1,4

MECHANICAL RESISTANCE

MODULUS OF ELASTICITY	130 1000 Kg/cm ²
MODULUS OF RUPTURE	1290 Kg/cm ²
COMPRESSION PARALELL TO GRAIN	748 Kg/cm ²
QUARTEREDSAWED	Kg/cm ²
LATERAL HARDNESS	1380 Kg
IMPACT BENDING	Kg-m

TECHNNICAL CONDITIONS FOR PROCESSING

MACHINING	Difficult machining. Good finishing
PRESERVATION	Impermeable, in preservation treatments
NATURAL DURABILITY	Very durable, even in contact with soil
DRYING	

END USES

Construction	Flooring
Veneer	

Source: MDSP, FAO PAF-BOL, IBAMA, LPF “Información Técnica para el Procesamiento Industrial de 134 especies maderables de Bolivia”. Serie Técnica XI. 2002. (Translated by Fernando Aguilar . Marketing - CADEFOR)

LAUREL

SPECIES IDENTIFICATION

SCIENTIFIC NAME	<i>Cinnamomum porphyria</i> (Kosterm.)
FAMILY	LAURACEAE
COMMERCIAL NAME	Laurel
OTHER NAMES	
DISTRIBUTION AREA	Humid and temperate forests in Departments of Chuquisaca and Tarija.
REGION AND FREQUENCY	Is considered an scarce species in Bolivian forests

TREE DESCRIPTION

TREETOP	Wide with abundant branches, persistent foliage, simple leaves
TRUNK	Cylindrical and uniform, commercial heights up to 18 m
BARK	Grayish color. Cracked

GENERAL CHARACTERISTICS

SAPWOOD COLOR	White yellowish	HEARTHWOOD COLOR	Ligth brown
ODOR	Indistinct	TASTE	Indistinct
LUSTER		GRAIN	Straight to irregular
STRIPED	Tenuous	TEXTURE	

ANATOMIC DESCRIPTION

ANNUAL GROWTH RINGS

Visibility	Average Number
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PORES

Visibility	With magnifying glass 10 x	Porosity	Diffuse
Type	Solitaries abundant and geminated	Shape	Straight

PARENCHYMA

Visibility	Quantity	Scarce
Type	Paratraqueal with centric vessels	

RADIUS

Visibility	Contrast	Present
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Stratification	Absent
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PHYSICAL PROPERTIES

MOISTURE CONTENT (GREEN LUMBER)	%
BASIC DENSITY	0,47 g/cm3
DENSITY (12% MOISTURE CONTENT)	0,55 g/cm3
RADIAL SHRINKAGE	3,9 %
TANGENTIAL SHRINKAGE	7 %
VOLUMETRIC SHRINKAGE	10,7 %
RATE T/R	1,8

MECHANICAL RESISTANCE

MODULUS OF ELASTICITY	1000 Kg/cm2
MODULUS OF RUPTURE	914 Kg/cm2
COMPRESSION PARALELL TO GRAIN	417 Kg/cm2
QUARTEREDSAWED	Kg/cm2
LATERAL HARDNESS	396 Kg
IMPACT BENDING	Kg-m

TECHNNICAL CONDITIONS FOR PROCESSING

MACHINING	Easy sawing and planing. Good finishing
PRESERVATION	Impermeable
NATURAL DURABILITY	Moderately durable, especialmente when not in contact with soil
DRYING	

END USES

Construction	Doors and window frames
Furniture	

Source : MDSP, FAO PAF-BOL, IBAMA, LPF “Información Técnica para el Procesamiento Industrial de 134 especies maderables de Bolivia”. Serie Técnica XI. 2002. (Translated by Fernando Aguilar . Marketing - CADEFOR)

LAUREL AMARILLO

SPECIES IDENTIFICATION

SCIENTIFIC NAME	<i>Nectandra angusta</i> Rohwer
FAMILY	LAURACEAE
COMMERCIAL NAME	Canelo, Laurel
OTHER NAMES	
DISTRIBUTION AREA	Humid temperate forests, Departments of Cochabamba, Chuquisaca, Tarija, La Paz and Santa Cruz.
REGION AND FREQUENCY	Frequent in Amazonian foothills

TREE DESCRIPTION

TREETOP	Medium, intense green foliage , simple leaves with elíptic shape
TRUNK	Straight and cylindrical with commercial heights up to 25 m
BARK	Dark grayish color. smooth texture

GENERAL CHARACTERISTICS

SAPWOOD COLOR	Yellowish	HEARTHWOOD COLOR	Brown yellowish to dark greenish
ODOR	Slightly aromatic	TASTE	Indistinct
LUSTER	Brigth	GRAIN	Straight to undulate
STRIPED	Dark	TEXTURE	

ANATOMIC DESCRIPTION

ANNUAL GROWTH RINGS

Visibility	With magnifying glass 10 x	magnifying Average Number	22 rings in a radium of 10 cm
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PORES

Visibility	Visible at sight	Porosity	Diffuse
Type	Solitaires abundant and biserial	Shape	Round to oval, occluded

PARENCHYMA

Visibility	Indistinguishable even with magnifying glass of 10 x	Quantity	Scarce
Type	Paratraqueal with centric vessels		

RADIUS

Visibility	With magnifying glass 10 x	Contrast	Present
Stratification	Absent		

PHYSICAL PROPERTIES

MOISTURE CONTENT (GREEN LUMBER)	%
BASIC DENSITY	0,48 g/cm ³
DENSITY (12% MOISTURE CONTENT)	0,53 g/cm ³
RADIAL SHRINKAGE	3,4 %
TANGENTIAL SHRINKAGE	6,4 %
VOLUMETRIC SHRINKAGE	9,8 %
RATE T/R	1,9

MECHANICAL RESISTANCE

MODULUS OF ELASTICITY	1000 Kg/cm ²
MODULUS OF RUPTURE	717 Kg/cm ²
COMPRESSION PARALELL TO GRAIN	354 Kg/cm ²
QUARTEREDSAWED	Kg/cm ²
LATERAL HARDNESS	Kg
IMPACT BENDING	Kg-m

TECHNNICAL CONDITIONS FOR PROCESSING

MACHINING	Easy machining. Good finishing
PRESERVATION	
NATURAL DURABILITY	Low durability, specially in contact with soil
DRYING	A cautious kiln schedule is recommended

END USES

Construction	Flooring
Decorative Veneer	Packages and crating

Source : MDSP, FAO PAF-BOL, IBAMA, LPF “Información Técnica para el Procesamiento Industrial de 134 especies maderables de Bolivia”. Serie Técnica XI. 2002. (Translated by Fernando Aguilar . Marketing - CADEFOR)

LAUREL NEGRO

SPECIES IDENTIFICATION

SCIENTIFIC NAME	<i>Ocotea costulata</i> (Nees.) Mez.
FAMILY	LAURACEAE
COMMERCIAL NAME	Laurel menta
OTHER NAMES	Aguarrás, Amarillo laurel (Colombia), Alcanfor, aguacatillo, jigua (Ecuador), Alcanfor moena, Casho moena (Peru), laurel (Venezuela)
DISTRIBUTION AREA	Humid tropical forests in Department of Pando.
REGION AND FREQUENCY	Frequent in Pando

TREE DESCRIPTION

TREETOP	Sparsed
TRUNK	Curved, irregular or straight corrugated, commercial heights up to 35 m
BARK	Coarse texture with small protuberances; gray to lighth brown color.

GENERAL CHARACTERISTICS

SAPWOOD COLOR	Brown greenish	HEARTHWOOD COLOR	Brown
ODOR	Distinctive	TASTE	Distinctive and astringent
LUSTER	Medium to bright	GRAIN	Interlocked
STRIPED	Superposed archs, defined by vessel lines	TEXTURE	Medium to Fine

ANATOMIC DESCRIPTION

ANNUAL GROWTH RINGS

Visibility	No visibles even with magnifying glass of 10 x	Average Number	
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PORES

Visibility	With magnifying glass 10 x	magnifying Porosity	Diffuse
Type	Solitaries and short radial multiple	Shape	Mediums

PARENCHYMA

Visibility	With magnifying glass 10 x	magnifying Quantity	Scarce
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Type	With centric vessels
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RADIUS

Visibility	With magnifying glass 10 x	magnifying Contrast	Present
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PHYSICAL PROPERTIES

MOISTURE CONTENT (GREEN LUMBER)	84 %
BASIC DENSITY	0,48 g/cm ³
DENSITY (12% MOISTURE CONTENT)	g/cm ³
RADIAL SHRINKAGE	4,3 %
TANGENTIAL SHRINKAGE	6 %
VOLUMETRIC SHRINKAGE	11,9 %
RATE T/R	1,4

MECHANICAL RESISTANCE

MODULUS OF ELASTICITY	106 1000 Kg/cm ²
MODULUS OF RUPTURE	737 Kg/cm ²
COMPRESSION PARALELL TO GRAIN	532 Kg/cm ²
QUARTEREDSAWED	Kg/cm ²
LATERAL HARDNESS	379 Kg
IMPACT BENDING	Kg-m

TECHNNICAL CONDITIONS FOR PROCESSING**MACHINING**

PRESERVATION Impermeable

NATURAL DURABILITY Moderately durable

DRYING Time drying is moderate, with tendency to crack and warp . A soft kiln schedule is recommended

END USES

Construction	Decorative veneer
Flooring	

Source : MDSP, FAO PAF-BOL, IBAMA, LPF “Información Técnica para el Procesamiento Industrial de 134 especies maderables de Bolivia”. Serie Técnica XI. 2002. (Translated by Fernando Aguilar . Marketing - CADEFOR)

LECHE LECHE

SPECIES IDENTIFICATION

SCIENTIFIC NAME	<i>Sapium marmieri</i> Huber
FAMILY	EUPHORBIACEAE
COMMERCIAL NAME	Burra leiteira
OTHER NAMES	Seringarana, Leiteira, Murupita, Seringueira (Brazil)
DISTRIBUTION AREA	Amazonian forests, Humid forest in plains and groves in the savannas. Departments of Beni, Cochabamaba, La Paz and Pando
REGION AND FREQUENCY	

TREE DESCRIPTION

TREETOP

TRUNK Straight, commercial heights up to 15 m

BARK

GENERAL CHARACTERISTICS

SAPWOOD COLOR	White	HEARTHWOOD COLOR	White
ODOR	Imperceptible	TASTE	
LUSTER	Absent	GRAIN	Straight
STRIPED		TEXTURE	Medium

ANATOMIC DESCRIPTION

ANNUAL GROWTH RINGS

Visibility Low Average Number

PORES

Visibility Porosity

Type Shape

PARENCHYMA

Visibility Quantity

Type

RADIUS

Visibility Contrast

Stratification

PHYSICAL PROPERTIES

MOISTURE CONTENT (GREEN LUMBER)	179 %
BASIC DENSITY	0,39 g/cm ³
DENSITY (12% MOISTURE CONTENT)	0,48 g/cm ³
RADIAL SHRINKAGE	5,6 %
TANGENTIAL SHRINKAGE	7,5 %
VOLUMETRIC SHRINKAGE	10,8 %
RATE T/R	1,3

MECHANICAL RESISTANCE

MODULUS OF ELASTICITY	91 1000 Kg/cm ²
MODULUS OF RUPTURE	639 Kg/cm ²
COMPRESSION PARALELL TO GRAIN	332 Kg/cm ²
QUARTEREDSAWED	Kg/cm ²
LATERAL HARDNESS	234 Kg
IMPACT BENDING	Kg-m

TECHNNICAL CONDITIONS FOR PROCESSING

MACHINING	Moderately easy.
PRESERVATION	Permeable
NATURAL DURABILITY	
DRYING	Air drying is rather quick, with slight tendency to warp and crack . A severe kiln schedule is recommended

END USES

Mouldings	Furniture
Veneer	Plywood

Source : MDSP, FAO PAF-BOL, IBAMA, LPF “[Información Técnica para el Procesamiento Industrial de 134 especies maderables de Bolivia](#)”. Serie Técnica XI. 2002. (Translated by Fernando Aguilar .
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MAPAJO

SPECIES IDENTIFICATION

SCIENTIFIC NAME	<i>Ceiba pentandra</i> (L.) Gaertner
FAMILY	BOMBACACEAE
COMMERCIAL NAME	Ceiba, Silk-cotton tree, Kapok tree
OTHER NAMES	Sumaúma (Brazil), Bonga, Ceiba (Colombia), Huimba (Peru)
DISTRIBUTION AREA	Subtropical and tropical humid forests, Departments of Santa Cruz, Cochabamba, Beni and La Paz
REGION AND FREQUENCY	Frequent in the regions of Chiquitanía, Guarayos, Choré, Amazonian foothills and Amazonia

TREE DESCRIPTION

TREETOP	Medium size. Sparsed, Light green color foliage.
TRUNK	With some deformities . Commercial heights up to 24 m
BARK	Gray color. Coarse texture with cracks along the trunk

GENERAL CHARACTERISTICS

SAPWOOD COLOR	Pale yellow	HEARTHWOOD COLOR	Red yellowish
ODOR	Indistinct	TASTE	Indistinct
LUSTER	Faint to Medium	GRAIN	Straight
STRIPED	Tenuous	TEXTURE	Medium to coarse

ANATOMIC DESCRIPTION

ANNUAL GROWTH RINGS

Visibility	Visible at sight	Average Number	9 rings in a radium of 10 cm
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PORES

Visibility	Visible at sight	Porosity	Diffuse
Type	Solitaires and biserial , scarce	Shape	Round to oval

PARENCHYMA

Visibility	With magnifying glass 10 x	magnifying Quantity	Scarce
Type	Apotraqueal in strips		

RADIUS

Visibility	Visible at sight	Contrast	Absent
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Stratification	Absent
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PHYSICAL PROPERTIES

MOISTURE CONTENT (GREEN LUMBER)	83 %
BASIC DENSITY	0,29 g/cm ³
DENSITY (12% MOISTURE CONTENT)	0,35 g/cm ³
RADIAL SHRINKAGE	2,7 %
TANGENTIAL SHRINKAGE	5,5 %
VOLUMETRIC SHRINKAGE	9,3 %
RATE T/R	0,6

MECHANICAL RESISTANCE

MODULUS OF ELASTICITY	45 1000 Kg/cm ²
MODULUS OF RUPTURE	399 Kg/cm ²
COMPRESSION PARALELL TO GRAIN	242 Kg/cm ²
QUARTEREDSAWED	38 Kg/cm ²
LATERAL HARDNESS	236 Kg
IMPACT BENDING	1,69 Kg-m

TECHNNICAL CONDITIONS FOR PROCESSING

MACHINING	Easy machining. Good finishing.
PRESERVATION	Permeable
NATURAL DURABILITY	Low durability without preservation treatment. The wood is susceptible to attack of fungi and insects
DRYING	Air drying and Kiln drying time is moderate

END USES

Construction	Packages and crating
Doors	Plywood

Source : MDSP, FAO PAF-BOL, IBAMA, LPF “[Información Técnica para el Procesamiento Industrial de 134 especies maderables de Bolivia](#)”. Serie Técnica XI. 2002. (Translated by Fernando Aguilar . Marketing - CADEFOR)

MARA

SPECIES IDENTIFICATION

SCIENTIFIC NAME	<i>Swietenia macrophylla</i> King
FAMILY	MELIACEAE
COMMERCIAL NAME	Mahogany, Mogno, Acajou, Caoba
OTHER NAMES	
DISTRIBUTION AREA	Subtropical and tropical humid forests , Departments of Santa Cruz, Beni, Cochabamba and La Paz
REGION AND FREQUENCY	Very frequent in Bajo Paraguá, Guarayos, Choré and Amazonian foothills , Chiquitania and Amazonia

TREE DESCRIPTION

TREETOP	Wide and rounded. Intense green foliage; pinnate composite leaves
TRUNK	Straight and cylindrical with commercial heights up to 40 m, slightly corrugated
BARK	Coarse , deeply fissured. Brown-Grayish color

GENERAL CHARACTERISTICS

SAPWOOD COLOR	White yellowish	HEARTHWOOD COLOR	Brown redish
ODOR	Indistinct	TASTE	Indistinct
LUSTER	Brigth	GRAIN	Straight to interlocked
STRIPED	Tenuous	TEXTURE	Fine

ANATOMIC DESCRIPTION

ANNUAL GROWTH RINGS

Visibility	Visible at sight	Average Number	
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PORES

Visibility	Visible at sight	Porosity	Diffuse
Type	Solitaires and radial multiple of 3	Shape	Closed

PARENCHYMA

Visibility	Visible at sight	Quantity	Abundant
Type	Apotraqueal in terminal strips		

RADIUS

Visibility	Visible at sight	Contrast	Present
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Stratification	Present
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PHYSICAL PROPERTIES

MOISTURE CONTENT (GREEN LUMBER)	%
BASIC DENSITY	0,43 g/cm ³
DENSITY (12% MOISTURE CONTENT)	0,48 g/cm ³
RADIAL SHRINKAGE	3,1 %
TANGENTIAL SHRINKAGE	4,6 %
VOLUMETRIC SHRINKAGE	8,7 %
RATE T/R	1,5

MECHANICAL RESISTANCE

MODULUS OF ELASTICITY	99 1000 Kg/cm ²
MODULUS OF RUPTURE	860 Kg/cm ²
COMPRESSION PARALELL TO GRAIN	430 Kg/cm ²
QUARTEREDSAWED	87 Kg/cm ²
LATERAL HARDNESS	471 Kg
IMPACT BENDING	0,79 Kg-m

TECHNNICAL CONDITIONS FOR PROCESSING

MACHINING	Easy machining . Good finishing.
PRESERVATION	Heartwood rather permeable to impermeable
NATURAL DURABILITY	Durable, resistant to attack of fungi and insects
DRYING	Quick without problems

END USES

Construction	Decorative veneer
Doors	Flooring
Windows	Furniture
Frames	Cabinetry

Source : MDSP, FAO PAF-BOL, IBAMA, LPF “Información Técnica para el Procesamiento Industrial de 134 especies maderables de Bolivia”. Serie Técnica XI. 2002. (Translated by Fernando Aguilar . Marketing - CADEFOR)

MARA MACHO

SPECIES IDENTIFICATION

SCIENTIFIC NAME	<i>Cedrelinga catenaeformis</i> Ducke
FAMILY	LEGUMINOSEAE (Mimosaseae*)
COMMERCIAL NAME	Tornillo, Cedro Rana
OTHER NAMES	Cedrarana (Brazil), Achapo (Colombia), Seique, Chuncho (Ecuador), Tornillo* (Peru)
DISTRIBUTION AREA	Humid tropical and subtropical forests. Department of La Paz, Beni and Pando
REGION AND FREQUENCY	Very frequent in the Amazonia

TREE DESCRIPTION

TREETOP	Round and open, composite, bi pinnate leaves
TRUNK	Straight and cylindrical with commercial heights up to 50 m*
BARK	Dark brown color, corrugated

GENERAL CHARACTERISTICS

SAPWOOD COLOR	Pink	HEARTHWOOD COLOR	Redish-Brown
ODOR	Peculiar	TASTE	Indistinct
LUSTER	Medium to bright	GRAIN	Straight
STRIPED	Dark vessels lines	TEXTURE	Coarse

ANATOMIC DESCRIPTION

ANNUAL GROWTH RINGS

Visibility	Visible at sight	Average Number	14 rings in a radium of 10 cm
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PORES

Visibility	Visible at sight	Porosity	Diffuse
Type	Solitaires and radial multiples	Shape	Oval, mostly open

PARENCHYMA

Visibility	With magnifying glass 10 x	magnifying Quantity	Regular
Type	Paratraqueal with centric vessels		

RADIUS

Visibility	With magnifying glass 10 x	magnifying Contrast	Absent
Stratification	Absent		

PHYSICAL PROPERTIES

MOISTURE CONTENT (GREEN LUMBER)	83 %
BASIC DENSITY	0,44 (0,46*) g/cm ³
DENSITY (12% MOISTURE CONTENT)	0,55 (0,57*) g/cm ³
RADIAL SHRINKAGE	3,2 (4,9*) %
TANGENTIAL SHRINKAGE	6,9 (8,0*) %
VOLUMETRIC SHRINKAGE	9,9 (13,2*) %
RATE T/R	2,2 (1,6*)

MECHANICAL RESISTANCE

MODULUS OF ELASTICITY	99 1000 Kg/cm ²
MODULUS OF RUPTURE	693 Kg/cm ²
COMPRESSION PARALELL TO GRAIN	413 (378*) Kg/cm ²
QUARTEREDSAWED	87 Kg/cm ²
LATERAL HARDNESS	373 (400*) Kg
IMPACT BENDING	2,88 Kg-m

TECHNNICAL CONDITIONS FOR PROCESSING

MACHINING	Easy machining. Good planing, moulding, sanding and boring*. Regular turning*. Low blunting effect*. Good finishing.
PRESERVATION	Rather permeable
NATURAL DURABILITY	Low durability*
DRYING	Air drying and kiln drying is rather quick, with tendency to twist and curve.

END USES

Construction	Furniture
Doors and Windows	Decorative veneer
Carpentry*	Cigar boxes*
Ceilings*	Plywood*
Tongue and groove*	Mouldings*
Turnery*	Flooring*

Source 1: MDSP, FAO PAF-BOL, IBAMA, LPF “[Información Técnica para el Procesamiento Industrial de 134 especies maderables de Bolivia](#)”. Serie Técnica XI. 2002. (Translated by Fernando Aguilar . Marketing - CADEFOR)

(*) Source 2. CFB, PROMABOSQUE, BOLFOR, SCC, FAO PAF-BOL. [Bolivian Woods](#). 1999.

MARA MACHO DEL CHAPARE

SPECIES IDENTIFICATION

SCIENTIFIC NAME	<i>Tapirira guianensis</i> Aubl.
FAMILY	ANACARDIACEAE
COMMERCIAL NAME	Tatapiririca
OTHER NAMES	Fresno, Cedrillo, Cedro macho (Colombia), Cedrillo, Capuli (Ecuador), Isaparitsi, Huira caspi, Huira caspi colorado (Peru), Jobillo, Cedro nogal (Venezuela)
DISTRIBUTION AREA	In humid savannas, humid montane and amazonian forests, Departments of Beni, Cochabamba and La Paz
REGION AND FREQUENCY	

TREE DESCRIPTION

TREETOP	Conical, with dense foliage, composite leaves
TRUNK	Rather straight and cylindrical, buttresses . Heights up to 40 m and diameters up to 80 cm
BARK	External side yellowish color

GENERAL CHARACTERISTICS

SAPWOOD COLOR	White pinkish	HEARTHWOOD COLOR	Pink,
ODOR	Indistinct	TASTE	Indistinct
LUSTER	Moderately alto	GRAIN	Straight
STRIPED	With superposed archs	TEXTURE	Medium to Fine

ANATOMIC DESCRIPTION

ANNUAL GROWTH RINGS

Visibility	Visible at sight	Average Number	
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PORES

Visibility	Visible at sight	Porosity	Diffuse
Type	Solitaires and some radial multiple	Shape	

PARENCHYMA

Visibility	Apenas visible with magnifying glass of 10X	Quantity	Scarce
Type	Paratraqueal scarce		

RADIUS

Visibility	Visibles with magnifying glass of 10 X	Contrast	Low contrast
Stratification	Absent		

PHYSICAL PROPERTIES

MOISTURE CONTENT (GREEN LUMBER)	%
BASIC DENSITY	0.55 - 0.65 g/cm ³
DENSITY (12% MOISTURE CONTENT)	0,73 g/cm ³
RADIAL SHRINKAGE	1,8 %
TANGENTIAL SHRINKAGE	4,1 %
VOLUMETRIC SHRINKAGE	5,9 %
RATE T/R	2,27

MECHANICAL RESISTANCE

MODULUS OF ELASTICITY	104 1000 Kg/cm ²
MODULUS OF RUPTURE	720 Kg/cm ²
COMPRESSION PARALELL TO GRAIN	Kg/cm ²
QUARTEREDSAWED	Kg/cm ²
LATERAL HARDNESS	238 Kg
IMPACT BENDING	1,03 Kg-m

TECHNNICAL CONDITIONS FOR PROCESSING

MACHINING	Easy machining , Good finishing
PRESERVATION	Moderately durable
NATURAL DURABILITY	Low durability when not in contact with soil
DRYING	Air drying is slow and steady

END USES

Furniture	Doors
Decorative Veneer	Windows

Source: MDSP, FAO PAF-BOL, IBAMA, LPF “[Información Técnica para el Procesamiento Industrial de 134 especies maderables de Bolivia](#)”. Serie Técnica XI. 2002. (Translated by Fernando Aguilar . Marketing - CADEFOR)

MASARANDUBA

SPECIES IDENTIFICATION

SCIENTIFIC NAME	<i>Manilkara bidentata</i> (A. DC.) Chevalier
FAMILY	SAPOTACEAE
COMMERCIAL NAME	Bulletwood, Balata
OTHER NAMES	Maçaranduba (Brazil), Balata (Colombia), Pamashto (Peru)
DISTRIBUTION AREA	Amazonian forests, Departments of La Paz and Pando.
REGION AND FREQUENCY	Considered scarce

TREE DESCRIPTION

TREETOP	Stratified
TRUNK	Cylindrical, slightly corrugated, commercial heights up to 25 m
BARK	Brown grayish color, coarse texture with deep fissures. Exudes abundant sticky latex

GENERAL CHARACTERISTICS

SAPWOOD COLOR	Light chesnut	HEARTHWOOD COLOR	Chesnut redish dark
ODOR	Indistinct	TASTE	Indistinct
LUSTER	Tenuous	GRAIN	Straight
STRIPED	Superposed archs	TEXTURE	Fine

ANATOMIC DESCRIPTION

ANNUAL GROWTH RINGS

Visibility	Indistincts	Average Number	Indistincts
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PORES

Visibility	With magnifying glass 10 x	magnifying Porosity	Diffuse
Type	Solitaires and radial multiples	Shape	

PARENCHYMA

Visibility	With magnifying glass 10 x	magnifying Quantity	Scarce
Type			

RADIUS

Visibility	Indistinguishable even with magnifying glass of 10 x	Contrast	Present
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Stratification	Absent
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PHYSICAL PROPERTIES

MOISTURE CONTENT (GREEN LUMBER)	%
BASIC DENSITY	0,8 g/cm ³
DENSITY (12% MOISTURE CONTENT)	0,95 g/cm ³
RADIAL SHRINKAGE	5,9 %
TANGENTIAL SHRINKAGE	8,3 %
VOLUMETRIC SHRINKAGE	13,8 %
RATE T/R	1,4

MECHANICAL RESISTANCE

MODULUS OF ELASTICITY	138 1000 Kg/cm ²
MODULUS OF RUPTURE	1307 Kg/cm ²
COMPRESSION PARALELL TO GRAIN	648 Kg/cm ²
QUARTEREDSAWED	163 Kg/cm ²
LATERAL HARDNESS	887 Kg
IMPACT BENDING	Kg-m

TECHNNICAL CONDITIONS FOR PROCESSING

MACHINING	Difficult machining due to wood hardness. Good finishing.
PRESERVATION	Impermeable
NATURAL DURABILITY	Verydurable, resistant to attack of fungi and insects
DRYING	Air drying is rather quick. A soft kiln schedule is recommended.

END USES

Construction	Flooring
Furniture	

Source: MDSP, FAO PAF-BOL, IBAMA, LPF “Información Técnica para el Procesamiento Industrial de 134 especies maderables de Bolivia”. Serie Técnica XI. 2002. (Translated by Fernando Aguilar . Marketing - CADEFOR)

MOMOQUI

SPECIES IDENTIFICATION

SCIENTIFIC NAME	<i>Caesalpinia pluviosa</i> DC.
FAMILY	LEGUMINOSEAE (CAESALPINIACEAE)*
COMMERCIAL NAME	Partridgedwood, Coffeewood
OTHER NAMES	Granadillo (Colombia and Venezuela), Ébano (Mexico)
DISTRIBUTION AREA	Is found in forests ranging from humid subtropical forests to dry temperate forests. Departments of Santa Cruz, Beni and La Paz
REGION AND FREQUENCY	Very frequent in la Chiquitanía, Guarayos and Amazonian foothills

TREE DESCRIPTION

TREETOP	Intense green foliage, composite and alternate leaves
TRUNK	Straight and cylindrical with commercial heights up to 20 m*
BARK	Grayish color. Corrugated

GENERAL CHARACTERISTICS

SAPWOOD COLOR	Ligth brown	HEARTHWOOD COLOR	Dark brown
ODOR	Indistinct	TASTE	Indistinct
LUSTER	Medium to faint	GRAIN	Interlocked
STRIPED	Dark veins	TEXTURE	Fine

ANATOMIC DESCRIPTION

ANNUAL GROWTH RINGS

Visibility	Average Number
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PORES

Visibility	Porosity	Diffuse
Type	Shape	Open
		Solitaires, biserial and triserial

PARENCHYMA

Visibility	Quantity
Type	Paratraqueal with centric vessels , and aliform confluent

RADIUS

Visibility	With magnifying glass 10 x	magnifying Contrast	Present
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Stratification	Present
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PHYSICAL PROPERTIES

MOISTURE CONTENT (GREEN LUMBER)	%
BASIC DENSITY	0,89 g/cm ³
DENSITY (12% MOISTURE CONTENT)	1,05 g/cm ³
RADIAL SHRINKAGE	2,3 %
TANGENTIAL SHRINKAGE	6 %
VOLUMETRIC SHRINKAGE	9,8 %
RATE T/R	2,7

MECHANICAL RESISTANCE

MODULUS OF ELASTICITY	1000 Kg/cm ²
MODULUS OF RUPTURE	Kg/cm ²
COMPRESSION PARALELL TO GRAIN	918 (698*) Kg/cm ²
QUARTEREDSAWED	Kg/cm ²
LATERAL HARDNESS	1660 Kg
IMPACT BENDING	Kg-m

TECHNNICAL CONDITIONS FOR PROCESSING

MACHINING	Good planing, boring, turning and finishing*. Regular moulding*. Excellent sanding*. Medium blunting effect*.
PRESERVATION	Impermeable
NATURAL DURABILITY	Durable, including parts in soil contact*
DRYING	Air drying time is rather quick, with tendency for curving and cracking. Kiln drying T3 – C2 and T3- C1 (USA)

END USES

Heavy construction*	Flooring
Garden furniture*	Turnery*
Poles*	Decorative veneer *
Carvings*	Barrels*

Source 1: MDSP, FAO PAF-BOL, IBAMA, LPF “[Información Técnica para el Procesamiento Industrial de 134 especies maderables de Bolivia](#)”. Serie Técnica XI. 2002. (Translated by Fernando Aguilar . Marketing - CADEFOR)

(*) Source 2. CFB, PROMABOSQUE, BOLFOR, SCC, FAO PAF-BOL. [Bolivian Woods](#). 1999.

MORA

SPECIES IDENTIFICATION

SCIENTIFIC NAME	<i>Morus alba</i> L.
FAMILY	MORACEAE
COMMERCIAL NAME	White Mulberry
OTHER NAMES	
DISTRIBUTION AREA	Subtropical Forests and temperate forests in Departments of Cochabamba and Santa Cruz
REGION AND FREQUENCY	

TREE DESCRIPTION

TREETOP	
TRUNK	Straight and cylindrical with heights up to 20 m
BARK	

GENERAL CHARACTERISTICS

SAPWOOD COLOR	Yellow whitish	HEARTHWOOD COLOR	Orange to brown
ODOR		TASTE	
LUSTER	Alto	GRAIN	Straight
STRIPED		TEXTURE	

ANATOMIC DESCRIPTION

ANNUAL GROWTH RINGS	
Visibility	Average Number
PORES	
Visibility	Porosity
Type	Shape
PARENCHYMA	
Visibility	Quantity
Type	
RADIUS	
Visibility	Contrast
Stratification	

PHYSICAL PROPERTIES

MOISTURE CONTENT (GREEN LUMBER)	%
BASIC DENSITY	0,5 g/cm ³
DENSITY (12% MOISTURE CONTENT)	0,56 g/cm ³
RADIAL SHRINKAGE	3,6 %
TANGENTIAL SHRINKAGE	8,4 %
VOLUMETRIC SHRINKAGE	%
RATE T/R	2,3

MECHANICAL RESISTANCE

MODULUS OF ELASTICITY	112 1000 Kg/cm ²
MODULUS OF RUPTURE	750 Kg/cm ²
COMPRESSION PARALELL TO GRAIN	450 Kg/cm ²
QUARTEREDSAWED	220 Kg/cm ²
LATERAL HARDNESS	950 Kg
IMPACT BENDING	Kg-m

TECHNNICAL CONDITIONS FOR PROCESSING

MACHINING	Easy machining . Good finishing.
PRESERVATION	
NATURAL DURABILITY	Durable
DRYING	

END USES

Construction	Furniture
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Source: MDSP, FAO PAF-BOL, IBAMA, LPF “Información Técnica para el Procesamiento Industrial de 134 especies maderables de Bolivia”. Serie Técnica XI. 2002. (Translated by Fernando Aguilar . Marketing - CADEFOR)

MORA GRANDE

SPECIES IDENTIFICATION

SCIENTIFIC NAME	<i>Chlorophora tinctoria</i> (L.) Gaud. <i>Sinon.: Maclura tinctoria</i> (L.) D. Don ex Steud
FAMILY	MORACEAE
COMMERCIAL NAME	Fustic
OTHER NAMES	Moral (Central America), Amoreira (Brasil), Mora amarilla (Argentina)
DISTRIBUTION AREA	Primary and secondary forest, including Amazonian forest and Semidecuiduos tucumano-boliviano forests. Departments of Beni, La Paz and Santa Cruz.
REGION AND FREQUENCY	

TREE DESCRIPTION

TREETOP	Wide with thin foliage
TRUNK	Straight. Sometimes with aerial round roots. Commercial heights up to 37 m
BARK	External side light gray to yellowish color; smooth texture

GENERAL CHARACTERISTICS

SAPWOOD COLOR	Yellow	HEARTHWOOD COLOR	Yellow, turns brown when dry
ODOR	Indistinct	TASTE	Indistinct
LUSTER	Medium to bright	GRAIN	Interlocked
STRIPED	Superposed archs	TEXTURE	Medium

ANATOMIC DESCRIPTION

ANNUAL GROWTH RINGS

Visibility	Visible at sight	Average Number	30 rings in a radium of 10 cm
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PORES

Visibility	Visible at sight	Porosity	Diffuse
Type	Solitaries, radial multiple	Shape	Round to oval, occluded

PARENCHYMA

Visibility	Visible at sight	Quantity	Regular
Type	Paratraqueal in irregular strips		

RADIUS

Visibility	With magnifying glass 10 x	magnifying Contrast	Absent
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Stratification	Absent
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PHYSICAL PROPERTIES

MOISTURE CONTENT (GREEN LUMBER)	66 %
BASIC DENSITY	0,71 g/cm ³
DENSITY (12% MOISTURE CONTENT)	0,81 g/cm ³
RADIAL SHRINKAGE	2,3 %
TANGENTIAL SHRINKAGE	3,9 %
VOLUMETRIC SHRINKAGE	6,1 %
RATE T/R	1,9

MECHANICAL RESISTANCE

MODULUS OF ELASTICITY	152 1000 Kg/cm ²
MODULUS OF RUPTURE	1407 Kg/cm ²
COMPRESSION PARALELL TO GRAIN	819 Kg/cm ²
QUARTEREDSAWED	109 Kg/cm ²
LATERAL HARDNESS	752 Kg
IMPACT BENDING	3,56 Kg-m

TECHNNICAL CONDITIONS FOR PROCESSING

MACHINING	Moderately difficult to work
PRESERVATION	Impermeable
NATURAL DURABILITY	Highly durable to attack of fungi and insects
DRYING	Risks of curving and warping.

END USES

Flooring

Source: MDSP, FAO PAF-BOL, IBAMA, LPF “[Información Técnica para el Procesamiento Industrial de 134 especies maderables de Bolivia](#)”. Serie Técnica XI. 2002. (Translated by Fernando Aguilar . Marketing - CADEFOR)

MORADO

SPECIES IDENTIFICATION

SCIENTIFIC NAME	<i>Machaerium scleroxylon</i> Tul
FAMILY	LEG. PAPILIONOIDEAE
COMMERCIAL NAME	Caviuna
OTHER NAMES	Pau-ferro, Jacarandá-violeta (Brazil)
DISTRIBUTION AREA	Semideciduos forests in the Chiquitania. Department of Santa Cruz
REGION AND FREQUENCY	Very frequent in the Chiquitania and Guarayos

TREE DESCRIPTION

TREETOP	Elongated, with long main branches.
TRUNK	Straight, corrugated, commercial heights up to 25 m
BARK	Whitish color, coarse texture with white spots

GENERAL CHARACTERISTICS

SAPWOOD COLOR	White yellowish	HEARTHWOOD COLOR	Brown chesnut
ODOR	Distinctive	TASTE	Indistinct
LUSTER	Medium	GRAIN	Interlocked
STRIPED	Dark	TEXTURE	Fine

ANATOMIC DESCRIPTION

ANNUAL GROWTH RINGS

Visibility	Visible at sight	Average Number
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PORES

Visibility	With magnifying glass 10 x	magnifying Porosity	Diffuse
Type	Solitaires and radial multiples	Shape	Slightly oval

PARENCHYMA

Visibility	With magnifying glass 10 x	magnifying Quantity	Scarce
Type	Paratraqueal with centric vessels		

RADIUS

Visibility	With magnifying glass 10 x	magnifying Contrast	Present
Stratification	Present		

PHYSICAL PROPERTIES

MOISTURE CONTENT (GREEN LUMBER)	%
BASIC DENSITY	0,75 g/cm ³
DENSITY (12% MOISTURE CONTENT)	0,88 g/cm ³
RADIAL SHRINKAGE	2,9 %
TANGENTIAL SHRINKAGE	6,7 %
VOLUMETRIC SHRINKAGE	10,6 %
RATE T/R	2,31

MECHANICAL RESISTANCE (with 15% moisture content)

MODULUS OF ELASTICITY	94.1 1000 Kg/cm ²
MODULUS OF RUPTURE	1244 Kg/cm ²
COMPRESSION PARALELL TO GRAIN	614 Kg/cm ²
QUARTEREDSAWED	137 Kg/cm ²
LATERAL HARDNESS	970 Kg
IMPACT BENDING	Kg-m

TECHNNICAL CONDITIONS FOR PROCESSING

MACHINING	Moderately easy. Good finishing
PRESERVATION	Impermeable
NATURAL DURABILITY	Durable when not in contact with soil
DRYING	

END USES

Construction	Decorative Veneer
Doors and window frames	Furniture

Source: MDSP, FAO PAF-BOL, IBAMA, LPF “Información Técnica para el Procesamiento Industrial de 134 especies maderables de Bolivia”. Serie Técnica XI. 2002. (Translated by Fernando Aguilar . Marketing - CADEFOR)

MURURÉ

SPECIES IDENTIFICATION

SCIENTIFIC NAME	<i>Clarisia racemosa</i> Ruiz & Pavón
FAMILY	MORACEAE
COMMERCIAL NAME	Oiticica amarela, Ají, Guairiuba
OTHER NAMES	Pituca (Ecuador), Mashonaste, Palo Amarillo (Peru), Cajimán (Venezuela)
DISTRIBUTION AREA	Mururé is found in humid tropical forest in transition to subtropical forests*. Departments of Beni, Cochabamba, La Paz, Pando and Santa Cruz
REGION AND FREQUENCY	Very frequent in Amazonian foothills and Amazonia

TREE DESCRIPTION

TREETOP	Medium; Parasol- shaped; Intense green foliage
TRUNK	Conical and uniform , commercial heights up to 35 m*
BARK	Brown greenish color with orange spots

GENERAL CHARACTERISTICS

SAPWOOD COLOR	White yellowish	HEARTHWOOD COLOR	Yellowis-brown*
ODOR	Indistinct	TASTE	Indistinct
LUSTER	Brigth	GRAIN	Interlocked
STRIPED	Tenuous	TEXTURE	Medium

ANATOMIC DESCRIPTION

ANNUAL GROWTH RINGS

Visibility	Visible at sight	Average Number	27 rings in a radium of 10 cm
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PORES

Visibility	With magnifying glass 10 x	magnifying Porosity	Diffuse
Type	Solitaires and radial multiple of 2	Shape	Round to slightly oval

PARENCHYMA

Visibility	Visible at sight	Quantity	Abundant
Type	Paratraqueal in strips		

RADIUS

Visibility	With magnifying glass 10 x	magnifying Contrast	Present
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Stratification	Absent
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PHYSICAL PROPERTIES

MOISTURE CONTENT (GREEN LUMBER)	77 %
BASIC DENSITY	0,61 g/cm ³
DENSITY (12% MOISTURE CONTENT)	0,7 g/cm ³
RADIAL SHRINKAGE	2,5 %
TANGENTIAL SHRINKAGE	4,8 %
VOLUMETRIC SHRINKAGE	7,7 %
RATE T/R	2

MECHANICAL RESISTANCE

MODULUS OF ELASTICITY	123 1000 Kg/cm ²
MODULUS OF RUPTURE	985 Kg/cm ²
COMPRESSION PARALELL TO GRAIN	784 Kg/cm ²
QUARTEREDSAWED	126 Kg/cm ²
LATERAL HARDNESS	784 (893*) Kg
IMPACT BENDING	2,58 Kg-m

TECHNNICAL CONDITIONS FOR PROCESSING

MACHINING	Good planing, moulding, sanding, turning, boring and finishing*. High blunting effect (contains silica)*.
PRESERVATION	Impermeable
NATURAL DURABILITY	Durable, specially when not in contact with soil*
DRYING	Air drying is quick, with tendency for curving and twisting*. A carfull kiln schedule is recommended.*

END USES

Construction	Flooring
Decorative veneer	Naval construction
Turnery	Mouldings*
Flooring*	Carpentry*
Panels*	Tool handles*

Source 1: MDSP, FAO PAF-BOL, IBAMA, LPF “[Información Técnica para el Procesamiento Industrial de 134 especies maderables de Bolivia](#)”. Serie Técnica XI. 2002. (Translated by Fernando Aguilar . Marketing - CADEFOR)

(*) Source 2. CFB, PROMABOSQUE, BOLFOR, SCC, FAO PAF-BOL. [Bolivian Woods](#). 1999.

NEGRILLO

SPECIES IDENTIFICATION

SCIENTIFIC NAME	<i>Persea caerulea</i> (Ruiz & Pav.) Nez.
FAMILY	LAURACEAE
COMMERCIAL NAME	Canela rosa
OTHER NAMES	Amarillo (Colombia), Aguacate de monte (Ecuador), Aguacatillo (Venezuela)
DISTRIBUTION AREA	Montane semideciduous forest, Amazonian forest and groves in flooded savannas. Departments of Beni, La Paz and Santa Cruz.
REGION AND FREQUENCY	Is considered an scarce species in Bolivian forests

TREE DESCRIPTION

TREETOP	Small to medium , Intense green foliage.
TRUNK	With deformities , commercial heights up to 20 m
BARK	Gray color with dark spots

GENERAL CHARACTERISTICS

SAPWOOD COLOR	Yellowish	HEARTHWOOD COLOR	Blackish
ODOR	Indistinct	TASTE	Indistinct
LUSTER	Brigth	GRAIN	Straight to Interlocked
STRIPED	Tenuous	TEXTURE	Medium

ANATOMIC DESCRIPTION

ANNUAL GROWTH RINGS

Visibility	Indistinguishable even with magnifying glass of 10 x	Average Number	Indistinguishable
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PORES

Visibility	Visible at sight	Porosity	Diffuse
Type	Solitaries and biserial , numerous	Shape	Round to oval; some occluded

PARENCHYMA

Visibility	With magnifying glass 10 x	magnifying Quantity	Regular
Type	Paratraqueal with centric vessels		

RADIUS

Visibility	With magnifying glass 10 x	magnifying Contrast	Absent
Stratification	Absent		

PHYSICAL PROPERTIES

MOISTURE CONTENT (GREEN LUMBER)	71 %
BASIC DENSITY	0,44 g/cm ³
DENSITY (12% MOISTURE CONTENT)	0,5 g/cm ³
RADIAL SHRINKAGE	3,9 %
TANGENTIAL SHRINKAGE	6,7 %
VOLUMETRIC SHRINKAGE	10,5 %
RATE T/R	1,8

MECHANICAL RESISTANCE

MODULUS OF ELASTICITY	110 1000 Kg/cm ²
MODULUS OF RUPTURE	755 Kg/cm ²
COMPRESSION PARALELL TO GRAIN	473 Kg/cm ²
QUARTEREDSAWED	77 Kg/cm ²
LATERAL HARDNESS	475 Kg
IMPACT BENDING	2,26 Kg-m

TECHNNICAL CONDITIONS FOR PROCESSING

MACHINING	Easy machining . Good finishing.
PRESERVATION	Scarcely permeable
NATURAL DURABILITY	Low
DRYING	Air drying is quick and steady

END USES

Construction	Flooring
Decorative Veneer	

Source : MDSP, FAO PAF-BOL, IBAMA, LPF “Información Técnica para el Procesamiento Industrial de 134 especies maderables de Bolivia”. Serie Técnica XI. 2002. (Translated by Fernando Aguilar . Marketing - CADEFOR)

NOGAL

SPECIES IDENTIFICATION

SCIENTIFIC NAME	<i>Juglans australis</i> Griseb.
FAMILY	JUGLANDACEAE
COMMERCIAL NAME	Tropical walnut
OTHER NAMES	Palo de nuez (Central America), Nogal criollo (Argentina), Tocte (Ecuador)
DISTRIBUTION AREA	Humid temperate forests in Departments of Cochabamba, Tarija, Chuquisaca and Santa Cruz
REGION AND FREQUENCY	Very frequent in Amazonian foothills

TREE DESCRIPTION

TREETOP	Wide and leafy, intense green foliage
TRUNK	Straight and cylindrical, with commercial heights up to 25 m
BARK	Dark grayish color to brown grayish color. Aromatic. Very corrugated

GENERAL CHARACTERISTICS

SAPWOOD COLOR	White yellowish	HEARTHWOOD COLOR	Dark brown, with mulberry tint
ODOR	Peculiar	TASTE	Peculiar
LUSTER		GRAIN	Straight to Interlocked
STRIPED	Tenuous	TEXTURE	

ANATOMIC DESCRIPTION

ANNUAL GROWTH RINGS

Visibility	Average Number
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PORES

Visibility	Visible at sight	Porosity	Semicircular
Type	Solitaires and radial multiple of 4	Shape	

PARENCHYMA

Visibility	Quantity
Type	Apotraqueal in tangential strips

RADIUS

Visibility	With magnifying glass 10 x	magnifying Contrast	Absent
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Stratification	Absent
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PHYSICAL PROPERTIES

MOISTURE CONTENT (GREEN LUMBER)	%
BASIC DENSITY	0,52 g/cm ³
DENSITY (12% MOISTURE CONTENT)	0,59 g/cm ³
RADIAL SHRINKAGE	4,3 %
TANGENTIAL SHRINKAGE	9,5 %
VOLUMETRIC SHRINKAGE	14,3 %
RATE T/R	2,2

MECHANICAL RESISTANCE

MODULUS OF ELASTICITY	85 1000 Kg/cm ²
MODULUS OF RUPTURE	865 Kg/cm ²
COMPRESSION PARALELL TO GRAIN	505 Kg/cm ²
QUARTEREDSAWED	64,2 Kg/cm ²
LATERAL HARDNESS	602 Kg
IMPACT BENDING	Kg-m

TECHNNICAL CONDITIONS FOR PROCESSING

MACHINING	Easy machining.. Good finishing
PRESERVATION	Rather permeable
NATURAL DURABILITY	Durable, specially when not in contact with soil
DRYING	Difficult drying, water vaporizing is recommended

END USES

Furniture	Flooring
Decorative Veneer	

Source : MDSP, FAO PAF-BOL, IBAMA, LPF “[Información Técnica para el Procesamiento Industrial de 134 especies maderables de Bolivia](#)”. Serie Técnica XI. 2002. (Translated by Fernando Aguilar . Marketing - CADEFOR)

NUI

SPECIES IDENTIFICATION

SCIENTIFIC NAME	<i>Pseudolmedia laevigata</i> * (Ruiz & Pav.) J. F. Macbr.
FAMILY	MORACEAE
COMMERCIAL NAME	Cherry manax, Muiratinga, Nuí
OTHER NAMES	Ojoso Colorado* (Bolivia), Vara Piedra (Colombia), Chimi (Ecuador), Chemicua (Peru), Charo Macho (Venezuela)
DISTRIBUTION AREA	Humid tropical and subtropical forests*. Departments of Beni, La Paz, Cochabamba and Santa Cruz.
REGION AND FREQUENCY	Frequent in Bajo Paraguá, Guarayos, Amazonian foothills and Amazonia

TREE DESCRIPTION

TREETOP	Irregular shape; very open, simple alternate leaves.
TRUNK	Straight and cylindrical with commercial heights up to 18 m
BARK	Light gray color

GENERAL CHARACTERISTICS

SAPWOOD COLOR	Yellow	HEARTHWOOD COLOR	Red to dark-red*
ODOR	Indistinct	TASTE	Indistinct
LUSTER	Medium to bright	GRAIN	Interlocked
STRIPED	Tenuous	TEXTURE	Medium

ANATOMIC DESCRIPTION

ANNUAL GROWTH RINGS

Visibility	Visible at sight	Average Number	35 rings in a radium of 10 cm.
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PORES

Visibility	With magnifying glass 10 x	Porosity	Diffuse
Type	Solitaires, radial multiple	Shape	Round to oval

PARENCHYMA

Visibility	Visible at sight	Quantity	Abundant
Type	Paratraqueal in lines		

RADIUS

Visibility	With magnifying glass 10 x	Contrast	Present
Stratification	Absent		

PHYSICAL PROPERTIES

MOISTURE CONTENT (GREEN LUMBER)	39 %
BASIC DENSITY	0,76* g/cm ³
DENSITY (12% MOISTURE CONTENT)	0,86 (900*) g/cm ³
RADIAL SHRINKAGE	4,8 (5,1*) %
TANGENTIAL SHRINKAGE	10,3 %
VOLUMETRIC SHRINKAGE	14,6 %
RATE T/R	2,1*

MECHANICAL RESISTANCE

MODULUS OF ELASTICITY	174 1000 Kg/cm ²
MODULUS OF RUPTURE	1278 Kg/cm ²
COMPRESSION PARALELL TO GRAIN	659 (603*) Kg/cm ²
QUARTEREDSAWED	140 Kg/cm ²
LATERAL HARDNESS	998 (711*) Kg
IMPACT BENDING	4,1 Kg-m

TECHNNICAL CONDITIONS FOR PROCESSING

MACHINING	Moderately easy.
PRESERVATION	Rather permeable
NATURAL DURABILITY	Durable when not in soil contact
DRYING	Air drying is somewhat difficult, with tendency for twisting and curving up.* A severe kiln schedule is recommended.

END USES

Construction	Flooring
Tool handles*	Doors and window frames*
Mouldings*	

Source 1: MDSP, FAO PAF-BOL, IBAMA, LPF “[Información Técnica para el Procesamiento Industrial de 134 especies maderables de Bolivia](#)”. Serie Técnica XI. 2002. (Translated by Fernando Aguilar . Marketing - CADEFOR)

(*) Source 2. CFB, PROMABOSQUE, BOLFOR, SCC, FAO PAF-BOL. [Bolivian Woods](#). 1999.

OCHOO

SPECIES IDENTIFICATION

SCIENTIFIC NAME	<i>Hura crepitans</i> L.
FAMILY	EUPHORBIACEAE
COMMERCIAL NAME	Hura, Possumwood, Assacu
OTHER NAMES	Soliman, Ceiba Amarilla
DISTRIBUTION AREA	Humid tropical forests in transition to subtropical forests*. Departments of Santa Cruz, Beni, Cochabamba, La Paz and Pando
REGION AND FREQUENCY	Very frequent in Guarayos, Choré and Amazonian foothills

TREE DESCRIPTION

TREETOP	Large, intense green foliage, alternate leaves.
TRUNK	Conical and uniform , commercial heights up to 50 m*
BARK	Light brown to grayish, smooth texture, it exudes a caustic latex, which is dangerous for the eyes

GENERAL CHARACTERISTICS

SAPWOOD COLOR	White	HEARTHWOOD COLOR	Light yellow
ODOR	Indistinct	TASTE	Caustic
LUSTER	Medium	GRAIN	Straight to Interlocked
STRIPED	Tenuous	TEXTURE	Medium

ANATOMIC DESCRIPTION

ANNUAL GROWTH RINGS

Visibility	Visible at sight	Average Number	18 rings in a radium of 10 cm.
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PORES

Visibility	Visible at sight	Porosity	Diffuse
Type	Scarces, solitaires	Shape	Round to oval, occluded

PARENCHYMA

Visibility	With magnifying glass 10 x	magnifying Quantity	Abundant
Type	Apotraqueal in lines		

RADIUS

Visibility	With magnifying glass 10 x	magnifying Contrast	Absent
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Stratification	Absent
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PHYSICAL PROPERTIES

MOISTURE CONTENT (GREEN LUMBER)	84 %
BASIC DENSITY	0,44 g/cm ³
DENSITY (12% MOISTURE CONTENT)	0,55 g/cm ³
RADIAL SHRINKAGE	3,9 %
TANGENTIAL SHRINKAGE	5,7 %
VOLUMETRIC SHRINKAGE	9,7 %
RATE T/R	1,5

MECHANICAL RESISTANCE

MODULUS OF ELASTICITY	99 1000 Kg/cm ²
MODULUS OF RUPTURE	685 Kg/cm ²
COMPRESSION PARALELL TO GRAIN	445 Kg/cm ²
QUARTEREDSAWED	81 Kg/cm ²
LATERAL HARDNESS	364 Kg
IMPACT BENDING	1,88 Kg-m

TECHNNICAL CONDITIONS FOR PROCESSING

MACHINING	Good planing, moulding, sanding, boring, turning and finishing.* Low blunting effect*.
PRESERVATION	Rather permeable
NATURAL DURABILITY	Low durability. The wood is susceptible to blue stain
DRYING	Air drying is rather quick with tendency to curve and blue stain*. Kiln drying T6 – D2 and T3 – D1 (USA)*

END USES

Construction	Decorative Veneer
Doors	Furniture
Plywood*	Packages and crating
Mouldings*	Carpentry*
Coffins*	Boxes*
Toys*	Panels*
Fiber and particle boards*	

Source 1: MDSP, FAO PAF-BOL, IBAMA, LPF “[Información Técnica para el Procesamiento Industrial de 134 especies maderables de Bolivia](#)”. Serie Técnica XI. 2002. (Translated by Fernando Aguilar . Marketing - CADEFOR)

(*) Source 2. CFB, PROMABOSQUE, BOLFOR, SCC, FAO PAF-BOL. [Bolivian Woods](#). 1999.

PACAY

SPECIES IDENTIFICATION

SCIENTIFIC NAME	<i>Inga edulis</i> Martius
FAMILY	LEG. MIMOSOIDEAE
COMMERCIAL NAME	Manniballi
OTHER NAMES	Inga (Brazil), Guamo (Colombia), Guaba (Ecuador), Chimbillo (Peru)
DISTRIBUTION AREA	Humid subtropical forests, Departments of Santa Cruz, Beni, La Paz and Pando
REGION AND FREQUENCY	

TREE DESCRIPTION

TREETOP	Small Parasol- shaped, Intense green foliage, composite leaves
TRUNK	With deformities, commercial heights up to 20 m
BARK	Brown color bark, with light red color exudates

GENERAL CHARACTERISTICS

SAPWOOD COLOR	Pale yellow	HEARTHWOOD COLOR	Ligth brown with dark strips
ODOR	Indistinct	TASTE	Indistinct
LUSTER	Medium	GRAIN	Straight to Interlocked
STRIPED	Dark	TEXTURE	Coarse

ANATOMIC DESCRIPTION

ANNUAL GROWTH RINGS

Visibility	Visible at sight	Average Number	31 rings in a radium of 10 cm.
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PORES

Visibility	Visible at sight	Porosity	Diffuse
Type	Solitaires and radial multiple of 3	Shape	Round to oval, open

PARENCHYMA

Visibility	Visible at sight	Quantity	Abundant
Type	Paratraqueal with centric vessels		

RADIUS

Visibility	With magnifying glass 10 x	magnifying Contrast	Absent
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Stratification	Present
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PHYSICAL PROPERTIES

MOISTURE CONTENT (GREEN LUMBER)	78 %
BASIC DENSITY	0,53 g/cm ³
DENSITY (12% MOISTURE CONTENT)	0,66 g/cm ³
RADIAL SHRINKAGE	3,8 %
TANGENTIAL SHRINKAGE	8,4 %
VOLUMETRIC SHRINKAGE	12,1 %
RATE T/R	2,2

MECHANICAL RESISTANCE

MODULUS OF ELASTICITY	114 1000 Kg/cm ²
MODULUS OF RUPTURE	876 Kg/cm ²
COMPRESSION PARALELL TO GRAIN	505 Kg/cm ²
QUARTEREDSAWED	93 Kg/cm ²
LATERAL HARDNESS	501 Kg
IMPACT BENDING	1,74 Kg-m

TECHNNICAL CONDITIONS FOR PROCESSING

MACHINING	Easy machining. Bad finishing
PRESERVATION	Rather permeable
NATURAL DURABILITY	Low durability. The wood is susceptible to blue stain
DRYING	A moderate kiln schedule is recommended

END USES

Decorative Veneer	Furniture
Packages and crating	

Source : MDSP, FAO PAF-BOL, IBAMA, LPF “Información Técnica para el Procesamiento Industrial de 134 especies maderables de Bolivia”. Serie Técnica XI. 2002. (Translated by Fernando Aguilar . Marketing - CADEFOR)

PALO BARROSO

SPECIES IDENTIFICATION

SCIENTIFIC NAME	<i>Blepharocalyx gigantea</i> Lillo
FAMILY	MYRTACEAE
COMMERCIAL NAME	
OTHER NAMES	
DISTRIBUTION AREA	Bolivian - Tucumano forests, Departments of Tarija, Chuquisaca, Cochabamba and Santa Cruz
REGION AND FREQUENCY	

TREE DESCRIPTION

TREETOP	Wide with numerous branches, Intense green foliage
TRUNK	Conical and uniform , commercial heights up to 25 m
BARK	Color Grayish color, corrugated

GENERAL CHARACTERISTICS

SAPWOOD COLOR	Ligth brown yellowish	HEARTHWOOD COLOR	Ligth brown yellowish
ODOR	Indistinct	TASTE	Indistinct
LUSTER		GRAIN	Straight
STRIPED		TEXTURE	

ANATOMIC DESCRIPTION

ANNUAL GROWTH RINGS

Visibility	Average Number		
PORES			
Visibility	With magnifying glass 10 x	magnifying Porosity	Diffuse
Type	Solitaries, abundant	Shape	Vacíos
PARENCHYMA			
Visibility	Quantity		
Type	Apotraqueal diffuse		
RADIUS			
Visibility	Contrast		
Stratification	Absent		

PHYSICAL PROPERTIES

MOISTURE CONTENT (GREEN LUMBER)	%
BASIC DENSITY	0,6 g/cm ³
DENSITY (12% MOISTURE CONTENT)	0,66 g/cm ³
RADIAL SHRINKAGE	5,4 %
TANGENTIAL SHRINKAGE	10,9 %
VOLUMETRIC SHRINKAGE	15,6 %
RATE T/R	2,1

MECHANICAL RESISTANCE

MODULUS OF ELASTICITY	100 1000 Kg/cm ²
MODULUS OF RUPTURE	1273 Kg/cm ²
COMPRESSION PARALELL TO GRAIN	545 Kg/cm ²
QUARTEREDSAWED	Kg/cm ²
LATERAL HARDNESS	918 Kg
IMPACT BENDING	Kg-m

TECHNNICAL CONDITIONS FOR PROCESSING

MACHINING	Moderately easy. Good finishing
PRESERVATION	Permeable
NATURAL DURABILITY	Durable
DRYING	Rather difficult with risks of twisting

END USES

Door Frames	Flooring
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Source : MDSP, FAO PAF-BOL, IBAMA, LPF “Información Técnica para el Procesamiento Industrial de 134 especies maderables de Bolivia”. Serie Técnica XI. 2002. (Translated by Fernando Aguilar . Marketing - CADEFOR)

PALO BLANCO

SPECIES IDENTIFICATION

SCIENTIFIC NAME	<i>Calycophyllum multiflorum</i> Griseb.
FAMILY	RUBIACEAE
COMMERCIAL NAME	Palo blanco*. Pau - Mulato, Degame, Zitonenholz, Citronnier Bresilien, Lemonwood
OTHER NAMES	Verdolaga (Bolivia), Palo blanco *(Paraguay), Camaron (Central America), Capirona, Pau mulato* (Brazil), Alzano (Colombia), Corusicaa (Ecuador), Ivirá Morotí* (Argentina)
DISTRIBUTION AREA	Is found in dry forests in transition to temperate humid forests*. Gran Chaco Forest in Departments of Chuquisaca and Santa Cruz
REGION AND FREQUENCY	

TREE DESCRIPTION

TREETOP	Large , Intense green foliage, simple opposite leaves
TRUNK	Straight and cylindrical, commercial heights up to 30 m
BARK	Gray whitish color, with longitudinal deep cracks.

GENERAL CHARACTERISTICS

SAPWOOD COLOR	White yellowish	HEARTHWOOD COLOR	White yellowish
ODOR	Indistinct	TASTE	Indistinct
LUSTER		GRAIN	Straight
STRIPED	Tenuous	TEXTURE	Fine

ANATOMIC DESCRIPTION

ANNUAL GROWTH RINGS

Visibility			Average Number	
PORES				
Visibility	With magnifying glass 10 x	magnifying	Porosity	Diffuse
Type	Solitaries and radial multiple of 6		Shape	Open
PARENCHYMA				
Visibility	Quantity			Scarce
Type	Longitudinal diffuse			
RADIUS				
Visibility	Contrast			Absent
Stratification	Absent			

PHYSICAL PROPERTIES

MOISTURE CONTENT (GREEN LUMBER)	%
BASIC DENSITY	0,64 g/cm ³
DENSITY (12% MOISTURE CONTENT)	0,78 g/cm ³
RADIAL SHRINKAGE	4,0 %
TANGENTIAL SHRINKAGE	7,4 %
VOLUMETRIC SHRINKAGE	11,0 %
RATE T/R	1,8

MECHANICAL RESISTANCE

MODULUS OF ELASTICITY	1000 Kg/cm ²
MODULUS OF RUPTURE	947 Kg/cm ²
COMPRESSION PARALELL TO GRAIN	552 Kg/cm ²
QUARTEREDSAWED	Kg/cm ²
LATERAL HARDNESS	912 Kg
IMPACT BENDING	Kg-m

TECHNNICAL CONDITIONS FOR PROCESSING

MACHINING	Good planing, moulding, boring, turning and finishing*. Excellent sanding*. Medium blunting effect*.
PRESERVATION	Scarcely permeable
NATURAL DURABILITY	Very durable, specially when not in contact with soil.*
DRYING	Air drying is rather quick with few defects. Kiln drying T2 – C2 and T2 – C1 (USA)*

END USES

Flooring	Furniture
Decorative Veneer	Turnery*
Toys*	Panels*
Mouldings*	Tool handles*
Wood carvings*	Beams*

Source 1: MDSP, FAO PAF-BOL, IBAMA, LPF “[Información Técnica para el Procesamiento Industrial de 134 especies maderables de Bolivia](#)”. Serie Técnica XI. 2002. (Translated by Fernando Aguilar . Marketing - CADEFOR)

(*) Source 2. CFB, PROMABOSQUE, BOLFOR, SCC, FAO PAF-BOL. [Bolivian Woods](#). 1999.

PALO LANZA

SPECIES IDENTIFICATION

SCIENTIFIC NAME	<i>Patagonula americana</i> L.
FAMILY	BORAGINACEAE
COMMERCIAL NAME	Guayaibi, Guayubira
OTHER NAMES	
DISTRIBUTION AREA	Temperate humid forests, Departments of Tarija and Chuquisaca
REGION AND FREQUENCY	
COMMERCIAL GROUP	

TREE DESCRIPTION

TREETOP	Wide, light green foliage, alternate leaves
TRUNK	Straight and cylindrical with commercial heights up to 30 m
BARK	Gray color whitish, slightly corrugated with longitudinal cracks

GENERAL CHARACTERISTICS

SAPWOOD COLOR	Whitish	HEARTHWOOD COLOR	Ligth brown
ODOR	Indistinct	TASTE	Indistinct
LUSTER	Brigth	GRAIN	Straight
STRIPED	Tenuous	TEXTURE	

ANATOMIC DESCRIPTION

ANNUAL GROWTH RINGS

Visibility	Average Number
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PORES

Visibility	Porosity	Tangential
Type	Shape	Open

PARENCHYMA

Visibility	Visible at sight	Quantity
Type	Paratraqueal with centric vessels confluent	

RADIUS

Visibility	Visible at sight	Contrast	Present
Stratification	Absent		

PHYSICAL PROPERTIES

MOISTURE CONTENT (GREEN LUMBER)	%
BASIC DENSITY	0,54 g/cm ³
DENSITY (12% MOISTURE CONTENT)	0,73 g/cm ³
RADIAL SHRINKAGE	4,6 %
TANGENTIAL SHRINKAGE	8,8 %
VOLUMETRIC SHRINKAGE	12,9 %
RATE T/R	1,9

MECHANICAL RESISTANCE

MODULUS OF ELASTICITY	120 – 150 1000 Kg/cm ²
MODULUS OF RUPTURE	1160 Kg/cm ²
COMPRESSION PARALELL TO GRAIN	540 Kg/cm ²
QUARTEREDSAWED	225 Kg/cm ²
LATERAL HARDNESS	822 Kg
IMPACT BENDING	Kg-m

TECHNNICAL CONDITIONS FOR PROCESSING

MACHINING	Easy machining . Good finishing.
PRESERVATION	Permeable
NATURAL DURABILITY	Moderately durable
DRYING	

END USES

Furniture	Construction
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Source : MDSP, FAO PAF-BOL, IBAMA, LPF “Información Técnica para el Procesamiento Industrial de 134 especies maderables de Bolivia”. Serie Técnica XI. 2002. (Translated by Fernando Aguilar . Marketing - CADEFOR)

PALO MARIA

SPECIES IDENTIFICATION

SCIENTIFIC NAME	<i>Calophyllum brasiliense</i> Cambess.
FAMILY	GUTTIFERAE (Clusiaceae*)
COMMERCIAL NAME	Santa María, Jacareuba, Palo María, American Sapelly*
OTHER NAMES	Guanandí, Jacareuba*, Cedro do Pantano (Brazil), Aceite mario (Colombia), María, Bella Maria * (Ecuador), Arary (Paraguay), Lagarto caspi, Alfaro (Peru)
DISTRIBUTION AREA	Humid tropical forests in transition to subtropical forests. Departments of Santa Cruz, Beni, La Paz and Cochabamba
REGION AND FREQUENCY	Very frequent in Guarayos, Choré and Amazonian foothills

TREE DESCRIPTION

TREETOP	Large. Parasol- shaped, intense green foliage with simple leaves
TRUNK	Conical and uniform , commercial heights up to 30 m
BARK	Redish- brown*, with deep longitudinal cracks

GENERAL CHARACTERISTICS

SAPWOOD COLOR	Pink	HEARTHWOOD COLOR	Brown redish
ODOR	Indistinct	TASTE	Indistinct
LUSTER	Medium	GRAIN	Interlocked
STRIPED	Tenuous	TEXTURE	Medium

ANATOMIC DESCRIPTION

ANNUAL GROWTH RINGS

Visibility	With magnifying glass 10 x	magnifying Average Number	19 rings in a radium of 10 x
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PORES

Visibility	Visible at sight	Porosity	Diffuse
Type	Solitaries, numerous	Shape	Round to oval

PARENCHYMA

Visibility	Visible at sight	Quantity	Abundant
Type	Apotraqueal in strips		

RADIUS

Visibility	With magnifying glass 10 x	Contrast	Present
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Stratification	Absent
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PHYSICAL PROPERTIES

MOISTURE CONTENT (GREEN LUMBER)	73 %
BASIC DENSITY	0,55 g/cm ³
DENSITY (12% MOISTURE CONTENT)	0,66 g/cm ³
RADIAL SHRINKAGE	5,1 %
TANGENTIAL SHRINKAGE	8,3 %
VOLUMETRIC SHRINKAGE	13,2 %
RATE T/R	1,6

MECHANICAL RESISTANCE

MODULUS OF ELASTICITY	130 1000 Kg/cm ²
MODULUS OF RUPTURE	913 Kg/cm ²
COMPRESSION PARALELL TO GRAIN	579 Kg/cm ²
QUARTEREDSAWED	99 Kg/cm ²
LATERAL HARDNESS	743 Kg
IMPACT BENDING	3,33 Kg-m

TECHNNICAL CONDITIONS FOR PROCESSING

MACHINING	Good planing, sanding, boring, turning and finishing*. Excellent moulding*. Medium blunt effect.*
PRESERVATION	The sapwood is permeable and the heartwood is impermeable
NATURAL DURABILITY	Durable, specially when not in contact with soil*
DRYING	Air drying is rather quickly with tendency to twist and curve*. Kiln drying T2 – D4 and T2 – D3 (USA)*

END USES

Construction	Furniture
Doors and Windows	Decorative Veneer
Frames	Flooring
Carpentry*	Panels*
Toys*	Truck beds*
Tool handles*	Fiber boards*
Turnery*	

Source 1: MDSP, FAO PAF-BOL, IBAMA, LPF “[Información Técnica para el Procesamiento Industrial de 134 especies maderables de Bolivia](#)”. Serie Técnica XI. 2002. (Translated by Fernando Aguilar . Marketing - CADEFOR)

(*) Source 2. CFB, PROMABOSQUE, BOLFOR, SCC, FAO PAF-BOL. [Bolivian Woods](#). 1999.

PALO SANTO NEGRO

SPECIES IDENTIFICATION

SCIENTIFIC NAME	<i>Virola surinamensis</i> Warb ex Rol.
FAMILY	MYRISTICACEAE
COMMERCIAL NAME	Pechice, Baboen
OTHER NAMES	Virola, Ucuúba (bra.)
DISTRIBUTION AREA	Amazonian forests, Department of Pando
REGION AND FREQUENCY	

TREE DESCRIPTION

TREETOP

TRUNK Straight and cylindrical.

BARK Coarse texture , whitish. It exudes a whitish liquid.

GENERAL CHARACTERISTICS

SAPWOOD COLOR	Light beige	HEARTHWOOD COLOR	Light beige, pinkish
ODOR	Indistinct	TASTE	Indistinct
LUSTER	Medium	GRAIN	Straight
STRIPED		TEXTURE	

ANATOMIC DESCRIPTION

ANNUAL GROWTH RINGS

Visibility Average Number

PORES

Visibility Porosity

Type Shape

PARENCHYMA

Visibility Quantity

Type

RADIUS

Visibility Contrast

Stratification

PHYSICAL PROPERTIES

MOISTURE CONTENT (GREEN LUMBER)	%
BASIC DENSITY	0,48 g/cm3

DENSITY (12% MOISTURE CONTENT)	g/cm3
RADIAL SHRINKAGE	4,7 %
TANGENTIAL SHRINKAGE	7 %
VOLUMETRIC SHRINKAGE	11,6 %
RATE T/R	1,48

MECHANICAL RESISTANCE

MODULUS OF ELASTICITY	106 1000 Kg/cm2
MODULUS OF RUPTURE	581 Kg/cm2
COMPRESSION PARALELL TO GRAIN	305 Kg/cm2
QUARTEREDSAWED	69 Kg/cm2
LATERAL HARDNESS	217 Kg
IMPACT BENDING	Kg-m

TECHNNICAL CONDITIONS FOR PROCESSING

MACHINING	Easy machining. Good finishing.
PRESERVATION	Permeable
NATURAL DURABILITY	Low durability, suceptible to attack of fungi and insects.
DRYING	

END USES

Decorative veneer	Furniture
Packages and crating	

Source : MDSP, FAO PAF-BOL, IBAMA, LPF “[Información Técnica para el Procesamiento Industrial de 134 especies maderables de Bolivia](#)”. Serie Técnica XI. 2002. (Translated by Fernando Aguilar . Marketing - CADEFOR)

PALO ZAPALLO

SPECIES IDENTIFICATION

SCIENTIFIC NAME	<i>Pisonia zapallo</i> Griseb
FAMILY	NYCTAGINACEAE
COMMERCIAL NAME	Catclaw, Cockspur
OTHER NAMES	
DISTRIBUTION AREA	Temperate humid forests, Departments of Chuquisaca, Tarija and Santa Cruz.
REGION AND FREQUENCY	Is considered an scarce species in Bolivian forests

TREE DESCRIPTION

TREETOP	Wide, sparsed foliage, simple-opposite-peciolated leaves.
TRUNK	Straight and cylindrical, commercial heights up to 12 m
BARK	Gray-whitish color, slightly corrugated with narrow furrows.

GENERAL CHARACTERISTICS

SAPWOOD COLOR	White yellowish to lighth brown	HEARTHWOOD COLOR	White yellowish to lighth brown
ODOR	Indistinct	TASTE	Indistinct
LUSTER		GRAIN	Straight
STRIPED		TEXTURE	

ANATOMIC DESCRIPTION

ANNUAL GROWTH RINGS

Visibility	Average Number
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PORES

Visibility	With magnifying glass 10 x	magnifying Porosity	Diffuse
Type	Solitaries and radial multiple of 7	Shape	Open

PARENCHYMA

Visibility	Indistinguishable with magnifying glass	even with Quantity
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Type

RADIUS

Visibility	Contrast	Absent
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Stratification	Absent
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PHYSICAL PROPERTIES

MOISTURE CONTENT (GREEN LUMBER)	%
BASIC DENSITY	0,3 g/cm3
DENSITY (12% MOISTURE CONTENT)	g/cm3
RADIAL SHRINKAGE	4,6 %
TANGENTIAL SHRINKAGE	8,9 %
VOLUMETRIC SHRINKAGE	13 %
RATE T/R	1,9

MECHANICAL RESISTANCE

MODULUS OF ELASTICITY	1000 Kg/cm2
MODULUS OF RUPTURE	304 Kg/cm2
COMPRESSION PARALELL TO GRAIN	240 Kg/cm2
QUARTEREDSAWED	Kg/cm2
LATERAL HARDNESS	168 Kg
IMPACT BENDING	Kg-m

TECHNNICAL CONDITIONS FOR PROCESSING

MACHINING	Easy machining. Finishing is not good due to rough texture of the wood.
PRESERVATION	Permeable
NATURAL DURABILITY	Low durability. The wood is susceptible to blue stain when humid.
DRYING	

END USES

Construction	Packages and crating
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Source : MDSP, FAO PAF-BOL, IBAMA, LPF “[Información Técnica para el Procesamiento Industrial de 134 especies maderables de Bolivia](#)”. Serie Técnica XI. 2002. (Translated by Fernando Aguilar . Marketing - CADEFOR)

PAQUIÓ

SPECIES IDENTIFICATION

SCIENTIFIC NAME	<i>Hymenaea courbaril</i> L.
FAMILY	LEGUMINOSAE (CAESALPINIACEAE)*
COMMERCIAL NAME	Jatobá, Courbaril
OTHER NAMES	Jatobá, Jataí* (Brazil), Algarrobo (Colombia, Venezuela), Copal (Ecuador), Azúcar-Huayo* (Peru)
DISTRIBUTION AREA	Is found in humid tropical and subtropical forests.* Departments of Beni, La Paz and Santa Cruz
REGION AND FREQUENCY	Very frequent in Bajo Paraguá, Guarayos Amazonian foothills and Amazonia

TREE DESCRIPTION

TREETOP	Wide and extended.
TRUNK	Conical and uniform. It reaches commercial heights up to 45 m*
BARK	Grayish color; slightly fissured; thin.

GENERAL CHARACTERISTICS

SAPWOOD COLOR	Pale Brown	HEARTHWOOD COLOR	Redish-Brown*
ODOR	Indistinct	TASTE	Indistinct
LUSTER	Medium	GRAIN	Straight to interlocked
STRIPED	Dark and Intense	TEXTURE	Medium-sized*

ANATOMIC DESCRIPTION

ANNUAL GROWTH RINGS

Visibility	Visible at sight	Average Number	29 rings in a radium of 10 cm.
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PORES

Visibility	Visible at sight	Porosity	Diffuse
Type	Solitaries, radial multiples	Shape	Round to slightly oval

PARENCHYMA

Visibility	Visible at sight	Quantity	Abundant
Type	Paratraqueal with centric vessels aliform		

RADIUS

Visibility	Visible at sight	Contrast	Absent
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Stratification	Absent
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PHYSICAL PROPERTIES

MOISTURE CONTENT (GREEN LUMBER)	53 %
BASIC DENSITY	0,77 g/cm ³
DENSITY (12% MOISTURE CONTENT)	0,95 g/cm ³
RADIAL SHRINKAGE	4,2 %
TANGENTIAL SHRINKAGE	7,4 %
VOLUMETRIC SHRINKAGE	11,2 %
RATE T/R	1,8

MECHANICAL RESISTANCE

MODULUS OF ELASTICITY	163 1000 Kg/cm ²
MODULUS OF RUPTURE	1515 Kg/cm ²
COMPRESSION PARALELL TO GRAIN	886 Kg/cm ²
QUARTEREDSAWED	186 Kg/cm ²
LATERAL HARDNESS	1351 Kg
IMPACT BENDING	2,05 Kg-m

TECHNNICAL CONDITIONS FOR PROCESSING

MACHINING	Good planing with an 15° cut angle*. Good moulding, sanding, boring and turning*. Medium blunting effect*. Good finishing.*
PRESERVATION	Permeable solamente la albura
NATURAL DURABILITY	Durable, resistant to termites and fungi, specially when not in contact with soil
DRYING	Air drying is rather slow with risks of cracking*. Kiln drying T3-C2 and T3 – C1 (USA)*

END USES

Heavy construction*	Garden Furniture*
Decorative veneer	Flooring
Naval construction	Turnery*
Stairways*	Door frames*
Truck beds*	Tool handles*

Source 1: MDSP, FAO PAF-BOL, IBAMA, LPF “Información Técnica para el Procesamiento Industrial de 134 especies maderables de Bolivia”. Serie Técnica XI. 2002. (Translated by Fernando Aguilar . Marketing - CADEFOR)

(*) Source 2. CFB, PROMABOSQUE, BOLFOR, SCC, FAO PAF-BOL. Bolivian Woods. 1999.

PARAISO

SPECIES IDENTIFICATION

SCIENTIFIC NAME	<i>Melia azedarach</i> L.
FAMILY	MELIACEAE
COMMERCIAL NAME	Persian lilac
OTHER NAMES	Cinamomo (Brazil)
DISTRIBUTION AREA	Ornamental tree, widely known. Departments of La Paz, Cochabamba and Santa Cruz
REGION AND FREQUENCY	

TREE DESCRIPTION

TREETOP	
TRUNK	Straight and cylindrical. Heights up to 30 m
BARK	

GENERAL CHARACTERISTICS

SAPWOOD COLOR	Yellow whitish	HEARTHWOOD COLOR	Red to brown-redish
ODOR		TASTE	
LUSTER	Brigth	GRAIN	Straight
STRIPED	Demarcated by annual growth rings	TEXTURE	Coarse

ANATOMIC DESCRIPTION

ANNUAL GROWTH RINGS	
Visibility	Average Number
PORES	
Visibility	Porosity
Type	Shape
PARENCHYMA	
Visibility	Quantity
Type	
RADIUS	
Visibility	Contrast
Stratification	

PHYSICAL PROPERTIES

MOISTURE CONTENT (GREEN LUMBER)	%
BASIC DENSITY	0.4 - 0.49 g/cm ³
DENSITY (12% MOISTURE CONTENT)	0.4 - 5.8 g/cm ³
RADIAL SHRINKAGE	3.1 - 5 %
TANGENTIAL SHRINKAGE	8.1 - 9.5 %
VOLUMETRIC SHRINKAGE	%
RATE T/R	1.9 - 2.6

MECHANICAL RESISTANCE

MODULUS OF ELASTICITY	< 100 1000 Kg/cm ²
MODULUS OF RUPTURE	510 - 870 Kg/cm ²
COMPRESSION PARALELL TO GRAIN	210- 560 Kg/cm ²
QUARTEREDSAWED	90 - 130 Kg/cm ²
LATERAL HARDNESS	300 - 920 Kg
IMPACT BENDING	Kg-m

TECHNNICAL CONDITIONS FOR PROCESSING

MACHINING	Easy machining . Good finishing.
PRESERVATION	Rather permeable
NATURAL DURABILITY	Low durability.
DRYING	Air drying is quick, without serious deffects.

END USES

Packages and crating	Construction
Carpentry	Decorative veneer

Source: MDSP, FAO PAF-BOL, IBAMA, LPF “Información Técnica para el Procesamiento Industrial de 134 especies maderables de Bolivia”. Serie Técnica XI. 2002. (Translated by Fernando Aguilar . Marketing - CADEFOR)

PEINE DE MONO

SPECIES IDENTIFICATION

SCIENTIFIC NAME	<i>Apeiba membranaceae</i> Spruce ex Benth.
FAMILY	TILIACEAE
COMMERCIAL NAME	Peine mono
OTHER NAMES	Peine Mono, Corcho, Guácimo Blanco, Pente-de-Macaco (Brazil), Guácimo Baba (Colombia), Peine Mono, Peine de Mico (Ecuador), Peine Mono (Peru)
DISTRIBUTION AREA	Amazonian forests; humid forest in plains and foothills. Departments of Beni, La Paz and Cochabamba
REGION AND FREQUENCY	

TREE DESCRIPTION

TREETOP	Narrow, open and irregular shape
TRUNK	Straight, with round buttresses . Commercial heights up to 35 m
BARK	Gray-greenish color. Coarse texture. Scaly

GENERAL CHARACTERISTICS

SAPWOOD COLOR		HEARTHWOOD COLOR	Light yellow
ODOR	Indistinct	TASTE	Slightly bitter when green
LUSTER	Medium to bright	GRAIN	Straight to Interlocked
STRIPED	Tenuous	TEXTURE	Coarse

ANATOMIC DESCRIPTION

ANNUAL GROWTH RINGS

Visibility	Absent and non distinctive	Average Number	
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PORES

Visibility	Visible at sight	Porosity	Diffuse
Type	Solitaires and radial multiples	Shape	Round to oval, open

PARENCHYMA

Visibility	Visible at sight	Quantity	Abundant
Type	Apotraqeal in wide strips		

RADIUS

Visibility	With magnifying glass 10 x	magnifying Contrast	Present
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Stratification	Absent
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PHYSICAL PROPERTIES

MOISTURE CONTENT (GREEN LUMBER)	%
BASIC DENSITY	0,3 g/cm3
DENSITY (12% MOISTURE CONTENT)	0,37 g/cm3
RADIAL SHRINKAGE	2,3 %
TANGENTIAL SHRINKAGE	6,3 %
VOLUMETRIC SHRINKAGE	8,6 %
RATE T/R	2,73

MECHANICAL RESISTANCE

MODULUS OF ELASTICITY	73 1000 Kg/cm2
MODULUS OF RUPTURE	504 Kg/cm2
COMPRESSION PARALELL TO GRAIN	308 Kg/cm2
QUARTEREDSAWED	45 Kg/cm2
LATERAL HARDNESS	172 Kg
IMPACT BENDING	1,49 Kg-m

TECHNNICAL CONDITIONS FOR PROCESSING

MACHINING	Easy machining. Good finishing
PRESERVATION	Permeable
NATURAL DURABILITY	Low durability
DRYING	

END USES

Construction	Packages and crating
Plywood	

Source: MDSP, FAO PAF-BOL, IBAMA, LPF “[Información Técnica para el Procesamiento Industrial de 134 especies maderables de Bolivia](#)”. Serie Técnica XI. 2002. (Translated by Fernando Aguilar . Marketing - CADEFOR)

PEQUI

SPECIES IDENTIFICATION

SCIENTIFIC NAME	<i>Pseudobombax marginatum</i>
FAMILY	BOMBACACEAE
COMMERCIAL NAME	Imbiricu
OTHER NAMES	
DISTRIBUTION AREA	
REGION AND FREQUENCY	

TREE DESCRIPTION

TREETOP
TRUNK
BARK

GENERAL CHARACTERISTICS

SAPWOOD COLOR	Light beige-pinkish	HEARTHWOOD COLOR	Light beige-pinkish
ODOR	Indistinct	TASTE	Indistinct
LUSTER	Medium	GRAIN	Straight
STRIPED	Tenuous	TEXTURE	

ANATOMIC DESCRIPTION

ANNUAL GROWTH RINGS

Visibility	Average Number
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PORES

Visibility	Visible at sight	Porosity	Diffuse
Type	Solitaires and radial multiples	Shape	Open

PARENCHYMA

Visibility	Scarcely visible even with magnifying glass of 10 x	Quantity	
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Type

RADIUS

Visibility	Scarcely visible at sight	Contrast	Absent
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Stratification	Present
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PHYSICAL PROPERTIES

MOISTURE CONTENT (GREEN LUMBER)	%
BASIC DENSITY	0,32 g/cm ³
DENSITY (12% MOISTURE CONTENT)	0,39 g/cm ³
RADIAL SHRINKAGE	3,8 %
TANGENTIAL SHRINKAGE	6,9 %
VOLUMETRIC SHRINKAGE	13,9 %
RATE T/R	1,82

MECHANICAL RESISTANCE

MODULUS OF ELASTICITY	1000 Kg/cm ²
MODULUS OF RUPTURE	Kg/cm ²
COMPRESSION PARALELL TO GRAIN	Kg/cm ²
QUARTEREDSAWED	Kg/cm ²
LATERAL HARDNESS	Kg
IMPACT BENDING	Kg-m

TECHNNICAL CONDITIONS FOR PROCESSING

MACHINING	Easy machining
PRESERVATION	
NATURAL DURABILITY	
DRYING	

END USES

Plywood	Packages and crating
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Source: MDSP, FAO PAF-BOL, IBAMA, LPF "[Información Técnica para el Procesamiento Industrial de 134 especies maderables de Bolivia](#)". Serie Técnica XI. 2002. (Translated by Fernando Aguilar . Marketing - CADEFOR)

PICANA NEGRA

SPECIES IDENTIFICATION

SCIENTIFIC NAME	<i>Cordia alliodora</i> (Ruiz & Pav.) Cham.
FAMILY	BORAGINACEAE
COMMERCIAL NAME	Light American Cordia, Salmwood
OTHER NAMES	Peterebi (Argentina), Louro-amarelo (Brazil), Laurel negro (Ecuador), Pardillo (Venezuela)
DISTRIBUTION AREA	Is found in Amazonian forest. Departments of Beni, Cochabamba, La Paz, Pando, Tarija and Santa Cruz
REGION AND FREQUENCY	Very frequent in Bajo Paraguá, Chiquitanía, Guarayos and Amazonian foothills

TREE DESCRIPTION

TREETOP	Narrow and irregular shape, simple alternate leaves.
TRUNK	Straight, with buttresses . commercial heights up to 30 m
BARK	Fissured and cracked, brown-grayish color

GENERAL CHARACTERISTICS

SAPWOOD COLOR	Brown	HEARTHWOOD COLOR	Dark brown
ODOR	Indistinct	TASTE	Indistinct
LUSTER	Medium	GRAIN	Slightly Interlocked
STRIPED	Intense	TEXTURE	Medium

ANATOMIC DESCRIPTION

ANNUAL GROWTH RINGS

Visibility	Scarcely distinguishable	Average Number	
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PORES

Visibility	Visible at sight	Porosity	Semicircular with tangential arrangement
Type	Solitaries and radial multiples	Shape	Semicircular

PARENCHYMA

Visibility	With magnifying glass 10 x	magnifying Quantity	
Type	Apotraqueal diffuse and paratraqueal aliform, sometimes confluent		

RADIUS

Visibility	Visible at sight	Contrast	Present
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PHYSICAL PROPERTIES

MOISTURE CONTENT (GREEN LUMBER)	%
BASIC DENSITY	0,39 g/cm ³
DENSITY (12% MOISTURE CONTENT)	0,45 g/cm ³
RADIAL SHRINKAGE	3,09 %
TANGENTIAL SHRINKAGE	6,62 %
VOLUMETRIC SHRINKAGE	9,71 %
RATE T/R	2,14

MECHANICAL RESISTANCE

MODULUS OF ELASTICITY	86,2 1000 Kg/cm ²
MODULUS OF RUPTURE	723 Kg/cm ²
COMPRESSION PARALELL TO GRAIN	324 Kg/cm ²
QUARTEREDSAWED	73 Kg/cm ²
LATERAL HARDNESS	294 Kg
IMPACT BENDING	1,88 Kg-m

TECHNNICAL CONDITIONS FOR PROCESSING

MACHINING	Easy machining. Good finishing.
PRESERVATION	The sapwood is permeable to preservation treatment
NATURAL DURABILITY	Durable, resistant to fungi and insects
DRYING	Air drying is quick and steady

END USES

Construction	Decorative Veneer
Furniture	Flooring

Source: MDSP, FAO PAF-BOL, IBAMA, LPF “[Información Técnica para el Procesamiento Industrial de 134 especies maderables de Bolivia](#)”. Serie Técnica XI. 2002. (Translated by Fernando Aguilar . Marketing - CADEFOR)

PINO DE MONTE

SPECIES IDENTIFICATION

SCIENTIFIC NAME	<i>Podocarpus parlatorei</i> Pilger
FAMILY	PODOCARPACEAE
COMMERCIAL NAME	Manio
OTHER NAMES	Pinho bravo (Brazil), Pino chaquiro (Colombia), Mañiu (Chile), Pino Castañeto (Venezuela)
DISTRIBUTION AREA	Temperate humid forests, Departments of Santa Cruz, Tarija, Chuquisaca and Cochabamba
REGION AND FREQUENCY	Very scarce

TREE DESCRIPTION

TREETOP	
TRUNK	Straight and cylindrical with commercial heights up to 15 m
BARK	Grayish color

GENERAL CHARACTERISTICS

SAPWOOD COLOR	White yellowish	HEARTHWOOD COLOR	Slightly Pink
ODOR	Indistinct	TASTE	Indistinct
LUSTER	Medium	GRAIN	Straight
STRIPED	Tenuous	TEXTURE	

ANATOMIC DESCRIPTION

ANNUAL GROWTH RINGS

Visibility		Average Number	
PORES			
Visibility		Porosity	
Type		Shape	
PARENCHYMA			
Visibility		Quantity	Scarce
Type	Apotraqueal		
RADIUS			
Visibility		Contrast	Present
Stratification	Absent		

PHYSICAL PROPERTIES

MOISTURE CONTENT (GREEN LUMBER)	59 %
BASIC DENSITY	0,43 g/cm ³
DENSITY (12% MOISTURE CONTENT)	0,48 g/cm ³
RADIAL SHRINKAGE	3,6 %
TANGENTIAL SHRINKAGE	6 %
VOLUMETRIC SHRINKAGE	10,1 %
RATE T/R	1,7

MECHANICAL RESISTANCE

MODULUS OF ELASTICITY	96 1000 Kg/cm ²
MODULUS OF RUPTURE	1016 Kg/cm ²
COMPRESSION PARALELL TO GRAIN	415 Kg/cm ²
QUARTEREDSAWED	116 Kg/cm ²
LATERAL HARDNESS	452 Kg
IMPACT BENDING	2,05 Kg-m

TECHNNICAL CONDITIONS FOR PROCESSING

MACHINING	Easy machining. Good finishing
PRESERVATION	Moderate
NATURAL DURABILITY	Durable, specially when not in soil contact
DRYING	Air Drying with risks of cracking and twisting

END USES

Construction	Flooring
Furniture	Packages and crating
Decorative Veneer	

Source: MDSP, FAO PAF-BOL, IBAMA, LPF "[Información Técnica para el Procesamiento Industrial de 134 especies maderables de Bolivia](#)". Serie Técnica XI. 2002. (Translated by Fernando Aguilar . Marketing - CADEFOR)

PITON

SPECIES IDENTIFICATION

SCIENTIFIC NAME	<i>Talisia esculenta</i> (A.St.-Hil.) Radlk.
FAMILY	SAPINDACEAE
COMMERCIAL NAME	Pitomba
OTHER NAMES	
DISTRIBUTION AREA	
REGION AND FREQUENCY	
COMMERCIAL GROUP	

TREE DESCRIPTION

TREETOP

TRUNK

BARK

GENERAL CHARACTERISTICS

SAPWOOD COLOR	Ligth brown- yellowish	HEARTHWOOD COLOR	Ligth brown- yellowish
ODOR	Indistincts	TASTE	Indistincts
LUSTER	Tenuous	GRAIN	Interlocked
STRIPED	Tenuous	TEXTURE	

ANATOMIC DESCRIPTION

ANNUAL GROWTH RINGS

Visibility	Indistintos	Average Number	
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PORES

Visibility	With magnifying glass 10 x	magnifying Porosity	Diffuse
Type	In multiple of 2	Shape	Oval to circular

PARENCHYMA

Visibility	Visible at sight	Quantity	
Type	In concentrical strips		

RADIUS

Visibility	With magnifying glass 10 x	Contrast	Absent
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Stratification	Absent
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PHYSICAL PROPERTIES

MOISTURE CONTENT (GREEN LUMBER)	%
BASIC DENSITY	0,94 g/cm3
DENSITY (12% MOISTURE CONTENT)	1,1 g/cm3
RADIAL SHRINKAGE	9,3 %
TANGENTIAL SHRINKAGE	16,9 %
VOLUMETRIC SHRINKAGE	29,9 %
RATE T/R	1,82

MECHANICAL RESISTANCE

MODULUS OF ELASTICITY	183 1000 Kg/cm2
MODULUS OF RUPTURE	1412 Kg/cm2
COMPRESSION PARALELL TO GRAIN	694 Kg/cm2
QUARTEREDSAWED	98 Kg/cm2
LATERAL HARDNESS	649 Kg
IMPACT BENDING	Kg-m

TECHNNICAL CONDITIONS FOR PROCESSING

MACHINING

PRESERVATION Impermeable

NATURAL DURABILITY Durable. Resistant to attack of insects and fung, but susceptible to rotting

DRYING

END USES

Construction

Source: MDSP, FAO PAF-BOL, IBAMA, LPF “Información Técnica para el Procesamiento Industrial de 134 especies maderables de Bolivia”. Serie Técnica XI. 2002. (Translated by Fernando Aguilar . Marketing - CADEFOR)

PLUMERO

SPECIES IDENTIFICATION

SCIENTIFIC NAME	<i>Vochysia lanceolata</i> Stafleu
FAMILY	VOCHYSIACEAE
COMMERCIAL NAME	Yemeri, Quaruba
OTHER NAMES	
DISTRIBUTION AREA	Humid subtropical forests, Departments of Santa Cruz and Beni
REGION AND FREQUENCY	Frecuent in El Chorré

TREE DESCRIPTION

TREETOP	Large. Parasol- shaped, Intense green foliage, simple leaves
TRUNK	Conical and uniform , commercial heights up to 33 m
BARK	Coarse de gray-organge color, Corky texture

GENERAL CHARACTERISTICS

SAPWOOD COLOR	Whitish	HEARTHWOOD COLOR	Ligth brown- redish
ODOR	Indistinct	TASTE	Indistinct
LUSTER	Medium	GRAIN	Straight to interlocked
STRIPED	Tenuous	TEXTURE	Medium

ANATOMIC DESCRIPTION

ANNUAL GROWTH RINGS

Visibility	Visible at sight	Average Number	26 rings in a radium of 10 x
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PORES

Visibility	Visible at sight	Porosity	Diffuse
Type	Solitaries	Shape	Round to oval

PARENCHYMA

Visibility	Visible at sight	Quantity	Abundant
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Type	Paratraqueal aliform
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RADIUS

Visibility	Visible at sight	Contrast	Absent
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Stratification	Absent
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PHYSICAL PROPERTIES

MOISTURE CONTENT (GREEN LUMBER)	104 %
BASIC DENSITY	0,49 g/cm3

DENSITY (12% MOISTURE CONTENT)	0,6 g/cm ³
RADIAL SHRINKAGE	3,8 %
TANGENTIAL SHRINKAGE	10,2 %
VOLUMETRIC SHRINKAGE	13,4 %
RATE T/R	2,8

MECHANICAL RESISTANCE

MODULUS OF ELASTICITY	115 1000 Kg/cm ²
MODULUS OF RUPTURE	943 Kg/cm ²
COMPRESSION PARALELL TO GRAIN	536 Kg/cm ²
QUARTEREDSAWED	89 Kg/cm ²
LATERAL HARDNESS	539 Kg
IMPACT BENDING	3,34 Kg-m

TECHNNICAL CONDITIONS FOR PROCESSING

MACHINING	Easy machining. Good finishing.
PRESERVATION	Scarcely permeable
NATURAL DURABILITY	Low durability without preservation treatment
DRYING	Air drying time is rather moderate, with few defects

END USES

Construction	Decorative veneer
Furniture	

Source: MDSP, FAO PAF-BOL, IBAMA, LPF "[Información Técnica para el Procesamiento Industrial de 134 especies maderables de Bolivia](#)". Serie Técnica XI. 2002. (Translated by Fernando Aguilar . Marketing - CADEFOR)

QUEBRACHO BLANCO

SPECIES IDENTIFICATION

SCIENTIFIC NAME	<i>Aspidosperma quebracho - white</i> Schldl.
FAMILY	APOCYNACEAE
COMMERCIAL NAME	Quebracho blanco
OTHER NAMES	Árbol de la vaca (Venezuela)
DISTRIBUTION AREA	Dry temperate forests , Departments of Chuquisaca, Tarija and Santa Cruz.
REGION AND FREQUENCY	Frequent in andean dry valleys and Chaco serrano

TREE DESCRIPTION

TREETOP	Extended, light green color foliage, simple leaves
TRUNK	Straight and cylindrical, commercial heights up to 20 m
BARK	Yellow- Grayish color, very corrugated with cracks and angular plaques

GENERAL CHARACTERISTICS

SAPWOOD COLOR	Pink Yellow	HEARTHWOOD COLOR	Brown Pink
ODOR	Indistinct	TASTE	Indistinct
LUSTER	Medium	GRAIN	Interlocked
STRIPED	Tenuous	TEXTURE	Fine

ANATOMIC DESCRIPTION

ANNUAL GROWTH RINGS

Visibility	Visible at sight	Average Number
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PORES

Visibility	With magnifying glass 10 x	magnifying Porosity	Diffuse
Type	Solitaires	Shape	Occluded by resins

PARENCHYMA

Visibility	Indistinguishable even with magnifying glass of 10 x	Quantity	Scarce
Type	Apotraqueal short		

RADIUS

Visibility	With magnifying glass 10 x	magnifying Contrast	Present
Stratification	Absent		

PHYSICAL PROPERTIES

MOISTURE CONTENT (GREEN LUMBER)	%
BASIC DENSITY	0,76 g/cm ³
DENSITY (12% MOISTURE CONTENT)	0,92 g/cm ³
RADIAL SHRINKAGE	4,7 %
TANGENTIAL SHRINKAGE	8,6 %
VOLUMETRIC SHRINKAGE	14 %
RATE T/R	1,8

MECHANICAL RESISTANCE

MODULUS OF ELASTICITY	< 100 1000 Kg/cm ²
MODULUS OF RUPTURE	977 Kg/cm ²
COMPRESSION PARALELL TO GRAIN	620 Kg/cm ²
QUARTEREDSAWED	Kg/cm ²
LATERAL HARDNESS	979 Kg
IMPACT BENDING	Kg-m

TECHNNICAL CONDITIONS FOR PROCESSING

MACHINING	Moderately easy machining. Good finishing
PRESERVATION	Rather permeable
NATURAL DURABILITY	Very durable, specially when not in contact with soil
DRYING	

END USES

Construction	Flooring
Sleepers	

Source: MDSP, FAO PAF-BOL, IBAMA, LPF “[Información Técnica para el Procesamiento Industrial de 134 especies maderables de Bolivia](#)”. Serie Técnica XI. 2002. (Translated by Fernando Aguilar . Marketing - CADEFOR)

QUEBRACHO COLORADO

SPECIES IDENTIFICATION

SCIENTIFIC NAME	<i>Schinopsis quebracho - colorado</i> Barkley & T. Meyer
FAMILY	ANACARDIACEAE
COMMERCIAL NAME	Quebracho
OTHER NAMES	
DISTRIBUTION AREA	Dry temperate forests, Departments of Tarija, La Paz, Chuquisaca and Santa Cruz
REGION AND FREQUENCY	Is considered a scarce species in Bolivian forests

TREE DESCRIPTION

TREETOP	Round, medium de Intense green foliage
TRUNK	Straight and cylindrical, with commercial heights up to 20 m
BARK	Color chesnut- darkish, cracked texture. It exudes cristaline resin.

GENERAL CHARACTERISTICS

SAPWOOD COLOR	White- yellowish	HEARTHWOOD COLOR	Ligth brown- redish
ODOR	Indistinct	TASTE	Astringente
LUSTER	Brigth	GRAIN	Inclinado to Interlocked
STRIPED	Tenuous	TEXTURE	Fine

ANATOMIC DESCRIPTION

ANNUAL GROWTH RINGS

Visibility	Not well demarcated	Average Number	44 rings in a radium of 10 cm
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PORES

Visibility	With magnifying glass 10 x	magnifying Porosity	Diffuse
Type	Solitaries and multiples	Shape	

PARENCHYMA

Visibility	With magnifying glass 10 x	magnifying Quantity	Scarce
Type	Paratraqueal with centric vessels		

RADIUS

Visibility	With magnifying glass 10 x	magnifying Contrast	Present
Stratification	Absent		

PHYSICAL PROPERTIES

MOISTURE CONTENT (GREEN LUMBER)	28,1 %
BASIC DENSITY	1,04 g/cm ³
DENSITY (12% MOISTURE CONTENT)	1,22 g/cm ³
RADIAL SHRINKAGE	3,2 %
TANGENTIAL SHRINKAGE	6 %
VOLUMETRIC SHRINKAGE	9,9 %
RATE T/R	1,9

MECHANICAL RESISTANCE

MODULUS OF ELASTICITY	122 1000 Kg/cm ²
MODULUS OF RUPTURE	1481 Kg/cm ²
COMPRESSION PARALELL TO GRAIN	786 Kg/cm ²
QUARTEREDSAWED	242 Kg/cm ²
LATERAL HARDNESS	2132 Kg
IMPACT BENDING	2,59 Kg-m

TECHNNICAL CONDITIONS FOR PROCESSING

MACHINING	Difficult machining due to hardness of the wood. It is recommended to work it in green. Good finishing.
PRESERVATION	Impermeable
NATURAL DURABILITY	Extremely durable
DRYING	Air drying es very slow with tendency to cracks. A careful kiln schedule is recommended.

END USES

Sleepers	Construction
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Source: MDSP, FAO PAF-BOL, IBAMA, LPF “[Información Técnica para el Procesamiento Industrial de 134 especies maderables de Bolivia](#)”. Serie Técnica XI. 2002. (Translated by Fernando Aguilar . Marketing - CADEFOR)

QUECHO

SPECIES IDENTIFICATION

SCIENTIFIC NAME	<i>Brosimum utile</i> (H.B.K.) Pittier
FAMILY	MORACEAE
COMMERCIAL NAME	Sande
OTHER NAMES	Garrote (Brazil), Sande, Lechero, Árbol vaca (Colombia), Panguana (Peru)
DISTRIBUTION AREA	Amazonian forests and secondary forests , Department of Beni
REGION AND FREQUENCY	Frecuent in the Amazonia

TREE DESCRIPTION

TREETOP	Medium size. Simple - alternate leaves
TRUNK	Commercial heights up to 20 m
BARK	Pink- darkish color. It exudes abundante white látex

GENERAL CHARACTERISTICS

SAPWOOD COLOR		HEARTHWOOD COLOR	Pale yellow
ODOR	Indistinct	TASTE	Indistinct
LUSTER	Brigth	GRAIN	Interlocked
STRIPED	Medium, but visible	TEXTURE	Coarse

ANATOMIC DESCRIPTION

ANNUAL GROWTH RINGS

Visibility	Visible at sight	Average Number	33 rings
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PORES

Visibility	Visible at sight	Porosity	Diffuse
Type	Solitaries and radial multiples	Shape	Round and oval, some occluded

PARENCHYMA

Visibility	Visible at sight	Quantity	Regular
Type	Paratraqueal aliform		

RADIUS

Visibility	With magnifying glass 10 x	magnifying Contrast	Absent
Stratification	Absent		

PHYSICAL PROPERTIES

MOISTURE CONTENT (GREEN LUMBER)	62 %
BASIC DENSITY	0,48 g/cm ³
DENSITY (12% MOISTURE CONTENT)	0,53 g/cm ³
RADIAL SHRINKAGE	3,7 %
TANGENTIAL SHRINKAGE	6,9 %
VOLUMETRIC SHRINKAGE	10,4 %
RATE T/R	1,9

MECHANICAL RESISTANCE

MODULUS OF ELASTICITY	119 1000 Kg/cm ²
MODULUS OF RUPTURE	770 Kg/cm ²
COMPRESSION PARALELL TO GRAIN	419 Kg/cm ²
QUARTEREDSAWED	99 Kg/cm ²
LATERAL HARDNESS	478 Kg
IMPACT BENDING	2,84 Kg-m

TECHNNICAL CONDITIONS FOR PROCESSING

MACHINING	Moderately easy. Good finishing
PRESERVATION	Rather permeable
NATURAL DURABILITY	Moderately durable, specially when not in soil contact
DRYING	A soft kiln schedule is recommended. There is a risk of cracking due to interlocked grain of the wood.

END USES

Construction	Packages and crating
Doors	Furniture

Source: MDSP, FAO PAF-BOL, IBAMA, LPF “[Información Técnica para el Procesamiento Industrial de 134 especies maderables de Bolivia](#)”. Serie Técnica XI. 2002. (Translated by Fernando Aguilar . Marketing - CADEFOR)

QUECHO – BACHIRAO

SPECIES IDENTIFICATION

SCIENTIFIC NAME	<i>Brosimun guianense</i> (Aubl.) Huber
FAMILY	MORACEAE
COMMERCIAL NAME	Amourette
OTHER NAMES	Muirapinima (Brazil), Leche perra (Colombia), Marequende (Ecuador)
DISTRIBUTION AREA	Amazonian forests, deptos de Pando, Beni, La Paz and San. Cruz.
REGION AND FREQUENCY	Frequent in Amazonian foothills and Amazonia

TREE DESCRIPTION

TREETOP	Alternate leaves
TRUNK	Straight and cylindrical, commercial heights up to
BARK	Gray color. It exudes a latex

GENERAL CHARACTERISTICS

SAPWOOD COLOR	White	HEARTHWOOD COLOR	Yellow
ODOR	Distinctive	TASTE	Indistinct
LUSTER	Medium	GRAIN	Straight
STRIPED	Tenuous	TEXTURE	Fine

ANATOMIC DESCRIPTION

ANNUAL GROWTH RINGS

Visibility	Indistincts	Average Number
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PORES

Visibility	With magnifying glass 10 x	magnifying	Porosity	Diffuse
Type	Solitaries and some arranged in series o radial chains		Shape	

PARENCHYMA

Visibility	Visible at sight en wet surfaces	Quantity
Type	Paratraqueal aliform and confluent	

RADIUS

Visibility	With magnifying glass 10 x	magnifying Contrast	Low contrast
Stratification	Absent		

PHYSICAL PROPERTIES

MOISTURE CONTENT (GREEN LUMBER)	%
BASIC DENSITY	0,48 g/cm ³
DENSITY (12% MOISTURE CONTENT)	0,54 g/cm ³
RADIAL SHRINKAGE	%
TANGENTIAL SHRINKAGE	%
VOLUMETRIC SHRINKAGE	%
RATE T/R	

MECHANICAL RESISTANCE

MODULUS OF ELASTICITY	1000 Kg/cm ²
MODULUS OF RUPTURE	Kg/cm ²
COMPRESSION PARALELL TO GRAIN	Kg/cm ²
QUARTEREDSAWED	Kg/cm ²
LATERAL HARDNESS	305 - 610 Kg
IMPACT BENDING	Kg-m

TECHNNICAL CONDITIONS FOR PROCESSING

MACHINING	Easy machining. Good finishing
PRESERVATION	
NATURAL DURABILITY	Moderately durable without preservation treatment
DRYING	

END USES

Construction	Decorative veneer
Furniture	

Source: MDSP, FAO PAF-BOL, IBAMA, LPF "[Información Técnica para el Procesamiento Industrial de 134 especies maderables de Bolivia](#)". Serie Técnica XI. 2002. (Translated by Fernando Aguilar . Marketing - CADEFOR)

QUECHO - MURURE

SPECIES IDENTIFICATION

SCIENTIFIC NAME	<i>Brosimum acutifolium</i> Huber
FAMILY	MORACEAE
COMMERCIAL NAME	Mururé
OTHER NAMES	Urupi* (Bolivia), Muirapiranga (Brazil)
DISTRIBUTION AREA	Humid subtropical forests, Department of Santa Cruz
REGION AND FREQUENCY	

TREE DESCRIPTION

TREETOP	
TRUNK	Straight and cylindrical. Commercial heights up to 11 m
BARK	White to Pink color

GENERAL CHARACTERISTICS

SAPWOOD COLOR	Pale yellow	HEARTHWOOD COLOR	Brown
ODOR	No perceptible	TASTE	Imperceptible
LUSTER	Medium	GRAIN	Interlocked
STRIPED		TEXTURE	Medium

ANATOMIC DESCRIPTION

ANNUAL GROWTH RINGS

Visibility		Average Number	
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PORES

Visibility	Visible at sight	Porosity	Diffuse
Type	Solitaires	Shape	Oval

PARENCHYMA

Visibility	Visible at sight	Quantity	Scarce
Type	Paratraqueal aliform		

RADIUS

Visibility	With magnifying glass 10 x	magnifying Contrast	Present
Stratification	Absent		

PHYSICAL PROPERTIES

MOISTURE CONTENT (GREEN LUMBER)	68,4 %
BASIC DENSITY	0,55 g/cm ³
DENSITY (12% MOISTURE CONTENT)	0,91 g/cm ³
RADIAL SHRINKAGE	5 %
TANGENTIAL SHRINKAGE	9,1 %
VOLUMETRIC SHRINKAGE	14,1 %
RATE T/R	1,8

MECHANICAL RESISTANCE

MODULUS OF ELASTICITY	145 1000 Kg/cm ²
MODULUS OF RUPTURE	1402 Kg/cm ²
COMPRESSION PARALELL TO GRAIN	785 Kg/cm ²
QUARTEREDSAWED	Kg/cm ²
LATERAL HARDNESS	1463 Kg
IMPACT BENDING	Kg-m

TECHNNICAL CONDITIONS FOR PROCESSING

MACHINING	Moderately easy. Good finishing
PRESERVATION	Permeable
NATURAL DURABILITY	
DRYING	Rather slow, with tendency for curving, cracking and collapsing. A moderate kiln schedule is recommended.

END USES

Construction	Flooring
Furniture	Packages and crating

Source: MDSP, FAO PAF-BOL, IBAMA, LPF “[Información Técnica para el Procesamiento Industrial de 134 especies maderables de Bolivia](#)”. Serie Técnica XI. 2002. (Translated by Fernando Aguilar . Marketing - CADEFOR)

QUINA - BALSAMO

SPECIES IDENTIFICATION

SCIENTIFIC NAME	<i>Myroxylon balsamum</i> (L.) Harms.
FAMILY	LEG. PAPILIONOIDEAE
COMMERCIAL NAME	Santos mahogany, Bálsamo
OTHER NAMES	Cabreuba vermelha (Brazil)
DISTRIBUTION AREA	Humid montane forests; Departments of Beni, La Paz and Santa Cruz
REGION AND FREQUENCY	Is considered an scarce species in Bolivian forests

TREE DESCRIPTION

TREETOP	Uniform, sparsed, alternate leaves ovado lanceolated
TRUNK	Straight and cylindrical with commercial heights up to 22 m
BARK	Orange colar, sandy texture

GENERAL CHARACTERISTICS

SAPWOOD COLOR	Yellow very pale	HEARTHWOOD COLOR	Brown redish
ODOR	Indistinct to slightly distinctive	TASTE	Indistinct
LUSTER	Medium	GRAIN	Interlocked
STRIPED	Tenuous	TEXTURE	Medium to Fine

ANATOMIC DESCRIPTION

ANNUAL GROWTH RINGS

Visibility	Visible at sight	Average Number	30 rings in a radium of 10 cm
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PORES

Visibility	With magnifying glass 10 x	magnifying Porosity	Diffuse
Type	Solitaires and radial multiples	Shape	Oval

PARENCHYMA

Visibility	With magnifying glass 10 x	magnifying Quantity	Regular
Type	Predominant paratraqueal		

RADIUS

Visibility	With magnifying glass 10 x	magnifying Contrast	Absent
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Stratification	Present
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PHYSICAL PROPERTIES

MOISTURE CONTENT (GREEN LUMBER)	30 %
BASIC DENSITY	0,78 g/cm ³
DENSITY (12% MOISTURE CONTENT)	0,95 g/cm ³
RADIAL SHRINKAGE	4,16 %
TANGENTIAL SHRINKAGE	6,52 %
VOLUMETRIC SHRINKAGE	9,97 %
RATE T/R	1,56

MECHANICAL RESISTANCE

MODULUS OF ELASTICITY	175 1000 Kg/cm ²
MODULUS OF RUPTURE	1340 Kg/cm ²
COMPRESSION PARALELL TO GRAIN	714 Kg/cm ²
QUARTEREDSAWED	173 Kg/cm ²
LATERAL HARDNESS	1143 Kg
IMPACT BENDING	6,6 Kg-m

TECHNNICAL CONDITIONS FOR PROCESSING

MACHINING	Moderately difficult
PRESERVATION	Impermeable
NATURAL DURABILITY	Durable
DRYING	Air drying es slow, but steady. A soft kiln schedule is recommended.

END USES

Construction	Flooring
Furniture	

Source: MDSP, FAO PAF-BOL, IBAMA, LPF “[Información Técnica para el Procesamiento Industrial de 134 especies maderables de Bolivia](#)”. Serie Técnica XI. 2002. (Translated by Fernando Aguilar . Marketing - CADEFOR)

QUINA BLANCA

SPECIES IDENTIFICATION

SCIENTIFIC NAME	<i>Lonchocarpus lilloi</i> (Hassl.) Burk.
FAMILY	LEG. PAPILIONOIDEAE
COMMERCIAL NAME	
OTHER NAMES	
DISTRIBUTION AREA	Temperate humid forests. Departments of Chuquisaca and Tarija
REGION AND FREQUENCY	

TREE DESCRIPTION

TREETOP	composite leaves
TRUNK	Straight and cylindrical with commercial heights up to 25 m
BARK	Brown- grayish color.

GENERAL CHARACTERISTICS

SAPWOOD COLOR	White yellowish	HEARTHWOOD COLOR	White yellowish
ODOR	Indistinct	TASTE	Indistinct
LUSTER		GRAIN	Irregular
STRIPED		TEXTURE	

ANATOMIC DESCRIPTION

ANNUAL GROWTH RINGS

Visibility	Average Number
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PORES

Visibility	Porosity	Diffuse
Type	Shape	Open

PARENCHYMA

Visibility	Quantity
Type	

RADIUS

Visibility	Visible at sight	Contrast	Present
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Stratification	Present
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PHYSICAL PROPERTIES

MOISTURE CONTENT (GREEN LUMBER)	%
BASIC DENSITY	0,64 g/cm ³
DENSITY (12% MOISTURE CONTENT)	0,71 g/cm ³
RADIAL SHRINKAGE	4,4 %
TANGENTIAL SHRINKAGE	8,6 %
VOLUMETRIC SHRINKAGE	12,7 %
RATE T/R	2

MECHANICAL RESISTANCE

MODULUS OF ELASTICITY	1000 Kg/cm ²
MODULUS OF RUPTURE	Kg/cm ²
COMPRESSION PARALELL TO GRAIN	Kg/cm ²
QUARTEREDSAWED	Kg/cm ²
LATERAL HARDNESS	Kg
IMPACT BENDING	Kg-m

TECHNNICAL CONDITIONS FOR PROCESSING

MACHINING	Easy machining . Good finishing.
PRESERVATION	
NATURAL DURABILITY	Durable
DRYING	

END USES

Construction	Furniture
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Source: MDSP, FAO PAF-BOL, IBAMA, LPF “Información Técnica para el Procesamiento Industrial de 134 especies maderables de Bolivia”. Serie Técnica XI. 2002. (Translated by Fernando Aguilar . Marketing - CADEFOR)

QUINA COLORADA

SPECIES IDENTIFICATION

SCIENTIFIC NAME	<i>Myroxylon peruiferum</i> L.f.
FAMILY	LEG. PAPILIONOIDEAE
COMMERCIAL NAME	Estoraque
OTHER NAMES	Quina morada (Argentina), Cabréuva-vermelha (Brazil), Olor (Colombia), Sándalo (Ecuador), Bálsamo del Perú (Peru)
DISTRIBUTION AREA	Bolivian - Tucumano forests, Departments of Chuquisaca, Tarija and Santa Cruz
REGION AND FREQUENCY	

TREE DESCRIPTION

TREETOP	Medium size and irregular shape, with composite leaves
TRUNK	Straight and cylindrical with buttresses. Heights average 17 m
BARK	Light brown color. Scaly texture. Fissured.

GENERAL CHARACTERISTICS

SAPWOOD COLOR	Pale brown	HEARTHWOOD COLOR	Purple red
ODOR	Indistinct	TASTE	Indistinct
LUSTER	Medium	GRAIN	Interlocked
STRIPED	Intense	TEXTURE	Medium

ANATOMIC DESCRIPTION

ANNUAL GROWTH RINGS

Visibility	Visible at sight	Average Number	38 rings in a radius of 10 cm
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PORES

Visibility	With magnifying glass 10 x	magnifying Porosity	Diffuse
Type	Solitaires and radial multiples	Shape	Oval

PARENCHYMA

Visibility	With magnifying glass 10 x	magnifying Quantity	Regular
Type	Paratraqueal with centric vessels		

RADIUS

Visibility	With magnifying glass 10 x	magnifying Contrast	Absent
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Stratification	Present
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PHYSICAL PROPERTIES

MOISTURE CONTENT (GREEN LUMBER)	30 %
BASIC DENSITY	0,78 g/cm ³
DENSITY (12% MOISTURE CONTENT)	0,91 g/cm ³
RADIAL SHRINKAGE	2 %
TANGENTIAL SHRINKAGE	3,6 %
VOLUMETRIC SHRINKAGE	5,5 %
RATE T/R	1,6

MECHANICAL RESISTANCE

MODULUS OF ELASTICITY	186 1000 Kg/cm ²
MODULUS OF RUPTURE	1648 Kg/cm ²
COMPRESSION PARALELL TO GRAIN	783 Kg/cm ²
QUARTEREDSAWED	173 Kg/cm ²
LATERAL HARDNESS	1279 Kg
IMPACT BENDING	6,63 Kg-m

TECHNNICAL CONDITIONS FOR PROCESSING

MACHINING	Moderately difficult, due to hardness an internal tensions of the wood.
PRESERVATION	Impermeable
NATURAL DURABILITY	Durable, resistant to attack of fungi and insects
DRYING	Air Drying is slow. A soft kiln schedule is recommended.

END USES

Decorative Veneer	Flooring
Construction	

Source: MDSP, FAO PAF-BOL, IBAMA, LPF “Información Técnica para el Procesamiento Industrial de 134 especies maderables de Bolivia”. Serie Técnica XI. 2002. (Translated by Fernando Aguilar . Marketing - CADEFOR)

ROBLE

SPECIES IDENTIFICATION

SCIENTIFIC NAME	<i>Amburana cearensis</i> (Allemão) A.C.Smith
FAMILY	LEG. PAPILIONOIDEAE
COMMERCIAL NAME	Cerejeira
OTHER NAMES	Palo trebol (Argentina), Soriocó (Bolivia),
DISTRIBUTION AREA	Humid subtropical forests in transition to temperate humid forests. Departments of Santa Cruz, Beni and Tarija.
REGION AND FREQUENCY	Very frequent in Chiquitanía, Bajo Paraguá, Amazonian foothills and frequent in Guarayos and Amazonia

TREE DESCRIPTION

TREETOP	Medium, intense green foliage , composite leaves
TRUNK	Straight and cylindrical with commercial heights up to 30 m
BARK	It contains a oily resin, which is volatile and fragrant, used for medicinal purposes.

GENERAL CHARACTERISTICS

SAPWOOD COLOR	White yellowish	HEARTHWOOD COLOR	Brown yellowish
ODOR	Peculiar	TASTE	Indistinct
LUSTER	Brigth	GRAIN	Interlocked
STRIPED	Intense	TEXTURE	Tenuous

ANATOMIC DESCRIPTION

ANNUAL GROWTH RINGS

Visibility	Almost imperceptible	Average Number	Slightlys
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PORES

Visibility	Visible at sight	Porosity	Diffuse
Type	Solitaries and biserial	Shape	

PARENCHYMA

Visibility	Visible at sight	Quantity	Abundant
Type	Paratraqueal with centric vessels		

RADIUS

Visibility	Visible at sight	Contrast	Present
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Stratification	Absent
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PHYSICAL PROPERTIES

MOISTURE CONTENT (GREEN LUMBER)	%
BASIC DENSITY	0,5 g/cm ³
DENSITY (12% MOISTURE CONTENT)	0,53 g/cm ³
RADIAL SHRINKAGE	3 %
TANGENTIAL SHRINKAGE	4,3 %
VOLUMETRIC SHRINKAGE	8,1 %
RATE T/R	1,4

MECHANICAL RESISTANCE

MODULUS OF ELASTICITY	100 – 120 1000 Kg/cm ²
MODULUS OF RUPTURE	720 Kg/cm ²
COMPRESSION PARALELL TO GRAIN	453 Kg/cm ²
QUARTEREDSAWED	< 90 Kg/cm ²
LATERAL HARDNESS	546 Kg
IMPACT BENDING	Kg-m

TECHNNICAL CONDITIONS FOR PROCESSING

MACHINING	Easy machining . Good finishing.
PRESERVATION	Rather permeable
NATURAL DURABILITY	Low durability without preservation treatment
DRYING	Air drying is slow, A soft kiln schedule is recommended.

END USES

Construction	Decorative Veneer
Doors	Furniture
Windows	Flooring
Doors and window frames	

Source: MDSP, FAO PAF-BOL, IBAMA, LPF “Información Técnica para el Procesamiento Industrial de 134 especies maderables de Bolivia”. Serie Técnica XI. 2002. (Translated by Fernando Aguilar . Marketing - CADEFOR)

SANGRE DE TORO - BITA

SPECIES IDENTIFICATION

SCIENTIFIC NAME	<i>Iryanthera juruensis</i> Warburg
FAMILY	MYRISTICACEAE
COMMERCIAL NAME	Kirikawa, Marakaipo
OTHER NAMES	Ucuhúba-rana (Brazil), Cuangare (Colombia), Sangrito (Venezuela)
DISTRIBUTION AREA	
REGION AND FREQUENCY	

TREE DESCRIPTION

TREETOP

TRUNK It reaches commercial heights up to 40 m and a diameter of 1,20 m

BARK

GENERAL CHARACTERISTICS

SAPWOOD COLOR	Beige	HEARTHWOOD COLOR	Pink to brown
ODOR	Indistinct	TASTE	Indistinct
LUSTER	Medium to bright	GRAIN	Straight
STRIPED	Tenuous	TEXTURE	

ANATOMIC DESCRIPTION

ANNUAL GROWTH RINGS

Visibility Average Number

PORES

Visibility Porosity

Type Shape

PARENCHYMA

Visibility Quantity

Type

RADIUS

Visibility Contrast

Stratification

PHYSICAL PROPERTIES

MOISTURE CONTENT (GREEN LUMBER)	%
BASIC DENSITY	0,57 g/cm ³

DENSITY (12% MOISTURE CONTENT)	0,62 g/cm ³
RADIAL SHRINKAGE	5,3 %
TANGENTIAL SHRINKAGE	9,4 %
VOLUMETRIC SHRINKAGE	15,6 %
RATE T/R	1,77

MECHANICAL RESISTANCE

MODULUS OF ELASTICITY	161 1000 Kg/cm ²
MODULUS OF RUPTURE	1120 Kg/cm ²
COMPRESSION PARALELL TO GRAIN	672 Kg/cm ²
QUARTEREDSAWED	Kg/cm ²
LATERAL HARDNESS	465 Kg
IMPACT BENDING	Kg-m

TECHNNICAL CONDITIONS FOR PROCESSING

MACHINING	Easy machining. Good finishing.
PRESERVATION	Permeable
NATURAL DURABILITY	Low durability. The wood is susceptible to attack of insects and fungi, including blue stain
DRYING	Air drying is rather quick, with few defects

END USES

Decorative Veneer	Doors
Construction	Windows
Furniture	

Source: MDSP, FAO PAF-BOL, IBAMA, LPF “[Información Técnica para el Procesamiento Industrial de 134 especies maderables de Bolivia](#)”. Serie Técnica XI. 2002. (Translated by Fernando Aguilar . Marketing - CADEFOR)

SANGRE DE TORO – CHOCOLATILLO

SPECIES IDENTIFICATION

SCIENTIFIC NAME	<i>Virola sebífera</i> Aubl.
FAMILY	MYRISTICACEAE
COMMERCIAL NAME	Banak, Baboen, Virola
OTHER NAMES	Sota amarilla, Sota, Tirasucio, Sangre de Toro, Nuánamo, Sebo (Colombia), Chalviande, Tzimbo, Cacao de Monte, Unay (Ecuador), Cumala, Cumala Blanca (Peru), Virola, Cuajo, Sangrino (Venezuela)
DISTRIBUTION AREA	Humid montane forests, humid savannas and secondary forests. Departments of La Paz, Santa Cruz and Beni
REGION AND FREQUENCY	Very frequent in Choré and Amazonian foothills

TREE DESCRIPTION

TREETOP	Irregular shape. Horizontal branches arranged in verticils
TRUNK	Corrugated in the base, with small buttresses.
BARK	Brown to brown- blackish with gray specks, fissured and corrugated

GENERAL CHARACTERISTICS

SAPWOOD COLOR	Ligth brown- redish	HEARTHWOOD COLOR	Ligth brown -redish
ODOR	Indistinct	TASTE	Indistinct
LUSTER	Medium to bright	GRAIN	Straight
STRIPED	Superposed archs	TEXTURE	Medium

ANATOMIC DESCRIPTION

ANNUAL GROWTH RINGS

Visibility	Visible at sight	Average Number	23 rings in a radium of 10 cm
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PORES

Visibility	Visible at sight	Porosity	Diffuse
Type	Radial multiple, solitaires	Shape	Oval , typical bi and triserial

PARENCHYMA

Visibility	Indistinguishable even with magnifying glass of 10 x	Quantity	Scarce
Type	Paratraqueal with centric vessels narrow		

RADIUS

Visibility	With magnifying glass 10 x	magnifying Contrast	Present
Stratification	Absent		

PHYSICAL PROPERTIES

MOISTURE CONTENT (GREEN LUMBER)	141 %
BASIC DENSITY	0,39 g/cm ³
DENSITY (12% MOISTURE CONTENT)	0,46 g/cm ³
RADIAL SHRINKAGE	4,7 %
TANGENTIAL SHRINKAGE	7,7 %
VOLUMETRIC SHRINKAGE	11,6 %
RATE T/R	1,6

MECHANICAL RESISTANCE

MODULUS OF ELASTICITY	100 1000 Kg/cm ²
MODULUS OF RUPTURE	581 Kg/cm ²
COMPRESSION PARALELL TO GRAIN	305 Kg/cm ²
QUARTEREDSAWED	56 Kg/cm ²
LATERAL HARDNESS	216 Kg
IMPACT BENDING	0,61 Kg-m

TECHNNICAL CONDITIONS FOR PROCESSING

MACHINING	Easy sawing. Satisfactory worked. Good finishing
PRESERVATION	Permeable
NATURAL DURABILITY	Low durability. The wood is susceptible to attack of fungi and specially insects
DRYING	Air drying is rather quick, with few defects. A soft kiln schedule is recommended

END USES

Construction	Furniture
Doors	Decorative veneer

Source: MDSP, FAO PAF-BOL, IBAMA, LPF “[Información Técnica para el Procesamiento Industrial de 134 especies maderables de Bolivia](#)”. Serie Técnica XI. 2002. (Translated by Fernando Aguilar . Marketing - CADEFOR)

SANGRE DE TORO - GABON

SPECIES IDENTIFICATION

SCIENTIFIC NAME	<i>Otoba parvifolia</i> (Mgf.) M.Gently
FAMILY	MYRISTICACEAE
COMMERCIAL NAME	Cuangare
OTHER NAMES	Otoba (Colombia), Cuangare, Sangre de gallina, Bella María (Ecuador), Aguanillo (Peru), Otoba (Venezuela)
DISTRIBUTION AREA	Humid tropical and subtropical forests, Pre-Andean forests. Departments of de La Paz, Beni, Cochabamba and Santa Cruz
REGION AND FREQUENCY	

TREE DESCRIPTION

TREETOP	Proportionally smaller than trunk
TRUNK	Straight, commercial heights up to 30 m
BARK	Gray or chesnut- redish color, brittle, fibrous-laminar

GENERAL CHARACTERISTICS

SAPWOOD COLOR	Brown	HEARTHWOOD COLOR	Brown
ODOR	Indistinct	TASTE	Indistinct
LUSTER	Brigth	GRAIN	Straight
STRIPED	Tenuous	TEXTURE	Medium

ANATOMIC DESCRIPTION

ANNUAL GROWTH RINGS

Visibility	With magnifying glass 10 x	magnifying	Average Number
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PORES

Visibility	With magnifying glass 10 x	magnifying	Porosity	Diffuse
Type	Solitaires and short radial multiple	Shape		

PARENCHYMA

Visibility	Visible with magnifying glass of 10 x	Quantity
Type	With centric vessels and arranged in fine strips	

RADIUS

Visibility	With magnifying glass 10 x	magnifying	Contrast	Present
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PHYSICAL PROPERTIES

MOISTURE CONTENT (GREEN LUMBER)	%
BASIC DENSITY	0.4 - 0.55 g/cm3
DENSITY (12% MOISTURE CONTENT)	0,55 g/cm3
RADIAL SHRINKAGE	%
TANGENTIAL SHRINKAGE	%
VOLUMETRIC SHRINKAGE	%
RATE T/R	

MECHANICAL RESISTANCE

MODULUS OF ELASTICITY	1000 Kg/cm2
MODULUS OF RUPTURE	Kg/cm2
COMPRESSION PARALELL TO GRAIN	Kg/cm2
QUARTEREDSAWED	Kg/cm2
LATERAL HARDNESS	Kg
IMPACT BENDING	Kg-m

TECHNNICAL CONDITIONS FOR PROCESSING

MACHINING

PRESERVATION

NATURAL DURABILITY

DRYING

END USES

Furniture	Plywood
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Source: MDSP, FAO PAF-BOL, IBAMA, LPF “Información Técnica para el Procesamiento Industrial de 134 especies maderables de Bolivia”. Serie Técnica XI. 2002. (Translated by Fernando Aguilar . Marketing - CADEFOR)

SAUCO

SPECIES IDENTIFICATION

SCIENTIFIC NAME	<i>Zanthoxylum rhoifolium</i> Lam
FAMILY	RUTACEAE
COMMERCIAL NAME	Satinwood
OTHER NAMES	Hualaja (Peru)
DISTRIBUTION AREA	Degraded subhumid forests, Departments of Santa Cruz, Beni, Chuquisaca and Tarija.
REGION AND FREQUENCY	Very frequent in Bajo Paraguá, Guarayos, Choré and Amazonian foothills .

TREE DESCRIPTION

TREETOP	Medium size, alternate leaves.
TRUNK	It reaches commercial heights up to 15 m
BARK	

GENERAL CHARACTERISTICS

SAPWOOD COLOR	White yellowish	HEARTHWOOD COLOR	Ligth brown
ODOR	Indistinct	TASTE	
LUSTER	Medium	GRAIN	Straight to Interlocked
STRIPED	Tenuous	TEXTURE	

ANATOMIC DESCRIPTION

ANNUAL GROWTH RINGS

Visibility	Average Number
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PORES

Visibility	Porosity
Type	Shape

PARENCHYMA

Visibility	Quantity
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Type

RADIUS

Visibility	Contrast
------------	----------

Stratification

PHYSICAL PROPERTIES

MOISTURE CONTENT (GREEN LUMBER)	%
BASIC DENSITY	0,47 g/cm ³
DENSITY (12% MOISTURE CONTENT)	0,53 g/cm ³
RADIAL SHRINKAGE	4,29 %
TANGENTIAL SHRINKAGE	7,98 %
VOLUMETRIC SHRINKAGE	11,4 %
RATE T/R	1,9

MECHANICAL RESISTANCE

MODULUS OF ELASTICITY	97 1000 Kg/cm ²
MODULUS OF RUPTURE	551 Kg/cm ²
COMPRESSION PARALELL TO GRAIN	299 Kg/cm ²
QUARTEREDSAWED	73 Kg/cm ²
LATERAL HARDNESS	361 Kg
IMPACT BENDING	2,2 Kg-m

TECHNNICAL CONDITIONS FOR PROCESSING

MACHINING	Easy machining. Good finishing.
PRESERVATION	It is recommended to apply vacuum pressure for preservative solution penetration
NATURAL DURABILITY	Low durability. ; suceptible to attack of fungi and insects
DRYING	Air drying is rather quick, A soft kiln schedule is recommended to avoid defects.

END USES

Construction	Decorative veneer
Furniture	Doors and windows

Source: MDSP, FAO PAF-BOL, IBAMA, LPF “[Información Técnica para el Procesamiento Industrial de 134 especies maderables de Bolivia](#)”. Serie Técnica XI. 2002. (Translated by Fernando Aguilar . Marketing - CADEFOR)

SEREBO

SPECIES IDENTIFICATION

SCIENTIFIC NAME	<i>Schizolobium parahyba</i> (Vell.) Blake
FAMILY	LEGUMINOSAE (CAESALPINIACEAE)*
COMMERCIAL NAME	Guapuruvu, Quamwood
OTHER NAMES	Sombrerillo* (Bolivia), Pinho cuiabano (Brazil), Tambor (Colombia), Pashaco (Ecuador), Pashaco, Pino Chuncho (Peru).
DISTRIBUTION AREA	Humid tropical and subtropical forests. Departments of Santa Cruz and Beni
REGION AND FREQUENCY	

TREE DESCRIPTION

TREETOP	Medium size, light green foliage, composite- pinnate leaves
TRUNK	Conical and uniform; it reaches commercial heights up to 30 m
BARK	Coarse texture; light Brown color; thickness 2-4 cm.

GENERAL CHARACTERISTICS

SAPWOOD COLOR	White yellowish	HEARTHWOOD COLOR	Ligth brown
ODOR	Indistinct	TASTE	Astringent
LUSTER	Medium to bright	GRAIN	Straight to interlocked
STRIPED	Tenuous	TEXTURE	Medium

ANATOMIC DESCRIPTION

ANNUAL GROWTH RINGS

Visibility	Visible at sight	Average Number	11 rings in a radium of 10 cm
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PORES

Visibility	Visible at sight	Porosity	Diffuse
Type	Solitaires	Shape	Round to oval

PARENCHYMA

Visibility	Visible at sight	Quantity	Abundant
Type	Paratraqueal with centric vessels		

RADIUS

Visibility	With magnifying glass 10 x	magnifying Contrast	Present
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Stratification	Absent
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PHYSICAL PROPERTIES

MOISTURE CONTENT (GREEN LUMBER)	83 %
BASIC DENSITY	0,4 (0,35*) g/cm ³
DENSITY (12% MOISTURE CONTENT)	0,44 (410*) g/cm ³
RADIAL SHRINKAGE	3,5 %
TANGENTIAL SHRINKAGE	6,8 %
VOLUMETRIC SHRINKAGE	10,1 %
RATE T/R	2

MECHANICAL RESISTANCE

MODULUS OF ELASTICITY	86 1000 Kg/cm ²
MODULUS OF RUPTURE	569 Kg/cm ²
COMPRESSION PARALELL TO GRAIN	364 Kg/cm ²
QUARTEREDSAWED	80 Kg/cm ²
LATERAL HARDNESS	231 Kg
IMPACT BENDING	1,44 Kg-m

TECHNNICAL CONDITIONS FOR PROCESSING

MACHINING	Easy machining. Excellent planing and moulding*. Good boring and finishing*. Regular sanding and turning*. Low blunting effect*.
PRESERVATION	Permeable
NATURAL DURABILITY	Low durability. The wood is very susceptible to blue stain
DRYING	A severe kiln schedule can be applied without problems.

END USES

Decorative Veneer	Packages and crating
Boxes*	Plywood*
Toys*	Interior constructions*
Mouldings*	Ceilings*

Source 1: MDSP, FAO PAF-BOL, IBAMA, LPF “Información Técnica para el Procesamiento Industrial de 134 especies maderables de Bolivia”. Serie Técnica XI. 2002. (Translated by Fernando Aguilar . Marketing - CADEFOR)

(*) Source 2. CFB, PROMABOSQUE, BOLFOR, SCC, FAO PAF-BOL. Bolivian Woods. 1999.

SEREBÓ - SOMBRERILLO

SPECIES IDENTIFICATION

SCIENTIFIC NAME	<i>Schizolobium amazonicum</i> (Huber) Ducke
FAMILY	LEG. CAESALPINIOIDEAE
COMMERCIAL NAME	Pinho cuiabano
OTHER NAMES	Guapuruvu (Brazil)
DISTRIBUTION AREA	
REGION AND FREQUENCY	

TREE DESCRIPTION

TREETOP

TRUNK

BARK

GENERAL CHARACTERISTICS

SAPWOOD COLOR	White	HEARTHWOOD COLOR	White
ODOR	Indistinct	TASTE	
LUSTER	Brigth	GRAIN	Undulate
STRIPED		TEXTURE	

ANATOMIC DESCRIPTION

ANNUAL GROWTH RINGS

Visibility	Indistintos	Average Number	
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PORES

Visibility	Visible at sight	Porosity	Diffuse uniform
Type	Solitaires, in multiple of 2 and 3	Shape	Round

PARENCHYMA

Visibility	Visible at sight	Quantity	Abundant
Type	Paratraqueal aliform		

RADIUS

Visibility	Visible at sight and with magnifying glass of 10x in tangential plane	Contrast	Absent
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Stratification	Absent
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PHYSICAL PROPERTIES

MOISTURE CONTENT (GREEN LUMBER)	%
BASIC DENSITY	0,49 g/cm3
DENSITY (12% MOISTURE CONTENT)	0,53 g/cm3
RADIAL SHRINKAGE	4,56 %
TANGENTIAL SHRINKAGE	4,8 %
VOLUMETRIC SHRINKAGE	11 %
RATE T/R	1,05

MECHANICAL RESISTANCE

MODULUS OF ELASTICITY	1000 Kg/cm2
MODULUS OF RUPTURE	Kg/cm2
COMPRESSION PARALELL TO GRAIN	Kg/cm2
QUARTEREDSAWED	Kg/cm2
LATERAL HARDNESS	Kg
IMPACT BENDING	Kg-m

TECHNNICAL CONDITIONS FOR PROCESSING

MACHINING

PRESERVATION

NATURAL DURABILITY

DRYING

END USES

Interior construction

Packages and crating

Decorative Veneer

Source: MDSP, FAO PAF-BOL, IBAMA, LPF "[Información Técnica para el Procesamiento Industrial de 134 especies maderables de Bolivia](#)". Serie Técnica XI. 2002. (Translated by Fernando Aguilar . Marketing - CADEFOR)

SIRARI

SPECIES IDENTIFICATION

SCIENTIFIC NAME	<i>Ormosia coarctata</i> Jackson
FAMILY	LEG. PAPILIONOIDEAE
COMMERCIAL NAME	Baracara
OTHER NAMES	Tento (Brazil), Choco (Colombia), Palo de matos (Puerto Rico), Peonio (Venezuela)
DISTRIBUTION AREA	Humid montane forests and forests in plains. Departments of La Paz, Beni and Pando.
REGION AND FREQUENCY	Very frequent in Choré, Amazonian foothills and Amazonia

TREE DESCRIPTION

TREETOP	Parasol- shaped. Alternate composite-pinnate leaves
TRUNK	Spindle -shaped, cylindrical, commercial heights up to 30 m
BARK	Brown color and corrugated texture

GENERAL CHARACTERISTICS

SAPWOOD COLOR	Pale brown	HEARTHWOOD COLOR	Yellow- redish
ODOR	Absent to slightly aromatic	TASTE	Indistinct
LUSTER	Brighth	GRAIN	Interlocked
STRIPED	Tenuous	TEXTURE	

ANATOMIC DESCRIPTION

ANNUAL GROWTH RINGS

Visibility	With magnifying glass 10 x	magnifying Average Number	13 rings in a radium of 10 x
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PORES

Visibility	Visible at sight	Porosity	Diffuse
Type	Solitaires and radial multiples	Shape	Round to oval

PARENCHYMA

Visibility	Visible at sight	Quantity	Abundant
Type	Paratraqueal aliform		

RADIUS

Visibility	With magnifying glass 10 x	Contrast	Absent
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Stratification	Absent
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PHYSICAL PROPERTIES

MOISTURE CONTENT (GREEN LUMBER)	74 %
BASIC DENSITY	0,6 g/cm ³
DENSITY (12% MOISTURE CONTENT)	0,65 g/cm ³
RADIAL SHRINKAGE	3,2 %
TANGENTIAL SHRINKAGE	6,4 %
VOLUMETRIC SHRINKAGE	9,3 %
RATE T/R	2,1

MECHANICAL RESISTANCE

MODULUS OF ELASTICITY	148 1000 Kg/cm ²
MODULUS OF RUPTURE	1095 Kg/cm ²
COMPRESSION PARALELL TO GRAIN	592 Kg/cm ²
QUARTEREDSAWED	138 Kg/cm ²
LATERAL HARDNESS	706 Kg
IMPACT BENDING	3,97 Kg-m

TECHNNICAL CONDITIONS FOR PROCESSING

MACHINING	Easy machining. Good finishing
PRESERVATION	Scarcely permeable
NATURAL DURABILITY	Durable, resistant to attack of fungi and insects
DRYING	Air drying time is rather moderate, with no defects. A severe kiln schedule is recommended

END USES

Construction	Furniture
Doors and window frames	Flooring

Source: MDSP, FAO PAF-BOL, IBAMA, LPF “[Información Técnica para el Procesamiento Industrial de 134 especies maderables de Bolivia](#)”. Serie Técnica XI. 2002. (Translated by Fernando Aguilar . Marketing - CADEFOR)

SIRINGA

SPECIES IDENTIFICATION

SCIENTIFIC NAME	<i>Hevea brasiliensis</i> Müll.Argentina
FAMILY	EUPHORBIACEAE
COMMERCIAL NAME	Siringuiera
OTHER NAMES	Goma
DISTRIBUTION AREA	Amazonian forests, Department of Pando, northern Beni and northern La Paz
REGION AND FREQUENCY	Frequent in the Amazonia

TREE DESCRIPTION

TREETOP	Wide, with trifoliate leaves with glands in the petiole bases.
TRUNK	Cylindrical and straight, slightly widened in the base. It reaches up to 30 m height.,
BARK	Corrugated

GENERAL CHARACTERISTICS

SAPWOOD COLOR	Pale brown to slightly Pink	HEARTHWOOD COLOR	Pale brown to slightly Pink
ODOR	Imperceptible	TASTE	
LUSTER	Moderate	GRAIN	Straight
STRIPED	Tenuous, In vascular lines	TEXTURE	Medium

ANATOMIC DESCRIPTION

ANNUAL GROWTH RINGS

Visibility	Slightly demarcated by fibrous zones	Average Number	
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PORES

Visibility	Scarcely visible at sight	Porosity	Diffuse
Type	Solitaries and radial multiples	Shape	Oval , occluded

PARENCHYMA

Visibility	Visible with magnifying glass of 10 X	Quantity	Abundant
Type	Apotraqeal in fine lines		

RADIUS

Visibility	Visibles with magnifying glass of 10 X	Contrast	Absent
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Stratification	Absent
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PHYSICAL PROPERTIES

MOISTURE CONTENT (GREEN LUMBER)	121 %
BASIC DENSITY	0,49 g/cm ³
DENSITY (12% MOISTURE CONTENT)	0,54 g/cm ³
RADIAL SHRINKAGE	2,09 %
TANGENTIAL SHRINKAGE	5,12 %
VOLUMETRIC SHRINKAGE	7,62 %
RATE T/R	2,44

MECHANICAL RESISTANCE

MODULUS OF ELASTICITY	117 1000 Kg/cm ²
MODULUS OF RUPTURE	872 Kg/cm ²
COMPRESSION PARALELL TO GRAIN	432 Kg/cm ²
QUARTEREDSAWED	105 Kg/cm ²
LATERAL HARDNESS	442 Kg
IMPACT BENDING	Kg-m

TECHNNICAL CONDITIONS FOR PROCESSING

MACHINING	Easy machining. Good finishing.
PRESERVATION	Permeable.
NATURAL DURABILITY	Low durability. The wood is susceptible to attack of fungi and insects
DRYING	A severe kiln schedule is recommended. There is risk of twisting and superficial cracking.

END USES

Extraction of látex is the the main economic Furniture use of the tree.

Particle board

Decorative Veneer

Packages and crating

Source: MDSP, FAO PAF-BOL, IBAMA, LPF “[Información Técnica para el Procesamiento Industrial de 134 especies maderables de Bolivia](#)”. Serie Técnica XI. 2002. (Translated by Fernando Aguilar . Marketing - CADEFOR)

SOTO

SPECIES IDENTIFICATION

SCIENTIFIC NAME	<i>Schinopsis brasiliensis</i> Engl.
FAMILY	ANACARDIACEAE
COMMERCIAL NAME	Baraúna, Quebracho*, Soto*
OTHER NAMES	Baraúva, Brauna parda*, Pau preto (Brazil), Yvyraú (Paraguay)
DISTRIBUTION AREA	Dry temperate and subtropical forests. Departments of La Paz and Santa Cruz
REGION AND FREQUENCY	

TREE DESCRIPTION

TREETOP	Large, rounded, alternate ramification, 5-6 composite-pinnate leaves
TRUNK	Cylindrical and conical, it reaches commercial heights up to 25 m.*
BARK	Brown –grayish color, fissured with small plaques

GENERAL CHARACTERISTICS

SAPWOOD COLOR	White yellowish	HEARTHWOOD COLOR	Redish - ligh brown
ODOR	Indistinct	TASTE	Astringent
LUSTER		GRAIN	Interlocked
STRIPED	Pronounced	TEXTURE	Fine

ANATOMIC DESCRIPTION

ANNUAL GROWTH RINGS

Visibility	Visible at sight	Average Number	40 rings in a radium of 10 cm
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PORES

Visibility	With magnifying glass 10 x	magnifying Porosity	Diffuse
Type	Solitaries and radial multiple of 2 - 5	Shape	

PARENCHYMA

Visibility	With magnifying glass 10 x	magnifying Quantity	Scarce
Type	Paratraqueal with centric vessels and confluent in diagonal direction		

RADIUS

Visibility	With magnifying glass 10 x	magnifying Contrast	
Stratification	Absent		

PHYSICAL PROPERTIES

MOISTURE CONTENT (GREEN LUMBER)	31,4 %
BASIC DENSITY	1,039 g/cm ³
DENSITY (12% MOISTURE CONTENT)	1,28 g/cm ³
RADIAL SHRINKAGE	5,3 (5,0*) %
TANGENTIAL SHRINKAGE	10,3 (9,3*) %
VOLUMETRIC SHRINKAGE	16,3 (14,0*) %
RATE T/R	2

MECHANICAL RESISTANCE

MODULUS OF ELASTICITY	160 1000 Kg/cm ²
MODULUS OF RUPTURE	1516 Kg/cm ²
COMPRESSION PARALELL TO GRAIN	833 Kg/cm ²
QUARTEREDSAWED	222 Kg/cm ²
LATERAL HARDNESS	2177 Kg
IMPACT BENDING	3,33 Kg-m

TECHNNICAL CONDITIONS FOR PROCESSING

MACHINING	Good planing when cut with an angle of 15°. Good moulding, sanding, boring and turning. High blunting effect. Good finishing.
PRESERVATION	Impermeable
NATURAL DURABILITY	Durable, even in contact with soil
DRYING	Air drying is very slow. There is a risks of cracking and twisting*. Kiln drying T1-B1 (USA)*

END USES

Heavy construction*	Rustic Furniture
Sleepers*	Industrial flooring*
Poles*	Wood carvings*

Source 1: MDSP, FAO PAF-BOL, IBAMA, LPF “[Información Técnica para el Procesamiento Industrial de 134 especies maderables de Bolivia](#)”. Serie Técnica XI. 2002. (Translated by Fernando Aguilar . Marketing - CADEFOR)

(*) Source 2. CFB, PROMABOSQUE, BOLFOR, SCC, FAO PAF-BOL. [Bolivian Woods](#). 1999.

SUJO

SPECIES IDENTIFICATION

SCIENTIFIC NAME	<i>Sterculia apetala</i> Karsten
FAMILY	STERCULIACEAE
COMMERCIAL NAME	Chicha
OTHER NAMES	Castano (Central America), Xixá (Brazil), Camajura (Colombia), Saput, Zapote (Ecuador), Huarmi-caspi (Peru)
DISTRIBUTION AREA	Humid forests, occasionally flooded, Department of Santa Cruz
REGION AND FREQUENCY	

TREE DESCRIPTION

TREETOP	wide and globose shaped, dark color, simple-alternate leaves.
TRUNK	Conical, with commercial heights up to 30 m
BARK	

GENERAL CHARACTERISTICS

SAPWOOD COLOR	Yellow	HEARTHWOOD COLOR	Yellow redish to brown dark
ODOR	Indistinct	TASTE	Indistinct
LUSTER	Medium	GRAIN	Straight
STRIPED	Medium	TEXTURE	Coarse

ANATOMIC DESCRIPTION

ANNUAL GROWTH RINGS

Visibility	Not defined	Average Number	
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PORES

Visibility	Visible at sight	Porosity	Diffuse
Type	Solitaires and radial multiples	Shape	

PARENCHYMA

Visibility	Visible at sight	Quantity	
Type	Paratraqueal with centric vessels		

RADIUS

Visibility	Visible at sight	Contrast	Present
Stratification	Present		

PHYSICAL PROPERTIES

MOISTURE CONTENT (GREEN LUMBER)	%
BASIC DENSITY	0,43 g/cm ³
DENSITY (12% MOISTURE CONTENT)	640 g/cm ³
RADIAL SHRINKAGE	5,3 %
TANGENTIAL SHRINKAGE	11,2 %
VOLUMETRIC SHRINKAGE	11,8 %
RATE T/R	2,11

MECHANICAL RESISTANCE

MODULUS OF ELASTICITY	124 1000 Kg/cm ²
MODULUS OF RUPTURE	1010 Kg/cm ²
COMPRESSION PARALELL TO GRAIN	530 Kg/cm ²
QUARTEREDSAWED	196 Kg/cm ²
LATERAL HARDNESS	Kg
IMPACT BENDING	Kg-m

TECHNNICAL CONDITIONS FOR PROCESSING

MACHINING	Easy machining. Good finishing when the pores are sealed.
PRESERVATION	Permeable
NATURAL DURABILITY	Low resistant to attack of fungi and insects
DRYING	A soft kiln schedule is recommended to avoid risks of twisting and cracking

END USES

Decorative veneer	Packages and crating
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Source: MDSP, FAO PAF-BOL, IBAMA, LPF “[Información Técnica para el Procesamiento Industrial de 134 especies maderables de Bolivia](#)”. Serie Técnica XI. 2002. (Translated by Fernando Aguilar . Marketing - CADEFOR)

TACHORE

SPECIES IDENTIFICATION

SCIENTIFIC NAME	<i>Poulsenia armata</i> Standley
FAMILY	MORACEAE
COMMERCIAL NAME	Mastate
OTHER NAMES	Cucúa (Colombia), Majagua (Ecuador), Ababábite (Mexico)
DISTRIBUTION AREA	Humid subtropical forests, Departments of Santa Cruz, Beni and La Paz
REGION AND FREQUENCY	

TREE DESCRIPTION

TREETOP	Medium size, light green color foliage.
TRUNK	Conical and uniform, with commercial heights up to 27 m
BARK	White color, fissured.

GENERAL CHARACTERISTICS

SAPWOOD COLOR	White	HEARTHWOOD COLOR	Ligth brown yellowish
ODOR	Indistinct	TASTE	Indistinct
LUSTER	Medium to bright	GRAIN	Straight to Interlocked
STRIPED	Tenuous	TEXTURE	Coarse

ANATOMIC DESCRIPTION

ANNUAL GROWTH RINGS

Visibility	With magnifying glass 10 x	magnifying Average Number	16 rings in a radium of 10 cm.
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PORES

Visibility	Visible at sight	Porosity	Diffuse
Type	Solitaires and radial multiples	Shape	Round to oval

PARENCHYMA

Visibility	With magnifying glass 10 x	magnifying Quantity	Scarce
Type	Paratraqueal with centric vessels		

RADIUS

Visibility	Visible at sight	Contrast	Present
Stratification	Absent		

PHYSICAL PROPERTIES

MOISTURE CONTENT (GREEN LUMBER)	105 %
BASIC DENSITY	0,37 g/cm ³
DENSITY (12% MOISTURE CONTENT)	0,4 g/cm ³
RADIAL SHRINKAGE	4 %
TANGENTIAL SHRINKAGE	7,2 %
VOLUMETRIC SHRINKAGE	11,2 %
RATE T/R	1,8

MECHANICAL RESISTANCE

MODULUS OF ELASTICITY	85 1000 Kg/cm ²
MODULUS OF RUPTURE	587 Kg/cm ²
COMPRESSION PARALELL TO GRAIN	394 Kg/cm ²
QUARTEREDSAWED	69 Kg/cm ²
LATERAL HARDNESS	254 Kg
IMPACT BENDING	1,35 Kg-m

TECHNNICAL CONDITIONS FOR PROCESSING

MACHINING	Easy machining. Good finishing when worked in green.
PRESERVATION	Permeable
NATURAL DURABILITY	Low durability. The wood is susceptible to blue stain
DRYING	Air drying time is moderate, with minor defects.

END USES

Construction	Packages and crating
Decorative veneer	

Source: MDSP, FAO PAF-BOL, IBAMA, LPF "[Información Técnica para el Procesamiento Industrial de 134 especies maderables de Bolivia](#)". Serie Técnica XI. 2002. (Translated by Fernando Aguilar . Marketing - CADEFOR)

TAJIBO

SPECIES IDENTIFICATION

SCIENTIFIC NAME	<i>Tabebuia impetiginosa</i> (Mart. Ex DC.) Standley
FAMILY	BIGNONIACEAE
COMMERCIAL NAME	Bethabara, Ipe, Lapacho, Apamate
OTHER NAMES	Puy, Araguaney, Poi, Polvillo, Flor amarillo* (Venezuela); Cañaguate Morado, Polvillo, Roble Morado (Colombia); Tahuari, Ebano* (Peru); Ipe, Ipe-Roxo, Lapacho, Pau-d'arco (Brazil); Tay i (Paraguay)*
DISTRIBUTION AREA	Tajibo can be found in forest ranging from humid subtropical to dry temperate forest. Departments of Santa Cruz, Chuquisaca, Tarija, Beni and Pando.
REGION AND FREQUENCY	Frequent in the regions of Chiquitanía, Bajo Paraguá, Guarayos, Choré, Amazonian foothills and Amazonia.

TREE DESCRIPTION

TREETOP	Medium size; Intense green foliage, composite-opposite leaves.
TRUNK	Straight and cylindrical with commercial heights up to 30 m*
BARK	Brown - Grayish color, corrugated, with longitudinal cracks.

GENERAL CHARACTERISTICS

SAPWOOD COLOR	Yellowish	HEARTHWOOD COLOR	Greenish to yellowish- Brown.
ODOR	Peculiar	TASTE	Indistinct
LUSTER	Medium	GRAIN	Interlocked
STRIPED	Dark	TEXTURE	Medium

ANATOMIC DESCRIPTION

ANNUAL GROWTH RINGS

Visibility	Visible at sight	Average Number	28 rings in a radium of 10 cm
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PORES

Visibility	With magnifying glass 10 x	magnifying Porosity	Diffuse
Type	Solitaries and radial multiple of 3	Shape	Round, mostly open

PARENCHYMA

Visibility	Visible at sight	Quantity	Abundant
Type	Paratraqueal with centric vessels		

RADIUS

Visibility	With magnifying glass 10 x	magnifying Contrast	Present
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PHYSICAL PROPERTIES

MOISTURE CONTENT (GREEN LUMBER)	1,3 %
BASIC DENSITY	0,85 g/cm ³
DENSITY (12% MOISTURE CONTENT)	1,05 (0,98*) g/cm ³
RADIAL SHRINKAGE	3,3 %
TANGENTIAL SHRINKAGE	5,6 %
VOLUMETRIC SHRINKAGE	10 %
RATE T/R	1,7

MECHANICAL RESISTANCE

MODULUS OF ELASTICITY	130 1000 Kg/cm ²
MODULUS OF RUPTURE	1371 Kg/cm ²
COMPRESSION PARALELL TO GRAIN	719 Kg/cm ²
QUARTEREDSAWED	5,69 Kg/cm ²
LATERAL HARDNESS	1428 Kg
IMPACT BENDING	4,16 Kg-m

TECHNNICAL CONDITIONS FOR PROCESSING

MACHINING	Good planing when cut with an angle of 15 degrees.* Good moulding, sanding, boring and turning*. Medium blunting effect. Good finishing*.
PRESERVATION	Impermeable
NATURAL DURABILITY	Durable, specially when not in contact with soil
DRYING	Air drying is very slow, with risks of cracking and curving. Recommended Kiln drying is T3 – C1 (USA).*

END USES

Heavy construction	Sleepers
Interior construction*	Flooring
Decorative Veneer	Wood carvings*
Garden furniture	Moudings*
Truck beds*	Turnery*
Stairways*	Door and window frames*

Source 1: MDSP, FAO PAF-BOL, IBAMA, LPF “Información Técnica para el Procesamiento Industrial de 134 especies maderables de Bolivia”. Serie Técnica XI. 2002. (Translated by Fernando Aguilar . Marketing - CADEFOR)

(*) Source 2. CFB, PROMABOSQUE, BOLFOR, SCC, FAO PAF-BOL. Bolivian Woods. 1999.

TAJIBO AMARILLO

SPECIES IDENTIFICATION

SCIENTIFIC NAME	<i>Tabebuia serratifolia</i> (Vahl.) Nicholson
FAMILY	BIGNONIACEAE
COMMERCIAL NAME	ipe-amarelo
OTHER NAMES	ipe, Pau-d'arco amarelo (Brazil), Tahuari (Peru)
DISTRIBUTION AREA	
REGION AND FREQUENCY	

TREE DESCRIPTION

TREETOP

TRUNK Straight

BARK Smooth, pinkish -brown color. Around 1 cm thickness

GENERAL CHARACTERISTICS

SAPWOOD COLOR	Ligth brown	HEARTHWOOD COLOR	Brown -grayish with greenish jaspers
ODOR	Peculiar	TASTE	Indistinct
LUSTER	None	GRAIN	Interlocked
STRIPED	Tenuous	TEXTURE	Fine to medium

ANATOMIC DESCRIPTION

ANNUAL GROWTH RINGS

Visibility Indistinguishable s Average Number

PORES

Visibility With magnifying magnifying Porosity Diffuse
glass 10 x

Type Predominant solitaires and Shape Round, mostly obstructed
multiple of 2

PARENCHYMA

Visibility With magnifying magnifying Quantity
glass 10 x

Type Paratraqueal aliform and
paratraqueal confluent

RADIUS

Visibility With magnifying magnifying Contrast Low contrast
glass 10 x

Stratification Present

PHYSICAL PROPERTIES

MOISTURE CONTENT (GREEN LUMBER)	%
BASIC DENSITY	0,89 g/cm ³
DENSITY (12% MOISTURE CONTENT)	0,93 g/cm ³
RADIAL SHRINKAGE	7,4 %
TANGENTIAL SHRINKAGE	10,1 %
VOLUMETRIC SHRINKAGE	18,44 %
RATE T/R	1,36

MECHANICAL RESISTANCE

MODULUS OF ELASTICITY	169 1000 Kg/cm ²
MODULUS OF RUPTURE	2046 Kg/cm ²
COMPRESSION PARALELL TO GRAIN	1021 Kg/cm ²
QUARTEREDSAWED	169 Kg/cm ²
LATERAL HARDNESS	1665 Kg
IMPACT BENDING	6,5 Kg-m

TECHNNICAL CONDITIONS FOR PROCESSING

MACHINING	Is moderately difficult to saw and sand. . Is recommendable to prepare the wood and to work it carefully to avoid cracking.
PRESERVATION	Impermeable
NATURAL DURABILITY	Extremely durable to attack of xylophagous agents, even in extreme conditions
DRYING	A severe kiln schedule is recommended, with some risks of twisting and cracking.

END USES

Heavy construction	Flooring
Decorative veneer	Oudoor furniture

Source: MDSP, FAO PAF-BOL, IBAMA, LPF “Información Técnica para el Procesamiento Industrial de 134 especies maderables de Bolivia”. Serie Técnica XI. 2002. (Translated by Fernando Aguilar . Marketing - CADEFOR)

TAMAMOSI

SPECIES IDENTIFICATION

SCIENTIFIC NAME	<i>Platymiscium fragans</i> - Rusby
FAMILY	LEG. PAPILIONOIDEAE
COMMERCIAL NAME	Macacauba
OTHER NAMES	
DISTRIBUTION AREA	Semideciduous forests, Department of Santa Cruz.
REGION AND FREQUENCY	Is considered an scarce species in Bolivian forests

TREE DESCRIPTION

TREETOP	Irregular shape. Similar height than trunk
TRUNK	Straight and cylindrical with commercial heights up to 30 m
BARK	Brown -grayish color. Fissured

GENERAL CHARACTERISTICS

SAPWOOD COLOR	White -yellowish	HEARTHWOOD COLOR	Chesnut- redish
ODOR	Distinctive	TASTE	Indistinct
LUSTER	Medium	GRAIN	Interlocked and undulate
STRIPED	Dark	TEXTURE	

ANATOMIC DESCRIPTION

ANNUAL GROWTH RINGS

Visibility	Visible at sight	Average Number	
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PORES

Visibility	With magnifying glass 10 x	magnifying Porosity	Diffuse
Type	Solitaires and radial multiples	Shape	Shorts and grouped in clusters

PARENCHYMA

Visibility	Visible at sight	Quantity	
Type	Paratraqueal with centric vessels		

RADIUS

Visibility	Low even with magnifying glass of 10 x	Contrast	Present
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Stratification	Absent
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PHYSICAL PROPERTIES

MOISTURE CONTENT (GREEN LUMBER)	%
BASIC DENSITY	0.75 - 0.95 g/cm ³
DENSITY (12% MOISTURE CONTENT)	0,95 g/cm ³
RADIAL SHRINKAGE	%
TANGENTIAL SHRINKAGE	%
VOLUMETRIC SHRINKAGE	%
RATE T/R	

MECHANICAL RESISTANCE

MODULUS OF ELASTICITY	1000 Kg/cm ²
MODULUS OF RUPTURE	Kg/cm ²
COMPRESSION PARALELL TO GRAIN	Kg/cm ²
QUARTEREDSAWED	Kg/cm ²
LATERAL HARDNESS	850 - 1100 Kg
IMPACT BENDING	Kg-m

TECHNNICAL CONDITIONS FOR PROCESSING

MACHINING

PRESERVATION

NATURAL DURABILITY

DRYING

END USES

Construction	Doors
Decorative Veneer	Flooring

Source: MDSP, FAO PAF-BOL, IBAMA, LPF "[Información Técnica para el Procesamiento Industrial de 134 especies maderables de Bolivia](#)". Serie Técnica XI. 2002. (Translated by Fernando Aguilar . Marketing - CADEFOR)

TAMARINDO

SPECIES IDENTIFICATION

SCIENTIFIC NAME	<i>Dialium guianense</i> (Aubl.) Sandwith
FAMILY	LEG. CAESALPINIOIDEAE
COMMERCIAL NAME	Camalindo, Indian date, Tamarindo
OTHER NAMES	Parajuba (Brazil), Guapaque (Mexico), Cacho (Venezuela)
DISTRIBUTION AREA	Is found in Humid savannas, Departments of Beni and Santa Cruz
REGION AND FREQUENCY	

TREE DESCRIPTION

TREETOP	With alternate leaves
TRUNK	Straight and cylindrical, with small buttresses. Height averages 15 m.
BARK	Green-grayish color.

GENERAL CHARACTERISTICS

SAPWOOD COLOR	White yellowish	HEARTHWOOD COLOR	Dark brown
ODOR	Indistinct	TASTE	Indistinct
LUSTER	Brigth	GRAIN	Irregular
STRIPED	Dark	TEXTURE	Fine

ANATOMIC DESCRIPTION

ANNUAL GROWTH RINGS

Visibility	Ill defined	Average Number	
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PORES

Visibility	With magnifying glass 10 x	magnifying Porosity	Diffuse
Type	Solitaries	Shape	Circular, occasionally oval

PARENCHYMA

Visibility	With magnifying glass 10 x	magnifying Quantity	Regular
Type	Apotraqueal reticulated		

RADIUS

Visibility	With magnifying glass 10 x	magnifying Contrast	Absent
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Stratification	Present
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PHYSICAL PROPERTIES

MOISTURE CONTENT (GREEN LUMBER)	45 %
BASIC DENSITY	0,88 g/cm ³
DENSITY (12% MOISTURE CONTENT)	1,12 g/cm ³
RADIAL SHRINKAGE	6,3 %
TANGENTIAL SHRINKAGE	11,5 %
VOLUMETRIC SHRINKAGE	17,7 %
RATE T/R	1,82

MECHANICAL RESISTANCE

MODULUS OF ELASTICITY	175 1000 Kg/cm ²
MODULUS OF RUPTURE	1923 Kg/cm ²
COMPRESSION PARALELL TO GRAIN	922 Kg/cm ²
QUARTEREDSAWED	228 Kg/cm ²
LATERAL HARDNESS	1071 Kg
IMPACT BENDING	1,59 Kg-m

TECHNNICAL CONDITIONS FOR PROCESSING

MACHINING	Difficult machining
PRESERVATION	Impermeable
NATURAL DURABILITY	Durable even in extreme conditions.
DRYING	Air drying time is moderate, with some more or less considerable defects. A soft kiln schedule is recommended, with some risks of cracking and twisting

END USES

Construction	Turnery
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Source: MDSP, FAO PAF-BOL, IBAMA, LPF “[Información Técnica para el Procesamiento Industrial de 134 especies maderables de Bolivia](#)”. Serie Técnica XI. 2002. (Translated by Fernando Aguilar . Marketing - CADEFOR)

TARARA

SPECIES IDENTIFICATION

SCIENTIFIC NAME	<i>Centrolobium microchaete</i> (Martius ex Benth) Lima
FAMILY	LEG. PAPILIONOIDEAE
COMMERCIAL NAME	Arariba
OTHER NAMES	Araribá-amarelo (Brazil), Balaustre, Guayacan hobo (Colombia)
DISTRIBUTION AREA	Semideciduos forests. Departments of La Paz and Santa Cruz
REGION AND FREQUENCY	Very frequent in la Chiquitanía, Bajo Paraguá and Guarayos

TREE DESCRIPTION

TREETOP

TRUNK	Trunk with prominent buttresses, commercial heights up to 30 m
BARK	Light gray Color

GENERAL CHARACTERISTICS

SAPWOOD COLOR	Yellowish	HEARTHWOOD COLOR	Red orange
ODOR	Peculiar, similar to roble	TASTE	Indistinct
LUSTER	Medium to bright	GRAIN	Straight to irregular
STRIPED	Dark	TEXTURE	Fine to medium

ANATOMIC DESCRIPTION

ANNUAL GROWTH RINGS

Visibility	Average Number
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PORES

Visibility	Visible at sight	Porosity	
Type	Solitaries and radial multiples	Shape	Round, containing resin

PARENCHYMA

Visibility	Visible at sight	Quantity	Scarce
Type	Paratraqueal with centric vessels		

RADIUS

Visibility	With magnifying glass 10 x	magnifying Contrast	Present
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Stratification	Present
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PHYSICAL PROPERTIES

MOISTURE CONTENT (GREEN LUMBER)	%
BASIC DENSITY	0,58 g/cm ³
DENSITY (12% MOISTURE CONTENT)	0,74 g/cm ³
RADIAL SHRINKAGE	4 %
TANGENTIAL SHRINKAGE	6,2 %
VOLUMETRIC SHRINKAGE	10,2 %
RATE T/R	1,6

MECHANICAL RESISTANCE

MODULUS OF ELASTICITY	100 1000 Kg/cm ²
MODULUS OF RUPTURE	1520 Kg/cm ²
COMPRESSION PARALELL TO GRAIN	690 Kg/cm ²
QUARTEREDSAWED	120 Kg/cm ²
LATERAL HARDNESS	1093 Kg
IMPACT BENDING	3,34 Kg-m

TECHNNICAL CONDITIONS FOR PROCESSING

MACHINING	Easy machining . Good finishing.
PRESERVATION	Rather permeable
NATURAL DURABILITY	Durable, when not in soil contact
DRYING	A moderate kiln schedule is recommended.

END USES

Furniture	Flooring
Decorative Veneer	

Source: MDSP, FAO PAF-BOL, IBAMA, LPF “Información Técnica para el Procesamiento Industrial de 134 especies maderables de Bolivia”. Serie Técnica XI. 2002. (Translated by Fernando Aguilar . Marketing - CADEFOR)

TARARA COLORADA

SPECIES IDENTIFICATION

SCIENTIFIC NAME	<i>Platymiscium ulei</i> Harms
FAMILY	LEG. PAPILIONOIDEAE
COMMERCIAL NAME	Macacaúba, Macacawood
OTHER NAMES	Macacaúba preta, Macacaúba vermelha (Brazil)
DISTRIBUTION AREA	
REGION AND FREQUENCY	

TREE DESCRIPTION

TREETOP

TRUNK

BARK

GENERAL CHARACTERISTICS

SAPWOOD COLOR	Ligth brown- redish	HEARTHWOOD COLOR	Brown- redish
ODOR	Indistinct	TASTE	Indistinct
LUSTER	Medium	GRAIN	Irregular
STRIPED	Tenuous	TEXTURE	Medium

ANATOMIC DESCRIPTION

ANNUAL GROWTH RINGS

Visibility	Hardly distinguishable	Average Number	
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PORES

Visibility	Visible at sight	Porosity	Diffuse
Type	Solitaries	Shape	

PARENCHYMA

Visibility	Scarcely visible at sight	Quantity	Escasa
Type	Paratraqueal aliform		

RADIUS

Visibility	With magnifying glass 10 x	magnifying Contrast	Present
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Stratification	Present
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PHYSICAL PROPERTIES

MOISTURE CONTENT (GREEN LUMBER)

%

BASIC DENSITY

0.7 - 0.8 g/cm³

DENSITY (12% MOISTURE CONTENT)	0,88 g/cm ³
RADIAL SHRINKAGE	%
TANGENTIAL SHRINKAGE	%
VOLUMETRIC SHRINKAGE	%
RATE T/R	

MECHANICAL RESISTANCE

MODULUS OF ELASTICITY	1000 Kg/cm ²
MODULUS OF RUPTURE	Kg/cm ²
COMPRESSION PARALELL TO GRAIN	Kg/cm ²
QUARTEREDSAWED	Kg/cm ²
LATERAL HARDNESS	Kg
IMPACT BENDING	Kg-m

TECHNNICAL CONDITIONS FOR PROCESSING

MACHINING	Easy machining . Good finishing.
PRESERVATION	
NATURAL DURABILITY	Durable
DRYING	

END USES

Furniture	Flooring
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Source: MDSP, FAO PAF-BOL, IBAMA, LPF “[Información Técnica para el Procesamiento Industrial de 134 especies maderables de Bolivia](#)”. Serie Técnica XI. 2002. (Translated by Fernando Aguilar . Marketing - CADEFOR)

TARUMA

SPECIES IDENTIFICATION

SCIENTIFIC NAME	<i>Vitex cymosa</i> Bert. ex Spreng.
FAMILY	VERBENACEAE
COMMERCIAL NAME	Pechiche
OTHER NAMES	Taruma cheiroso, Tarumã-do-igapó (Brazil), Aceituno (Colombia Venezuela), Perchice (Ecuador), Tahuari (Peru)
DISTRIBUTION AREA	Humid forests in the plains of Beni, Pando and Santa Cruz
REGION AND FREQUENCY	

TREE DESCRIPTION

TREETOP	Almost spherical, with dense foliage
TRUNK	Straight, with the base slightly corrugates and commercial heights up to 30 m
BARK	Pale yellow color , fissured to cracked

GENERAL CHARACTERISTICS

SAPWOOD COLOR	Brown yellowish	HEARTHWOOD COLOR	Dark brown -chocolate
ODOR	Distinctive, a little fragrant	TASTE	Indistinct
LUSTER	Medium	GRAIN	Generally straight
STRIPED	Dark	TEXTURE	From fine to media

ANATOMIC DESCRIPTION

ANNUAL GROWTH RINGS

Visibility	Visible at sight	Average Number	36 in a radius of 10 cm
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PORES

Visibility	Visible at sight	Porosity	Diffuse
Type	Solitaires	Shape	Straight; sometimes undulate

PARENCHYMA

Visibility	With magnifying glass 10 x	magnifying Quantity	Scarce
Type	Paratraqueal with centric vessels		

RADIUS

Visibility	Visible at sight	Contrast	Present
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Stratification	Absent
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PHYSICAL PROPERTIES

MOISTURE CONTENT (GREEN LUMBER)	%
BASIC DENSITY	0,6 g/cm ³
DENSITY (12% MOISTURE CONTENT)	0,95 g/cm ³
RADIAL SHRINKAGE	3,2 %
TANGENTIAL SHRINKAGE	6,4 %
VOLUMETRIC SHRINKAGE	10,4 %
RATE T/R	2

MECHANICAL RESISTANCE

MODULUS OF ELASTICITY	168 1000 Kg/cm ²
MODULUS OF RUPTURE	1244 Kg/cm ²
COMPRESSION PARALELL TO GRAIN	766 Kg/cm ²
QUARTEREDSAWED	Kg/cm ²
LATERAL HARDNESS	526 Kg
IMPACT BENDING	Kg-m

TECHNNICAL CONDITIONS FOR PROCESSING

MACHINING	Easy machining. Good finishing
PRESERVATION	Heartwood impermeable; sapwood permeable
NATURAL DURABILITY	Durable
DRYING	A severe kiln schedule is recommended.

END USES

Decorative Veneer	Furniture
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Source: MDSP, FAO PAF-BOL, IBAMA, LPF “[Información Técnica para el Procesamiento Industrial de 134 especies maderables de Bolivia](#)”. Serie Técnica XI. 2002. (Translated by Fernando Aguilar . Marketing - CADEFOR)

TEJEYEQUE

SPECIES IDENTIFICATION

SCIENTIFIC NAME	<i>Centrolobium tomentosum</i> Guilles ex Benth.
FAMILY	LEG. PAPILIONOIDEAE ou FABACEAE
COMMERCIAL NAME	Arabina, Porcupine wood
OTHER NAMES	Araribá (Brazil)
DISTRIBUTION AREA	Humid subtropical forests, Departments of Santa Cruz, Beni, Cochabamba and Pando
REGION AND FREQUENCY	Is considered an scarce species in Bolivian forests

TREE DESCRIPTION

TREETOP	Composite and alternate leaves
TRUNK	With prominent buttresses, commercial heights up to 30 m
BARK	Grayish color; slightly fissured

GENERAL CHARACTERISTICS

SAPWOOD COLOR	Yellowish	HEARTHWOOD COLOR	Red - orange
ODOR	Peculiar similar to roble	TASTE	Indistinct
LUSTER		GRAIN	Straight to irregular
STRIPED	Dark	TEXTURE	

ANATOMIC DESCRIPTION

ANNUAL GROWTH RINGS

Visibility	Average Number
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PORES

Visibility	Porosity	Diffuse
Type	Solitaires and radial multiple of 3	Shape

PARENCHYMA

Visibility	Quantity
Type	Paratraqueal with centric vessels

RADIUS

Visibility	Visible at sight	Contrast	Present
Stratification	Present		

PHYSICAL PROPERTIES

MOISTURE CONTENT (GREEN LUMBER)	%
BASIC DENSITY	0,58 g/cm3
DENSITY (12% MOISTURE CONTENT)	0,7 g/cm3
RADIAL SHRINKAGE	4 %
TANGENTIAL SHRINKAGE	6,2 %
VOLUMETRIC SHRINKAGE	10,2 %
RATE T/R	1,6

MECHANICAL RESISTANCE

MODULUS OF ELASTICITY	100 1000 Kg/cm2
MODULUS OF RUPTURE	1520 Kg/cm2
COMPRESSION PARALELL TO GRAIN	690 Kg/cm2
QUARTEREDSAWED	Kg/cm2
LATERAL HARDNESS	1093 Kg
IMPACT BENDING	Kg-m

TECHNNICAL CONDITIONS FOR PROCESSING

MACHINING	Easy machining . Good finishing.
PRESERVATION	
NATURAL DURABILITY	Durable, specially when not in contact with soil
DRYING	

END USES

Construction	Decorative Veneer
Furniture	Flooring

Source: MDSP, FAO PAF-BOL, IBAMA, LPF "[Información Técnica para el Procesamiento Industrial de 134 especies maderables de Bolivia](#)". Serie Técnica XI. 2002. (Translated by Fernando Aguilar . Marketing - CADEFOR)

TINTO

SPECIES IDENTIFICATION

SCIENTIFIC NAME	<i>Callisthene fasciculata</i> Mart.
FAMILY	VOCHYSIACEAE
COMMERCIAL NAME	Carvão Branco
OTHER NAMES	Pau-terra, Capitão (Brazil)
DISTRIBUTION AREA	
REGION AND FREQUENCY	

TREE DESCRIPTION

TREETOP

TRUNK

BARK

GENERAL CHARACTERISTICS

SAPWOOD COLOR	Light brown- grayish	HEARTHWOOD COLOR	Brown- grayish
ODOR	Indistinct	TASTE	Indistinct
LUSTER	Tenuous	GRAIN	Irregular
STRIPED		TEXTURE	

ANATOMIC DESCRIPTION

ANNUAL GROWTH RINGS

Visibility	Average Number
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PORES

Visibility	With magnifying glass 10 x	magnifying Porosity
Type	Solitaires and radial multiples	Shape
	radiales	

PARENCHYMA

Visibility	With magnifying glass 10 x	magnifying Quantity
Type		

RADIUS

Visibility	With magnifying glass 10 x	magnifying Contrast	Absent
Stratification	Absent		

PHYSICAL PROPERTIES

MOISTURE CONTENT (GREEN LUMBER)	%
BASIC DENSITY	0,79 g/cm3
DENSITY (12% MOISTURE CONTENT)	0,86 g/cm3
RADIAL SHRINKAGE	4,36 %
TANGENTIAL SHRINKAGE	6,15 %
VOLUMETRIC SHRINKAGE	12,54 %
RATE T/R	1.41

MECHANICAL RESISTANCE

MODULUS OF ELASTICITY	1000 Kg/cm2
MODULUS OF RUPTURE	Kg/cm2
COMPRESSION PARALELL TO GRAIN	Kg/cm2
QUARTEREDSAWED	Kg/cm2
LATERAL HARDNESS	Kg
IMPACT BENDING	Kg-m

TECHNNICAL CONDITIONS FOR PROCESSING

MACHINING

PRESERVATION	Rather permeable in cold immersion
NATURAL DURABILITY	Durable, resistant to attack of fungi and highly resistant to attack of insects

DRYING

END USES

Construction	Pisos
Parquet	

Source: MDSP, FAO PAF-BOL, IBAMA, LPF “Información Técnica para el Procesamiento Industrial de 134 especies maderables de Bolivia”. Serie Técnica XI. 2002. (Translated by Fernando Aguilar . Marketing - CADEFOR)

TIPA

SPECIES IDENTIFICATION

SCIENTIFIC NAME	<i>Tipuana tipu</i> (Benth.) O.Kuntze
FAMILY	LEG. PAPILIONOIDEAE
COMMERCIAL NAME	
OTHER NAMES	Tipu (Argentina), Tipa-branca (Brazil)
DISTRIBUTION AREA	Temperate humid forests, Departments of Tarija, Cochabamba, Chuquisaca and Santa Cruz
REGION AND FREQUENCY	

TREE DESCRIPTION

TREETOP	Round shaoe, Intense green foliage, composite leaves
TRUNK	Straight and cylindrical with commercial heights up to 30 m
BARK	Dark gray color. Cracked.

GENERAL CHARACTERISTICS

SAPWOOD COLOR	White yellowish to lighth brown	HEARTHWOOD COLOR	White yellowish to lighth brown
ODOR	Indistinct	TASTE	Indistinct
LUSTER		GRAIN	Straight
STRIPED		TEXTURE	

ANATOMIC DESCRIPTION

ANNUAL GROWTH RINGS

Visibility	Average Number
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PORES

Visibility	Visible at sight	Porosity	Semicircular
Type	Solitaries and radial multiple of 5	Shape	Open

PARENCHYMA

Visibility	Visible at sight	Quantity
Type	Paratraqueal with centric vessels	

RADIUS

Visibility	With magnifying magnifying glass 10 x	Contrast	Present
Stratification	Present		

PHYSICAL PROPERTIES

MOISTURE CONTENT (GREEN LUMBER)	%
BASIC DENSITY	0,57 g/cm ³
DENSITY (12% MOISTURE CONTENT)	0,7 g/cm ³
RADIAL SHRINKAGE	5,1 %
TANGENTIAL SHRINKAGE	7,6 %
VOLUMETRIC SHRINKAGE	12,3 %
RATE T/R	1,5

MECHANICAL RESISTANCE

MODULUS OF ELASTICITY	100 1000 Kg/cm ²
MODULUS OF RUPTURE	923 Kg/cm ²
COMPRESSION PARALELL TO GRAIN	376 Kg/cm ²
QUARTEREDSAWED	Kg/cm ²
LATERAL HARDNESS	696 Kg
IMPACT BENDING	Kg-m

TECHNNICAL CONDITIONS FOR PROCESSING

MACHINING	Easy machining . Good finishing.
PRESERVATION	Permeable
NATURAL DURABILITY	Durable
DRYING	

END USES

Carpentry	Plywood
Furniture	

Source: MDSP, FAO PAF-BOL, IBAMA, LPF “[Información Técnica para el Procesamiento Industrial de 134 especies maderables de Bolivia](#)”. Serie Técnica XI. 2002. (Translated by Fernando Aguilar . Marketing - CADEFOR)

TOBOROCHI

SPECIES IDENTIFICATION

SCIENTIFIC NAME	<i>Chorisia speciosa</i> (A.St.-Hil.) Dawson
FAMILY	BOMBACACEAE
COMMERCIAL NAME	Samohu, Lupuna
OTHER NAMES	Paneiro (Argentina), Barriguda, Paineira (Brazil), Zamuhu (Paraguay)
DISTRIBUTION AREA	Humid forests in plains and semideciduos forest, Departments of Beni, Tarija and Santa Cruz
REGION AND FREQUENCY	

TREE DESCRIPTION

TREETOP	
TRUNK	Thorny trunk with commercial heights up to 27 m
BARK	

GENERAL CHARACTERISTICS

SAPWOOD COLOR	Grayish and brown	HEARTHWOOD COLOR	Grayish and brown
ODOR		TASTE	
LUSTER	From bright to very bright	GRAIN	Straight
STRIPED	Tenuous	TEXTURE	

ANATOMIC DESCRIPTION

ANNUAL GROWTH RINGS	
Visibility	Average Number
PORES	
Visibility	Porosity
Type	Shape
PARENCHYMA	
Visibility	Quantity
Type	
RADIUS	
Visibility	Contrast
Stratification	

PHYSICAL PROPERTIES

MOISTURE CONTENT (GREEN LUMBER)	%
BASIC DENSITY	0.3 - 0.39 g/cm ³
DENSITY (12% MOISTURE CONTENT)	0,42 g/cm ³
RADIAL SHRINKAGE	3.0 - 4.0 %
TANGENTIAL SHRINKAGE	8.0 - 10.0 %
VOLUMETRIC SHRINKAGE	%
RATE T/R	2.5 - 2.6

MECHANICAL RESISTANCE

MODULUS OF ELASTICITY	< 100 1000 Kg/cm ²
MODULUS OF RUPTURE	< 510 Kg/cm ²
COMPRESSION PARALELL TO GRAIN	< 220 Kg/cm ²
QUARTEREDSAWED	< 90 Kg/cm ²
LATERAL HARDNESS	< 306 Kg
IMPACT BENDING	Kg-m

TECHNNICAL CONDITIONS FOR PROCESSING

MACHINING	Easy machining. Good finishing.
PRESERVATION	Permeable
NATURAL DURABILITY	Low durability. The wood is susceptible to attack of fungi and insects
DRYING	A soft kiln schedule is recommended, with some risks of cracking and deformation

END USES

Plywood	Packages and crating
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Source: MDSP, FAO PAF-BOL, IBAMA, LPF “[Información Técnica para el Procesamiento Industrial de 134 especies maderables de Bolivia](#)”. Serie Técnica XI. 2002. (Translated by Fernando Aguilar . Marketing - CADEFOR)

TOCO

SPECIES IDENTIFICATION

SCIENTIFIC NAME	<i>Enterolobium contortisiliquum</i> (Vell.) Morong.
FAMILY	LEG. MIMOSOIDEAE
COMMERCIAL NAME	Timbauba, Conacaste, Tamboril
OTHER NAMES	Conacaste (Central America), Guanacaste, Timbo (Argentina), Timboúva, Tamboril (Brazil), Carito (Colombia), Timbo (Paraguay), Caro-caron (Venezuela)
DISTRIBUTION AREA	Humid subtropical forests and temperate humid forests. Departments of Santa Cruz, Cochabamba, Tarija, Chuquisaca, Beni
REGION AND FREQUENCY	

TREE DESCRIPTION

TREETOP	Large, extended, leafy, light green foliage
TRUNK	From cylindrical to irregular; commercial heights up to 30 m
BARK	Brown Grayish color to redish, fibrous

GENERAL CHARACTERISTICS

SAPWOOD COLOR	White yellowish	HEARTHWOOD COLOR	Brown yellowish
ODOR	Indistinct	TASTE	Indistinct
LUSTER		GRAIN	Straight
STRIPED	Intense	TEXTURE	

ANATOMIC DESCRIPTION

ANNUAL GROWTH RINGS

Visibility		Average Number	
PORES			
Visibility	Visible at sight	Porosity	Diffuse
Type	Solitaires and radial multiple of 3	Shape	Very large, some pores are occluded
PARENCHYMA			
Visibility	Visible at sight	Quantity	Scarce
Type	Paratraqueal with centric vessels		
RADIUS			
Visibility	Visibles with magnifying glass of 10 X	Contrast	Present
Stratification	Present		

PHYSICAL PROPERTIES

MOISTURE CONTENT (GREEN LUMBER)	%
BASIC DENSITY	0,38 g/cm ³
DENSITY (12% MOISTURE CONTENT)	0,42 g/cm ³
RADIAL SHRINKAGE	1,5 %
TANGENTIAL SHRINKAGE	3,4 %
VOLUMETRIC SHRINKAGE	7,2 %
RATE T/R	2,3

MECHANICAL RESISTANCE

MODULUS OF ELASTICITY	79 1000 Kg/cm ²
MODULUS OF RUPTURE	408 Kg/cm ²
COMPRESSION PARALELL TO GRAIN	370 Kg/cm ²
QUARTEREDSAWED	Kg/cm ²
LATERAL HARDNESS	395 Kg
IMPACT BENDING	Kg-m

TECHNNICAL CONDITIONS FOR PROCESSING

MACHINING	Easy machining. Good finishing.
PRESERVATION	Permeable
NATURAL DURABILITY	Low durability. The wood is susceptible to blue stain and to attack of fungi
DRYING	Air drying is rather quick, with minimum risks of cracking and deformations. A severe kiln schedule is recommended.

END USES

Plywood	Furniture
Packages and crating	Naval construction

Source: MDSP, FAO PAF-BOL, IBAMA, LPF “[Información Técnica para el Procesamiento Industrial de 134 especies maderables de Bolivia](#)”. Serie Técnica XI. 2002. (Translated by Fernando Aguilar . Marketing - CADEFOR)

TOCO COLORADO

SPECIES IDENTIFICATION

SCIENTIFIC NAME	<i>Parkia pendula</i> (Willd.) Benth. ex Walp.
FAMILY	LEG. MIMOSOIDEAE
COMMERCIAL NAME	Acacia Male, Faveira
OTHER NAMES	Fava-bolota (Brazil), Pashaco colorado (Peru)
DISTRIBUTION AREA	Amazonian forests, Department of Pando
REGION AND FREQUENCY	

TREE DESCRIPTION

TREETOP

TRUNK Straight and cylindrical, with commercial heights averaging 11 m

BARK

GENERAL CHARACTERISTICS

SAPWOOD COLOR	Pale yellow	HEARTHWOOD COLOR	Ligth brown to brown
ODOR	Indistinct	TASTE	
LUSTER	Medium	GRAIN	Straight
STRIPED		TEXTURE	

ANATOMIC DESCRIPTION

ANNUAL GROWTH RINGS

Visibility Indistinguishable **Average Number**

PORES

Visibility Visible at sight **Porosity** Diffuse
Type Solitaries **Shape** Oval

PARENCHYMA

Visibility Visible at sight **Quantity** Abundant
Type Paratraqueal aliform and confluent

RADIUS

Visibility Visibles with magnifying glass **Contrast** Absent
of 10 X

Stratification Absent

PHYSICAL PROPERTIES

MOISTURE CONTENT (GREEN LUMBER)	%
BASIC DENSITY	0,5 g/cm ³
DENSITY (12% MOISTURE CONTENT)	0,59 g/cm ³
RADIAL SHRINKAGE	3,8 %
TANGENTIAL SHRINKAGE	7,8 %
VOLUMETRIC SHRINKAGE	10,5 %
RATE T/R	2,05

MECHANICAL RESISTANCE

MODULUS OF ELASTICITY	118 1000 Kg/cm ²
MODULUS OF RUPTURE	864 Kg/cm ²
COMPRESSION PARALELL TO GRAIN	492 Kg/cm ²
QUARTEREDSAWED	115 Kg/cm ²
LATERAL HARDNESS	429 Kg
IMPACT BENDING	Kg-m

TECHNNICAL CONDITIONS FOR PROCESSING

MACHINING	Easy machining. Regular finishing
PRESERVATION	Heartwood impermeable
NATURAL DURABILITY	Moderately durable, resistant to attack of fungi and insects
DRYING	Very quick, with moderate tendency to crack. A soft kiln schedule is recommended

END USES

Construction	Decorative veneer
Furniture	Naval construction
Toys	

Source: MDSP, FAO PAF-BOL, IBAMA, LPF “[Información Técnica para el Procesamiento Industrial de 134 especies maderables de Bolivia](#)”. Serie Técnica XI. 2002. (Translated by Fernando Aguilar . Marketing - CADEFOR)

TROMPILLO

SPECIES IDENTIFICATION

SCIENTIFIC NAME	<i>Guarea guidonia</i> (L.) Sleumer
FAMILY	MELIACEAE
COMMERCIAL NAME	American muskwood, Trompillo
OTHER NAMES	Camboatá (Brazil), Pialde, Sambo cedro (Colombia), Tocota, Cedrillo, Piaste (Ecuador), Latapi caspi, Requía (Peru), Cachimbo (Venezuela)
DISTRIBUTION AREA	Humid tropical forests, Departments of Beni, Pando and Santa Cruz.
REGION AND FREQUENCY	Very frequent in Guarayos, Chorré, Amazonian foothills and Amazonia

TREE DESCRIPTION

TREETOP	Large, with composite- alternate- pinnate leaves
TRUNK	Straight and cylindrical, with commercial heights up to 30 m
BARK	Brown color; corrugated .

GENERAL CHARACTERISTICS

SAPWOOD COLOR	Pink	HEARTHWOOD COLOR	Yellow redish
ODOR	Indistinct	TASTE	Indistinct
LUSTER	Medium to bright	GRAIN	Straight to interlocked
STRIPED	Slightly pronounced	TEXTURE	Medium to thick

ANATOMIC DESCRIPTION

ANNUAL GROWTH RINGS

Visibility	Visible at sight	Average Number	12 rings in a radium of 10 cm
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PORES

Visibility	Visible at sight	Porosity	Diffuse
Type	Solitaires, radial multiples	Shape	Round to oval

PARENCHYMA

Visibility	Visible at sight	Quantity	Abundant
Type	Paratraqueal aliform confluent		

RADIUS

Visibility	Visibles with magnifying glass of 10 X	Contrast	Absent
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Stratification	Absent
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PHYSICAL PROPERTIES

MOISTURE CONTENT (GREEN LUMBER)	157 %
BASIC DENSITY	0,43 g/cm ³
DENSITY (12% MOISTURE CONTENT)	0,53 g/cm ³
RADIAL SHRINKAGE	4,1 %
TANGENTIAL SHRINKAGE	8 %
VOLUMETRIC SHRINKAGE	11,8 %
RATE T/R	2

MECHANICAL RESISTANCE

MODULUS OF ELASTICITY	98 1000 Kg/cm ²
MODULUS OF RUPTURE	845 Kg/cm ²
COMPRESSION PARALELL TO GRAIN	411 Kg/cm ²
QUARTEREDSAWED	100 Kg/cm ²
LATERAL HARDNESS	325 Kg
IMPACT BENDING	1,89 Kg-m

TECHNNICAL CONDITIONS FOR PROCESSING

MACHINING	Easy machining. Good finishing
PRESERVATION	Rather permeable
NATURAL DURABILITY	Moderately durable
DRYING	Air drying is quick. A severe kiln schedule is recommended

END USES

Construction	Doors and window frames
Doors	Furniture
Windows	Decorative veneer

Source: MDSP, FAO PAF-BOL, IBAMA, LPF "[Información Técnica para el Procesamiento Industrial de 134 especies maderables de Bolivia](#)". Serie Técnica XI. 2002. (Translated by Fernando Aguilar . Marketing - CADEFOR)

UMIRI

SPECIES IDENTIFICATION

SCIENTIFIC NAME	<i>Humiria balsamifera</i> (Aubl.) A.St.-Hil.
FAMILY	HUMIRIACEAE
COMMERCIAL NAME	Umiri, Chanul
OTHER NAMES	Umiri-de-cheiro (Brazil), Oloroso (Colombia), Chanul (Ecuador), Bois rouge (Guayana)
DISTRIBUTION AREA	
REGION AND FREQUENCY	

TREE DESCRIPTION

TREETOP	Irregular shape, with simple-alternate-elliptic leaves.
TRUNK	Straight and cylindrical with commercial heights up to 35 m. Diameters from 70 to 75 cm (DBH).
BARK	Dark -brown color, fissured.

GENERAL CHARACTERISTICS

SAPWOOD COLOR	Gray-pinkish violaceous	HEARTHWOOD COLOR	Brown- pinkish violaceous to Brown -redish violaceous
ODOR	Indistinct	TASTE	Indistinct
LUSTER	Medium	GRAIN	Straight to slightly Interlocked
STRIPED	Tenuous	TEXTURE	Medium

ANATOMIC DESCRIPTION

ANNUAL GROWTH RINGS

Visibility	Indistinguishable	Average Number	Not differentiated
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PORES

Visibility	With magnifying glass 10 x	magnifying Porosity	Diffuse
Type	Solitaires and some geminated	Shape	Irregular to oval

PARENCHYMA

Visibility	With magnifying glass 10 x	magnifying Quantity	Regular
Type	Apotracheal scarce in short lines. Aggregate		

RADIUS

Visibility	With magnifying glass 10 x	magnifying Contrast	Present
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Stratification	Absent
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PHYSICAL PROPERTIES

MOISTURE CONTENT (GREEN LUMBER)	50 %
BASIC DENSITY	0,68 g/cm ³
DENSITY (12% MOISTURE CONTENT)	0,89 g/cm ³
RADIAL SHRINKAGE	8 %
TANGENTIAL SHRINKAGE	13,1 %
VOLUMETRIC SHRINKAGE	20,2 %
RATE T/R	1,7

MECHANICAL RESISTANCE

MODULUS OF ELASTICITY	195 1000 Kg/cm ²
MODULUS OF RUPTURE	1730 Kg/cm ²
COMPRESSION PARALELL TO GRAIN	865 Kg/cm ²
QUARTEREDSAWED	127 Kg/cm ²
LATERAL HARDNESS	940 Kg
IMPACT BENDING	3,59 Kg-m

TECHNNICAL CONDITIONS FOR PROCESSING

MACHINING	Moderately easy
PRESERVATION	Impermeable
NATURAL DURABILITY	High durability; resistant to fungi and insects
DRYING	A soft kiln schedule is recommended, there is some risks of deformation and pores occlusion.

END USES

Construction	Decorative venner
Flooring	

Source: MDSP, FAO PAF-BOL, IBAMA, LPF “[Información Técnica para el Procesamiento Industrial de 134 especies maderables de Bolivia](#)”. Serie Técnica XI. 2002. (Translated by Fernando Aguilar . Marketing - CADEFOR)

UVA DEL MONTE

SPECIES IDENTIFICATION

SCIENTIFIC NAME	<i>Guazuma crinita</i> Martius
FAMILY	TILIACEAE
COMMERCIAL NAME	Bolaina blanca
OTHER NAMES	Mutamba (Brazil), Bolaina (Peru)
DISTRIBUTION AREA	
REGION AND FREQUENCY	

TREE DESCRIPTION

TREETOP	Parasol- shaped; simple –alternate leaves arranged in one plane.
TRUNK	Cylindrical. It reaches commercial heights up to 35 m and a diameter of 50 cm
BARK	Grayish-blackish color; from cracked to fissured

GENERAL CHARACTERISTICS

SAPWOOD COLOR	White	HEARTHWOOD COLOR	Pale brown
ODOR	Indistinct	TASTE	Indistinct
LUSTER	Medium	GRAIN	Straight
STRIPED	Satinado bright	TEXTURE	Medium

ANATOMIC DESCRIPTION

ANNUAL GROWTH RINGS

Visibility	Visible at sight	Average Number	12 rings in a radium of 10 cm
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PORES

Visibility	Visible at sight	Porosity	Diffuse
Type	Solitaires and mostly in radial multiples	Shape	

PARENCHYMA

Visibility	Visible with magnifying glass of 10 X	Quantity	
Type	Apotraqueal diffuse		

RADIUS

Visibility	Visible with magnifying glass of 10 X	Contrast	Absent
Stratification	Absent		

PHYSICAL PROPERTIES

MOISTURE CONTENT (GREEN LUMBER)	%
BASIC DENSITY	0,41 g/cm ³
DENSITY (12% MOISTURE CONTENT)	0,5 g/cm ³
RADIAL SHRINKAGE	5,5 %
TANGENTIAL SHRINKAGE	3,5 %
VOLUMETRIC SHRINKAGE	%
RATE T/R	1,57

MECHANICAL RESISTANCE

MODULUS OF ELASTICITY	1000 Kg/cm ²
MODULUS OF RUPTURE	Kg/cm ²
COMPRESSION PARALELL TO GRAIN	Kg/cm ²
QUARTEREDSAWED	Kg/cm ²
LATERAL HARDNESS	Kg
IMPACT BENDING	Kg-m

TECHNNICAL CONDITIONS FOR PROCESSING

MACHINING	Easy machining.
PRESERVATION	Rather permeable
NATURAL DURABILITY	Moderately durable
DRYING	A moderate kiln schedule is recommended.

END USES

Construction	Decorative veneer
Packages and crating	

Source: MDSP, FAO PAF-BOL, IBAMA, LPF “[Información Técnica para el Procesamiento Industrial de 134 especies maderables de Bolivia](#)”. Serie Técnica XI. 2002. (Translated by Fernando Aguilar . Marketing - CADEFOR)

VERDOLAGO

SPECIES IDENTIFICATION

SCIENTIFIC NAME	<i>Terminalia amazonica</i> (J.F.Gmel) Exell.
FAMILY	COMBRETACEAE
COMMERCIAL NAME	Nargusta, Tanimbuca*
OTHER NAMES	Tanimbuca, Cuilarana, Guajaruba* (Brazil); Guayabo*, Roble (Colombia); Yacushapana (Peru); Yumbingue, Roble de Esmeraldas* (Ecuador); Pardillo Amarillo* (Venezuela)
DISTRIBUTION AREA	Humid tropical forests in transition to subtropical forests*. Departments of Beni, Cochabamba and Santa Cruz
REGION AND FREQUENCY	Very frequent in Bajo Paraguá, Guarayos, Choré, Amazonian foothills and Amazonia

TREE DESCRIPTION

TREETOP	Large size, violaceous to lustrous light- green foliage
TRUNK	Conical and uniform, with small buttresses; commercial heights up to 30 m
BARK	Gray color; coarse texture

GENERAL CHARACTERISTICS

SAPWOOD COLOR	White yellowish	HEARTHWOOD COLOR	Ligth brown yellowish
ODOR	Indistinct	TASTE	Indistinct
LUSTER	Medium	GRAIN	Straight to interlocked
STRIPED	Dark tenuous	TEXTURE	Medium

ANATOMIC DESCRIPTION

ANNUAL GROWTH RINGS

Visibility	Visible at sight	Average Number	39 rings in a radium of 10 cm.
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PORES

Visibility	Visible at sight	Porosity	Diffuse
Type	Solitaries and multiples of 2- 3	Shape	Oval, mostly open

PARENCHYMA

Visibility	Visible at sight	Quantity	Abundant
Type	Paratraqueal with centric vessels		

RADIUS

Visibility	With magnifying glass 10 x	magnifying Contrast	Absent
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Stratification	Absent
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PHYSICAL PROPERTIES

MOISTURE CONTENT (GREEN LUMBER)	56 %
BASIC DENSITY	0,66 g/cm ³
DENSITY (12% MOISTURE CONTENT)	0,76 (0,8*) g/cm ³
RADIAL SHRINKAGE	5,3 %
TANGENTIAL SHRINKAGE	9,1 %
VOLUMETRIC SHRINKAGE	13,8 %
RATE T/R	1,7

MECHANICAL RESISTANCE

MODULUS OF ELASTICITY	135 1000 Kg/cm ²
MODULUS OF RUPTURE	1088 Kg/cm ²
COMPRESSION PARALELL TO GRAIN	584 Kg/cm ²
QUARTEREDSAWED	111 Kg/cm ²
LATERAL HARDNESS	911 Kg
IMPACT BENDING	4,34 Kg-m

TECHNNICAL CONDITIONS FOR PROCESSING

MACHINING	Easy machining. Good planing, moulding, sanding, boring, turning and finishing.* Medium blunting effect.*
PRESERVATION	Scarcely permeable
NATURAL DURABILITY	Durable, specially when not in contact with soil*. Moderately resistant to attack of fungi and highly resistant to attack of termites
DRYING	Air drying is rather quick, with tendency to crack and twist.* A severe kiln schedule is recommended artificial: T3-C2 and T3 – C1 (USA)*

END USES

Construction and structural timber*	Furniture
Veneer*	Flooring
Plywood*	Tongue and groove*
Carpentry*	Stairways*
Turnery*	Tool handles*

Source 1: MDSP, FAO PAF-BOL, IBAMA, LPF “[Información Técnica para el Procesamiento Industrial de 134 especies maderables de Bolivia](#)”. Serie Técnica XI. 2002. (Translated by Fernando Aguilar . Marketing - CADEFOR)

(*) Source 2. CFB, PROMABOSQUE, BOLFOR, SCC, FAO PAF-BOL. [Bolivian Woods](#). 1999.

VERDOLAGO – ICHISOJO

SPECIES IDENTIFICATION

SCIENTIFIC NAME	<i>Terminalia argentea</i> Mart. & Zucc.
FAMILY	COMBRETACEAE
COMMERCIAL NAME	
OTHER NAMES	Cuia (Brazil)
DISTRIBUTION AREA	
REGION AND FREQUENCY	

TREE DESCRIPTION

TREETOP	
TRUNK	Straight; Commercial heights up to 10 m
BARK	

GENERAL CHARACTERISTICS

SAPWOOD COLOR	Brown yellowish	HEARTHWOOD COLOR	Brown yellowish
ODOR	No perceptible	TASTE	
LUSTER	Medium	GRAIN	Straight to interlocked
STRIPED		TEXTURE	Medium

ANATOMIC DESCRIPTION

ANNUAL GROWTH RINGS	
Visibility	Average Number
PORES	
Visibility	Porosity
Type	Shape
PARENCHYMA	
Visibility	Quantity
Type	
RADIUS	
Visibility	Contrast
Stratification	

PHYSICAL PROPERTIES

MOISTURE CONTENT (GREEN LUMBER)	%
BASIC DENSITY	0,8 g/cm3

DENSITY (12% MOISTURE CONTENT)	0,97 g/cm ³
RADIAL SHRINKAGE	5,8 %
TANGENTIAL SHRINKAGE	9,8 %
VOLUMETRIC SHRINKAGE	15,2 %
RATE T/R	1,7

MECHANICAL RESISTANCE

MODULUS OF ELASTICITY	157 1000 Kg/cm ²
MODULUS OF RUPTURE	1448 Kg/cm ²
COMPRESSION PARALELL TO GRAIN	863 Kg/cm ²
QUARTEREDSAWED	Kg/cm ²
LATERAL HARDNESS	1572 Kg
IMPACT BENDING	Kg-m

TECHNNICAL CONDITIONS FOR PROCESSING

MACHINING

PRESERVATION Sapwood permeable

NATURAL DURABILITY

DRYING Air drying is quick, with some tendency to twist and check. A severe kiln schedule is recommended.

END USES

Construction Parquet
Flooring

Source : MDSP, FAO PAF-BOL, IBAMA, LPF “[Información Técnica para el Procesamiento Industrial de 134 especies maderables de Bolivia](#)”. Serie Técnica XI. 2002. (Translated by Fernando Aguilar . Marketing - CADEFOR)

VERDOLAGO BLANCO

SPECIES IDENTIFICATION

SCIENTIFIC NAME	<i>Terminalia oblonga</i> (Ruiz & Pav.) Steudel
FAMILY	COMBRETACEAE
COMMERCIAL NAME	Tanimbuca
OTHER NAMES	Guayabón, Guayabillo, yuyún (Ecuador); Yachuspana, chamisa, rifari (Peru); Guayabón (Venezuela)
DISTRIBUTION AREA	Humid sub-montane and flood plains forests. Departments of Cochabamba, Santa Cruz, Beni, Cochabamba, Santa Cruz, Beni and La Paz.
REGION AND FREQUENCY	Frequent in the regions of Chiquitanía, Bajo Paraguá and Amazonia

TREE DESCRIPTION

TREETOP	Globose shape; dark green color
TRUNK	It reaches commercial heights up to 35 m
BARK	Chesnut - yellowish to Yellow; smooth appearance

GENERAL CHARACTERISTICS

SAPWOOD COLOR	Pale yellow	HEARTHWOOD COLOR	Pale brown
ODOR	Indistinct	TASTE	Indistinct
LUSTER	Brigth to very bright	GRAIN	Straight to irregular
STRIPED	Dark	TEXTURE	Medium to thick

ANATOMIC DESCRIPTION

ANNUAL GROWTH RINGS

Visibility	Visible at sight	Average Number	
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PORES

Visibility	With magnifying glass 10 x	magnifying Porosity	Diffuse
Type	Solitaires and radial multiple	Shape	

PARENCHYMA

Visibility	Visible at sight	Quantity	Abundant
Type	With centric vessels		

RADIUS

Visibility	With magnifying glass 10 x	magnifying Contrast	Present
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Stratification

PHYSICAL PROPERTIES

MOISTURE CONTENT (GREEN LUMBER)	%
BASIC DENSITY	0,75 g/cm ³
DENSITY (12% MOISTURE CONTENT)	0,95 g/cm ³
RADIAL SHRINKAGE	4,93 %
TANGENTIAL SHRINKAGE	8,59 %
VOLUMETRIC SHRINKAGE	13,52 %
RATE T/R	1,74

MECHANICAL RESISTANCE

MODULUS OF ELASTICITY	138 1000 Kg/cm ²
MODULUS OF RUPTURE	1210 Kg/cm ²
COMPRESSION PARALELL TO GRAIN	Kg/cm ²
QUARTEREDSAWED	Kg/cm ²
LATERAL HARDNESS	Kg
IMPACT BENDING	2,91 Kg-m

TECHNNICAL CONDITIONS FOR PROCESSING

MACHINING	Easy machining. Good finishing
PRESERVATION	Permeable
NATURAL DURABILITY	Resistant to brown rotting, but susceptible to attack of fungi
DRYING	Air drying and kiln drying is quick.

END USES

Construction	Furniture
Flooring	Decorative veneer

Source : MDSP, FAO PAF-BOL, IBAMA, LPF “[Información Técnica para el Procesamiento Industrial de 134 especies maderables de Bolivia](#)”. Serie Técnica XI. 2002. (Translated by Fernando Aguilar . Marketing - CADEFOR)

VERDOLAGO CHICO

SPECIES IDENTIFICATION

SCIENTIFIC NAME	<i>Buchenavia oxycarpa</i> - Eichler
FAMILY	COMBRETACEAE
COMMERCIAL NAME	Yellow sanders
OTHER NAMES	Periquiteira (Brazil), Isulleja (Ecuador), Amarillo (Venezuela)
DISTRIBUTION AREA	Humid subtropical forests, Departments of Santa Cruz, Beni, Cochabamba and La Paz.
REGION AND FREQUENCY	Is considered an scarce species in Bolivian forests

TREE DESCRIPTION

TREETOP	Medium size, intense green color foliage, simple-alternate leaves.
TRUNK	With deformities; commercial heights up to 20 m
BARK	White color with green dots.

GENERAL CHARACTERISTICS

SAPWOOD COLOR	Pale yellow	HEARTHWOOD COLOR	Pale brown
ODOR	Indistinct	TASTE	Indistinct
LUSTER	Medium to bright	GRAIN	Straight to interlocked
STRIPED	Tenuous	TEXTURE	Fine

ANATOMIC DESCRIPTION

ANNUAL GROWTH RINGS

Visibility	Visible at sight	Average Number	18 rings in a radium of 10 cm
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PORES

Visibility	With magnifying glass 10 x	magnifying Porosity	Diffuse
Type	Solitaires and biserial	Shape	Round to oval; occluded

PARENCHYMA

Visibility	With magnifying glass 10 x	magnifying Quantity	Abundant
Type	Paratraqueal		

RADIUS

Visibility	With magnifying glass 10 x	magnifying Contrast	Absent
Stratification	Present		

PHYSICAL PROPERTIES

MOISTURE CONTENT (GREEN LUMBER)	44 %
BASIC DENSITY	0,77 g/cm ³
DENSITY (12% MOISTURE CONTENT)	0,93 g/cm ³
RADIAL SHRINKAGE	5,2 %
TANGENTIAL SHRINKAGE	10,2 %
VOLUMETRIC SHRINKAGE	15,2 %
RATE T/R	2

MECHANICAL RESISTANCE

MODULUS OF ELASTICITY	164 1000 Kg/cm ²
MODULUS OF RUPTURE	1355 Kg/cm ²
COMPRESSION PARALELL TO GRAIN	644 Kg/cm ²
QUARTEREDSAWED	133 Kg/cm ²
LATERAL HARDNESS	1417 Kg
IMPACT BENDING	3,52 Kg-m

TECHNNICAL CONDITIONS FOR PROCESSING

MACHINING	It is easier to work with green or humid wood.
PRESERVATION	Rather permeable
NATURAL DURABILITY	Durable, specially when not in contact with soil
DRYING	Air drying is quick, with minor defects.

END USES

Construction	Windows
Doors	Furniture

Source : MDSP, FAO PAF-BOL, IBAMA, LPF “Información Técnica para el Procesamiento Industrial de 134 especies maderables de Bolivia”. Serie Técnica XI. 2002. (Translated by Fernando Aguilar . Marketing - CADEFOR)

VIRARÓ

SPECIES IDENTIFICATION

SCIENTIFIC NAME	<i>Ruprechtia laxiflora</i> Meissner
FAMILY	POLIGONACEAE
COMMERCIAL NAME	
OTHER NAMES	
DISTRIBUTION AREA	Dry Forest in Chaco region, Department of Tarija
REGION AND FREQUENCY	
COMMERCIAL GROUP	

TREE DESCRIPTION

TREETOP	Regular shape, Intense green foliage, simple- alternate-petioled leaves.
TRUNK	Cylindrical and uniform; commercial heights up to de 20 m
BARK	Thin, dark gray color, irregular plaques.

GENERAL CHARACTERISTICS

SAPWOOD COLOR	Yellowish	HEARTHWOOD COLOR	Ligth brown
ODOR	Indistinct	TASTE	Indistinct
LUSTER		GRAIN	Straight to interlocked
STRIPED	Tenuous	TEXTURE	

ANATOMIC DESCRIPTION

ANNUAL GROWTH RINGS

Visibility	Visible at sight	Average Number	
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PORES

Visibility	With magnifying glass 10 x	magnifying Porosity	Diffuse
Type	Solitaries	Shape	

PARENCHYMA

Visibility		Quantity	Abundant
Type	Apotraqueal diffuse		

RADIUS

Visibility	With magnifying glass 10 x	magnifying Contrast	Present
Stratification	Absent		

PHYSICAL PROPERTIES

MOISTURE CONTENT (GREEN LUMBER)	%
BASIC DENSITY	0,57 g/cm ³
DENSITY (12% MOISTURE CONTENT)	0,7 g/cm ³
RADIAL SHRINKAGE	4,1 %
TANGENTIAL SHRINKAGE	9 %
VOLUMETRIC SHRINKAGE	13 %
RATE T/R	2,2

MECHANICAL RESISTANCE

MODULUS OF ELASTICITY	1000 Kg/cm ²
MODULUS OF RUPTURE	805 Kg/cm ²
COMPRESSION PARALELL TO GRAIN	492 Kg/cm ²
QUARTEREDSAWED	Kg/cm ²
LATERAL HARDNESS	682 Kg
IMPACT BENDING	Kg-m

TECHNNICAL CONDITIONS FOR PROCESSING

MACHINING	Easy machining. Good finishing
PRESERVATION	Permeable
NATURAL DURABILITY	Durable, specially when not in contact with soil
DRYING	

END USES

Doors and window frames	Furniture
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Source : MDSP, FAO PAF-BOL, IBAMA, LPF “Información Técnica para el Procesamiento Industrial de 134 especies maderables de Bolivia”. Serie Técnica XI. 2002. (Translated by Fernando Aguilar . Marketing - CADEFOR)

YESQUERO

SPECIES IDENTIFICATION

SCIENTIFIC NAME	<i>Cariniana estrelmagnifying glassis</i> (Raddi) O.Kuntze
FAMILY	LECYTHIDACEAE
COMMERCIAL NAME	Albarco, Jequitiba, Yesquero negro
OTHER NAMES	Jequitibá-rosa*, Estopeiro* (Brazil); Papelillo caspi, cachimbo caspi (Peru), Kai kay'gua (Paraguay); Abarco* (Colombia)
DISTRIBUTION AREA	Is found in forest ranging from very humid to humid tropical and subtropical. Departments of Beni, Cochabamba, La Paz, Pando and Santa Cruz.
REGION AND FREQUENCY	Frecuent in Bajo Paraguá, Guarayos, Choré, Amazonian foothills and Amazonia

TREE DESCRIPTION

TREETOP	Large size, intense green foliage, simple- alternate leaves
TRUNK	Conical and uniform ; commercial heights up to 30 m
BARK	Blackish color; corrugated; with large thin plaques

GENERAL CHARACTERISTICS

SAPWOOD COLOR	Light Pink	HEARTHWOOD COLOR	Pale Pink to ligh brown
ODOR	Similar to vanilla	TASTE	Indistinct
LUSTER	Medium	GRAIN	Straight to interlocked
STRIPED	Satined, superposed archs	TEXTURE	Medium

ANATOMIC DESCRIPTION

ANNUAL GROWTH RINGS

Visibility	Visible at sight	Average Number	14 rings in a radium of 10 cm
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PORES

Visibility	Visible at sight	Porosity	Diffuse
Type	Solitaries bi and and triserial	Shape	Oval, mostly occluded

PARENCHYMA

Visibility	Visible at sight	Quantity	Abundant
Type	Apotraqueal, arranged in fine strips		

RADIUS

Visibility	With magnifying glass 10 x	magnifying Contrast	Present
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Stratification	Absent
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PHYSICAL PROPERTIES

MOISTURE CONTENT (GREEN LUMBER)	69 %
BASIC DENSITY	0,56 g/cm ³
DENSITY (12% MOISTURE CONTENT)	0,68 g/cm ³
RADIAL SHRINKAGE	4,4 %
TANGENTIAL SHRINKAGE	7,2 %
VOLUMETRIC SHRINKAGE	11,5 %
RATE T/R	1,6

MECHANICAL RESISTANCE

MODULUS OF ELASTICITY	107 1000 Kg/cm ²
MODULUS OF RUPTURE	846 Kg/cm ²
COMPRESSION PARALELL TO GRAIN	514 Kg/cm ²
QUARTEREDSAWED	99 Kg/cm ²
LATERAL HARDNESS	735 Kg
IMPACT BENDING	2,97 Kg-m

TECHNNICAL CONDITIONS FOR PROCESSING

MACHINING	Easy machining . Good planing, moulding, sanding, boring, turning and finishing.* Medium blunting effect.*
PRESERVATION	Permeable
NATURAL DURABILITY	Durable, specially when not in soil contact
DRYING	Air drying is rather quick. Risks for twisting and curving*. A severe kiln schedule is recommended. T3-D2 and T3-D1 (USA)*

END USES

Construction	Furniture
Doors and Windows*	Decorative Veneer
Doors and window frames	Plywood*
Carpentry*	Flooring
Mouldings*	Panels*
Turnery*	Toys*
Tool handles*	Stairways*

Source 1: MDSP, FAO PAF-BOL, IBAMA, LPF “[Información Técnica para el Procesamiento Industrial de 134 especies maderables de Bolivia](#)”. Serie Técnica XI. 2002. (Translated by Fernando Aguilar . Marketing - CADEFOR)

(*) Source 2: CFB, PROMABOSQUE, BOLFOR, SCC, FAO PAF-BOL. [Bolivian Woods](#). 1999.

YESQUERO ROSA

SPECIES IDENTIFICATION

SCIENTIFIC NAME	<i>Cariniana brasiliensis</i> Casar.
FAMILY	LECYTHIDACEAE
COMMERCIAL NAME	Jequitibá rosa
OTHER NAMES	Jequitibá-vermelho (Brazil)
DISTRIBUTION AREA	
REGION AND FREQUENCY	

TREE DESCRIPTION

TREETOP

TRUNK

BARK

GENERAL CHARACTERISTICS

SAPWOOD COLOR	Beige to dark- Pinkish	HEARTHWOOD COLOR	Pink chesnut to beige Pink
ODOR	Indistinct	TASTE	Indistinct
LUSTER	Medium	GRAIN	Straight to interlocked
STRIPED	With brown shadows	TEXTURE	

ANATOMIC DESCRIPTION

ANNUAL GROWTH RINGS

Visibility		Average Number	
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PORES

Visibility	Visible at sight	Porosity	Diffuse
Type	Radial múltiple	Shape	

PARENCHYMA

Visibility	With magnifying glass 10 x	magnifying Quantity	
Type	Undulate fine lines		

RADIUS

Visibility	With magnifying glass 10 x	magnifying Contrast	Absent
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Stratification	Absent
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PHYSICAL PROPERTIES

MOISTURE CONTENT (GREEN LUMBER)	%
BASIC DENSITY	g/cm ³
DENSITY (12% MOISTURE CONTENT)	0,53 g/cm ³
RADIAL SHRINKAGE	3 %
TANGENTIAL SHRINKAGE	5,7 %
VOLUMETRIC SHRINKAGE	9,8 %
RATE T/R	1,9

MECHANICAL RESISTANCE

MODULUS OF ELASTICITY	110 1000 Kg/cm ²
MODULUS OF RUPTURE	900 Kg/cm ²
COMPRESSION PARALELL TO GRAIN	440 Kg/cm ²
QUARTEREDSAWED	90 Kg/cm ²
LATERAL HARDNESS	400 Kg
IMPACT BENDING	Kg-m

TECHNNICAL CONDITIONS FOR PROCESSING

MACHINING

PRESERVATION

NATURAL DURABILITY

DRYING

END USES

Flooring

Construction

Doors

Source : MDSP, FAO PAF-BOL, IBAMA, LPF “Información Técnica para el Procesamiento Industrial de 134 especies maderables de Bolivia”. Serie Técnica XI. 2002. (Translated by Fernando Aguilar . Marketing - CADEFOR)

YURUMA

SPECIES IDENTIFICATION

SCIENTIFIC NAME	<i>Rapanea laetevirens</i> Mez
FAMILY	MYRSINACEAE
COMMERCIAL NAME	Badula, Boisarrade, Canelón
OTHER NAMES	
DISTRIBUTION AREA	Temperate humid forests, Departments of Chuquisaca and Tarija
REGION AND FREQUENCY	

TREE DESCRIPTION

TREETOP	Narrow with simple leaves
TRUNK	Straight and cylindrical with commercial heights up to 20 m
BARK	Light gray color, smooth

GENERAL CHARACTERISTICS

SAPWOOD COLOR	Brown whitish	HEARTHWOOD COLOR	Brown whitish
ODOR	Indistinct	TASTE	Indistinct
LUSTER		GRAIN	Straight
STRIPED	Intense	TEXTURE	

ANATOMIC DESCRIPTION

ANNUAL GROWTH RINGS

Visibility	Average Number
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PORES

Visibility	Porosity	Diffuse
Type	Shape	
	Solitaires bi and and triserial	

PARENCHYMA

Visibility	Quantity	Scarce
	Scarcely visible with magnifying glass	
Type		
	Paratraqueal with centric vessels	

RADIUS

Visibility	Contrast	Present
	Visible at sight	
Stratification		
	Absent	

PHYSICAL PROPERTIES

MOISTURE CONTENT (GREEN LUMBER)	%
BASIC DENSITY	0,49 g/cm ³
DENSITY (12% MOISTURE CONTENT)	0,61 g/cm ³
RADIAL SHRINKAGE	3,7 %
TANGENTIAL SHRINKAGE	8,6 %
VOLUMETRIC SHRINKAGE	12 %
RATE T/R	2,3

MECHANICAL RESISTANCE

MODULUS OF ELASTICITY	1000 Kg/cm ²
MODULUS OF RUPTURE	730 Kg/cm ²
COMPRESSION PARALELL TO GRAIN	286 Kg/cm ²
QUARTEREDSAWED	Kg/cm ²
LATERAL HARDNESS	420 Kg
IMPACT BENDING	Kg-m

TECHNNICAL CONDITIONS FOR PROCESSING

MACHINING	Easy machining. Bad finishing.
PRESERVATION	Permeable
NATURAL DURABILITY	Low durability
DRYING	

END USES

Doors and window frames	Construccion
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Source : MDSP, FAO PAF-BOL, IBAMA, LPF “Información Técnica para el Procesamiento Industrial de 134 especies maderables de Bolivia”. Serie Técnica XI. 2002. (Translated by Fernando Aguilar . Marketing - CADEFOR)