



Designation: D7641 – 21

Standard Guide for Textile Fibers¹

This standard is issued under the fixed designation D7641; the number immediately following the designation indicates the year of original adoption or, in the case of revision, the year of last revision. A number in parentheses indicates the year of last reapproval. A superscript epsilon (ϵ) indicates an editorial change since the last revision or reapproval.

1. Scope

1.1 This guide lists fibers used to manufacture textile products.

1.2 Specific groups of fibers are identified using tables of standard classification.

1.2.1 Animal fibers are identified by commercial name, biological name, end use, and geographic source.

1.2.2 Vegetable fibers are identified by commercial name, botanical name, staple length or description, and geographic source.

1.2.3 Mineral fibers are identified by commercial name, mineralogical name, chemical description, and geographic source.

1.2.4 Manufactured fibers are identified by commercial name, generic name, and major component.

1.3 Major fiber types used for textile purposes are further classified.

1.3.1 Manufactured fibers are identified as having either an organic base or inorganic base.

1.3.2 Natural fibers are identified as having a cellulosic, protein, or mineral base.

1.4 A glossary of generic names and definitions for manufactured fibers is included as additional information.

1.5 *This international standard was developed in accordance with internationally recognized principles on standardization established in the Decision on Principles for the Development of International Standards, Guides and Recommendations issued by the World Trade Organization Technical Barriers to Trade (TBT) Committee.*

¹ This guide is under the jurisdiction of ASTM Committee D13 on Textiles and is the direct responsibility of Subcommittee D13.92 on Terminology.

Current edition approved Oct. 1, 2021. Published October 2021. Originally approved in 2010. Last previous edition approved in 2014 as D7641–10 (2014) ^{ϵ 1}. DOI: 10.1520/D7641-21.

2. Referenced Documents

2.1 *ASTM Standards*:²

D123 Terminology Relating to Textiles

2.2 *ISO Standards*:

ISO 2076:1999 (E) Textiles—Man-made Fibers—Generic Names

2.3 *Other Documents*:

Code of Federal Regulations, Title 16, Section 303.7

3. Terminology

3.1 *Definitions*:

3.1.1 *plastic, n—as related to textiles*, a polymer which can be combined with curatives, plasticizers, and fillers that can be molded under heat and pressure.

3.1.1.1 *Discussion—General* – One of a large group of organic compounds synthesized from cellular hydrocarbons, protein, and resins. The compounds are capable of being cast, extruded, or molded into various shapes.

Specific – Derivation from Greek “plastikos” which means “fit for molding”.

3.2 For definitions of textile terms used in the guide see Terminology D123.

4. Significance and Use

4.1 This guide is intended for use as a reference to improve the understanding of the relationship between commercial name, fiber identification and geographical regions of fiber origins that make up the composition of textile products.

4.2 This guide is intended to be used as a source of information only.

4.2.1 Detailed analysis, to verify specific data related to the composition of a particular fiber, may be necessary.

5. Animal (Protein Base) Fibers

5.1 See Table 1.

² For referenced ASTM standards, visit the ASTM website, www.astm.org, or contact ASTM Customer Service at service@astm.org. For *Annual Book of ASTM Standards* volume information, refer to the standard’s Document Summary page on the ASTM website.

TABLE 1 Animal (Protein-Base) Fibers

Commercial and Biological Name ^A	Use	Geographical Regions
ALPACA WOOL <i>Llama glama</i>	textiles	South America, North America

TABLE 1 *Continued*

	Commercial and Biological Name ^A	Use	Geographical Regions
American ring tail	<i>Bassariscus bacus astutus</i>	soft brushes	North America
Angora	See Rabbit, Angora, Mohair		
Badger	<i>Meles meles</i>	soft brushes	Asia, Europe
	<i>Camelus dromedarius</i>	textiles, soft	Asia
	<i>Camelus bactrianus</i>	textiles, coarse	Asia
CAMEL HAIR			
“Camel hair”	See Squirrel	soft brushes	Asia, North America
CASHMERE HAIR	<i>Capra hircus sp</i> (Goat)	textiles	Asia
Cattle hair	<i>Bos taurus</i>	upholstery	Asia, Europe
“Civet,” “Black Sable”	See Spotted Skunk		
“Fitch”	<i>Mephitis mephitis et al</i> (Skunk)	soft brushes	North America
Fox	<i>Vulpes fulva</i>	stuffing	North America, Europe
Genet	<i>Genetta</i>	soft brushes	Africa, Asia, Europe
Goat hair	<i>Capra sp</i>	soft brushes	Asia
Hog bristle	<i>Sus scrofa</i>	paint brushes	Asia, North America
Horse hair, body	<i>Equus caballus</i>	upholstery, felts	Asia, Europe, North America, South America
Horse hair, mane and tail	<i>Equus caballus</i>	upholstery	Asia, Europe
Kolinsky	See Sable, red		
LLAMA WOOL	<i>Llama glama</i>	textiles	South America
Mink	See Sable, red		
MOHAIR	<i>Capra hircus</i> (Angora goat)	textiles	Asia, Africa, North America
Muskrat, Northern	<i>Ondatra zibethicus</i>	textiles	North America, Russia
Muskrat, Southern	<i>Ondatra rivalicia</i>	textiles	North America
Ox hair, ear	<i>Bos taurus</i>	soft brushes	Asia, Europe, North America
Pony	<i>Equus caballus</i>	soft brushes, felts	Asia
RABBIT, COMMON	<i>Oryctolagus cuniculus</i>	fur felt	Australia, Europe, Asia, North America
RABBIT, ANGORA	<i>Oryctolagus cuniculus</i>	textiles	Europe, North America
Sable, red	<i>Mustela sibirica</i> (Kolinsky, China Mink, Jap Mink)	soft brushes, stuffing	Asia
SHEEP WOOL	<i>Ovis aries et al.</i>	textiles	all continents
Skunk	See “Fitch”		
Skunk, Spotted	<i>Spilogale sp</i>	soft brushes	North America
Squirrel	<i>Sciurus vulgaris et al.</i>	soft brushes	Asia, North America
SILK	<i>Bombyx mori</i>	textiles	Asia, Europe
SILK, TUSSAH	<i>Antheraea paphia et al.</i>	textiles	Asia
VICUNA WOOL	<i>Llama vicugna</i>	textiles	South America

^A The most common names are in capital letters; biological names are in italics.

6. Vegetable Fibers

6.1 See **Tables 2-4**.

TABLE 2 Vegetable Fibers: Seed and Fruit-Hair

NOTE 1—The physical origins and the botanical classifications in **Tables 2-4** were reviewed by the U.S. Department of Agriculture.

	Commercial and Botanical Name ^A	Staple Length, in.	Geographical Regions
Akund	<i>Calotropis gigantes</i>		Asia
	<i>Gossypium, various sp</i>		
COTTON	<i>Gossypium sp</i>		
1. American Upland	<i>Gossypium hirsutum</i>	¾ to 1 ⁷ / ₁₆	all continents
2. Asiatic cultivated			
a. Chinese	<i>Gossypium arboreum</i>	¾ to 1	China
b. Indian	<i>Gossypium arboreum</i>	¾ to 1	India
	<i>Gossypium herbaceum</i>		
c. Levantine	<i>Gossypium herbaceum</i>	½ to 1	Asia
3. Extra-long staple barbadenses:			
a. Egyptian	<i>Gossypium barbadense</i>	1 ¹ / ₈ to 1 ⁵ / ₈	Egypt, Sudan, Peru
b. American Egyptian	<i>Gossypium barbadense</i>	1 ³ / ₈ to 1 ¹ / ₂	United States
c. Sea Island	<i>Gossypium barbadense</i>	1 ¹ / ₂ to 2	West Indies
4. Medium staple, semi-rough barbadenses:			
a. Tanguis	<i>Gossypium barbadense</i>	1 ¹ / ₈ to 1 ¹ / ₄	Peru
b. Ishan	<i>Gossypium barbadense</i>	1 ¹ / ₈ to 1 ¹ / ₄	West Africa
c. Ashmouni (uppers)	<i>Gossypium barbadense</i>	1 ¹ / ₁₆ to 1 ¹ / ₈	Egypt
5. Short staple, rough barbadenses:			
a. Iquitos	<i>Gossypium barbadense</i>	1 to 1 ¹ / ₁₆	Peru
b. Lengupa	<i>Gossypium barbadense</i>	1 ⁵ / ₁₆ to 1 ¹ / ₁₆	Colombia
6. Perennial tree cottons:			
a. West Indian	<i>Gossypium hirsutum var Marie-Galante</i>	1 ¹ / ₈ to 1 ³ / ₈	West Indies
b. Sertao and Serido	<i>Gossypium hirsutum var Marie-Galante</i>	1 ¹ / ₈ to 1 ³ / ₈	Brazil
KAPOK	<i>Ceiba pentandra</i>	¾ to ¼	Tropics
Milkweed Floss	<i>Asclepias various sp</i>	¾ to ¼	North America
Ozone fiber	<i>Asclepias sp incarnata</i>		United States
Pochote	<i>Ceiba aesculifolia</i>		Mexico

TABLE 2 *Continued*

Commercial and Botanical Name ^A	Staple Length, in.	Geographical Regions
Samchu <i>Chorisia specios</i>		South America

^A Preferred or most common names are in capital letters; botanical names are in italics. The abbreviation *sp* is for the word “species,” the subdivisions of a genus.

TABLE 3 Vegetable Fibers: Bast and Leaf

Commercial and Botanical Name ^A	Description	Geographical Regions
ABACA <i>Musa textilis</i> Neé	hard leaf fiber	Philippine Islands, Central America, Borneo, Sumatra
<i>Abutilon avcennae</i> Gaertn	See <i>Abutilon theophrasti</i> Medic medii	
<i>Abutilon longicuspe</i>	Zada buack	coarse bast fiber
<i>Abutilon periplocifolium</i>	Maholtine	coarse bast fiber
<i>Abutilon theophrasti</i> Sweet Medic medii	CHINESE JUTE	coarse bast fiber
<i>Aechmea magdalenae</i> André	<i>Pita floja</i>	China Central and South America
AFRICAN SISAL <i>Agave sisalana</i> , Perrine & Engelm	hard leaf fiber	
<i>Agave cantala</i> Roxb	CANTALA	hard leaf fiber
<i>Agave cocui</i> Trel	Dispopo	coarse leaf fiber
<i>Agave hexapetala</i> Jacq	Cocuiza	coarse leaf fiber
<i>Agave deweyana</i> Trel	Zapupe larga	hard leaf fiber
<i>Agave falcata</i> Engelm	Guapilla	hard leaf fiber
<i>Agave fourcroydes</i> Lem	HENEQUEN	coarse leaf fiber
<i>Agave funkiana</i> Koch & Bouché	JAUMAVE ISTLE	hard leaf fiber
<i>Agave lespinassei</i> Trel	Zapupe fuerte	hard leaf fiber
<i>Agave letonae</i> F. W. Taylor	SALVADOR SISAL	coarse leaf fiber
<i>Agave lophanta</i> var. <i>poselgeri</i> (Salm-Dyck) Berger	TULA ISTLE	hard leaf fiber
<i>Agave pesa-mulae</i> Trel	Pata de mula, pie de mula	hard leaf fiber
<i>Agave pseudotequilana</i> Trel	Mescal	hard leaf fiber
<i>Agave sisalana</i> Perrine & Engelm	SISAL	hard leaf fiber
<i>Agave striata</i> Zucc	Espandinin	hard leaf fiber
<i>Agave tequilana</i> Weber	MESCAL	hard leaf fiber
<i>Agave zapupe</i> Trel	ZAPUPE	hard leaf fiber
Ake-ire	<i>Urenia lobata</i> Cav	bast fiber
Aloes creole		
Aloes fiber		
Aloes malgache	See <i>Furcraea gigantea</i> Vent true aloe is not a fiber plant	
Ambari	<i>Hibiscus cannabinus</i> L	coarse bast fiber
<i>Ananas comosus</i> L. (Merr)	PINEAPPLE FIBER	fine leaf fiber
<i>Apocynum</i> sp	Kendyr	soft bast fiber
Aramina	<i>Urena lobata</i> Cav	bast fiber
Arghan	<i>Aechmea magdalenae</i> André	
<i>Asclepias incurmata</i> L	Swamp milk weed	soft bast fiber
Awasthe hemp	<i>Hibiscus cannabinus</i> L (not hemp)	bast fiber
Bamia	<i>Urena lobata</i> Cav	
BANANA	<i>Musa sapientum</i> L	leaf fiber
Banana yucca	<i>Yucca mohavensis</i> Sarg	
Ban ochra	<i>Urena lobata</i> Cav	
Bariala	<i>Sida micrantha</i> Schrank	
Barreta	<i>Samuela carnerosana</i> Trel	
BEAR GRASS	<i>Nolina</i> sp, <i>Yucca</i> sp	
Benares hemp	<i>Crotalaria juncea</i> L (not hemp)	
Benares sunn	<i>Crotalaria</i>	
<i>Billbergia infuscata</i> ^B	Infuscata	soft leaf fiber
Bimli jute		South America
Bimli patam }	<i>Hibiscus cannabinus</i> L (not jute)	
<i>Boehmeria nivea</i> (L) Gaud	RAMIE, China grass	soft bast fiber
Bolo-bolo	<i>Urena lobata</i> Cav	
Bombay aloe	<i>Furcraea gigantea</i> Vent (not true aloe)	
Bombay hemp	<i>Crotalaria juncea</i> L (not hemp)	
Bowstring hemp	<i>Sansevieria</i> sp (not hemp)	
Brazilian jute	<i>Corchorus</i> sp (<i>Hibiscus</i> and <i>Urena</i> are not jute)	
<i>Bromelia magdalenae</i>	See <i>Aechmea magdalenae</i> André	
<i>Bromelia karatas</i> L	Gravata	soft leaf fiber
<i>Bromelia laciniosa</i> Mart & Schult	Macambira	soft leaf fiber
<i>Bromelia longissima</i>	<i>Aechmea magdalenae</i> André	soft leaf fiber
<i>Bromelia sagenaria</i>	<i>Pseudaranus sagenarius</i> (Arruda) Camargo	soft leaf fiber
Broom fiber	<i>Cystisus scoparius</i> (L) Link, and/or <i>Spartium junceum</i> L	soft leaf fiber
Brown hemp	<i>Crotalaria juncea</i> L (not hemp)	
Cabulla	<i>Furcraea cabuya</i> Trel	
Cabuya	<i>Furcraea cabuya</i> Trel	

TABLE 3 *Continued*

Commercial and Botanical Name ^A	Description	Geographical Regions
Cabuya blanca		
Cabuya blanco		
Cabuya sin espina	<i>F. cabuya</i> var. <i>integra</i> Trel	
Cadillo		
Caesar weed }	<i>Urena lobata</i> Cav	
<i>Calotropis gigantea</i> Dry & Ait	Akund	
Canamo		
Canamo }	Spanish word for hemp	
Candilla		
Candillo }	<i>Urena lobata</i> Cav	
Canhamo	<i>Urena lobata</i> Cav	
<i>Cannabis sativa</i> L	HEMP	soft bast fiber all temperate zones
CANTALA	<i>Agave cantala</i> Roxb; differs from maguey in retting	
CAROA, <i>Carua</i>	<i>Neoglaziova variegata</i> Mez	
Carrapicho	<i>Urena lobata</i> Cav	
Cebu hemp	<i>Musa textilis</i> Née (not hemp)	
CEBU MAGUEY	<i>Agave cantala</i> Roxb (retted differently from Cantala)	
<i>Cephalonema</i> sp	Punga	bast fiber Belgian Congo
Chanvre	French word for hemp	
Chaparral yucca	<i>Hesperoyucca whipplei</i> (Torr) Trel	
China grass	<i>Boehmeria nivea</i> (L) Gaud	
CHINESE JUTE	<i>Abutilon theophrasti</i> Medic Medii	
Chingma	<i>Abutilon theophrasti</i> Medic	
Chino azul	<i>Agave tequilana</i> Weber	
Chino bermejo	<i>Agave palmaris</i> Trel	
Chique-chique	<i>Leopoldinia piassaba</i> Wallace & Archer	
Chuchao	<i>Furcraea andina</i> Trel	
Coconada hemp	<i>Crotalaria juncea</i> L (not hemp)	
Cocuiza	<i>Furcraea humboldtiana</i> Trel <i>F. hexapetala</i> , (Jacq) Urb	
Cocuiza mansa	<i>Furcraea gigantea</i> Vent	
CONGO JUTE	<i>Urena lobata</i> Cav (not jute)	bast fiber Belgian Congo, Brazil, Argentina, Venezuela, Cuba
<i>Corchorus capsularis</i> L	JUTE (white jute)	soft bast fiber Pakistan, India
<i>Corchorus olitorius</i> L	TOSSA, DAISEE (jutes)	soft bast fiber Pakistan, India
Cousin rouge	<i>Urena lobata</i> Cav	
<i>Crotalaria juncea</i> L	SUNN (not hemp)	hard bast fiber India
Cuban jute	<i>Urena</i> sp. <i>Malva</i> sp <i>Sida</i> sp (not jute)	
Cuban sisal	<i>Agave fourcroydes</i> Lem	
Culut culutan	<i>Urena lobata</i> Cav	
<i>Cytisus scuparius</i> (L) Link	Broom fiber, Spanish broom	soft bast fiber Italy, Spain
Da	<i>Hibiscus cannabinus</i> L	
DAISEE JUTE	<i>Corchorus olitorius</i> L	
Davao hemp	<i>Musa textiles</i> Née (not hemp)	
Deccan hemp	<i>Hibiscus cannabinus</i> (not hemp)	
Dha	<i>Hibiscus cannabinus</i> L	
Dispopo	<i>Agave cocui</i> Trel	
Ensete edulis (Gmel) Horan	<i>Musa ensete</i> Gmel	
Escobilla	<i>Sida</i> sp	
Espadinum	<i>Agave striata</i> Zucc	
FIQUE	<i>Furcraea macrophylla</i> Baker	
Flax	<i>Linum usitatissimum</i> L	soft bast fiber Argentina, Australia, Belarus, Belgium, Brazil, Bulgaria, Canada, Chile, China, Czech Republic, Egypt, Estonia, France, Germany, Hungary, India, Ireland, Italy, Latvia, Lithuania, Netherlands, New Zealand, Poland, Romania, Russia, Ukraine, United States, Yugoslavia
FORMIO	<i>Phormium tenax</i> Forst	
French hemp	<i>Cannabis sativa</i> L	
<i>Furcraea andina</i> Trel	Chuchao	hard leaf fiber Ecuador
<i>Furcraea cabuya</i> Trel	Cabuya	hard leaf fiber Central America
<i>Furcraea cubensis</i>	Cabulla	hard leaf fiber Haiti, Cuba, Venezuela, Dominican Republic
<i>Furcraea geminispina</i> Jacobi	Cocuiza	Venezuela
<i>Furcraea gigantea</i> Vent	Piteira, cocuiza mansa	hard leaf fiber Mauritius, Venezuela, Brazil, Tropics
<i>Furcraea hexapetala</i> (Jacq) Urb	<i>Furcraea cubensis</i>	hard leaf fiber Haiti, Cuba, Venezuela, Dominican Republic
<i>Furcraea humboldtiana</i> Trel	Cocuiza	Venezuela
<i>Furcraea macrophylla</i> Baker	FIQUE	Colombia
Galla	<i>Musa ensete</i> - <i>Ensete edulis</i> (Gmel) Horan	
Gambo hemp	<i>Hibiscus cannabinus</i> L (not hemp)	
Gombo hemp	<i>Hibiscus cannabinus</i> L (not hemp)	

TABLE 3 *Continued*

Commercial and Botanical Name ^A	Description	Geographical Regions
Grand cousin	<i>Urena lobata</i> Cav	
Grand mahot cousin	<i>Urena lobata</i> Cav	
Gravata	<i>Bromelia Karatus</i> L	
Guapilla	<i>Agave falcata</i> Engelm	
GUAXIMA	<i>Urena lobata</i> Cav	
Guaxima roxa	<i>Urena lobata</i> Cav	
Guaxima vermehla	<i>Urena lobata</i> Cav	
Guiazo	<i>Urena lobata</i> Cav	
HAITIAN SISAL	<i>Agave sisalana</i> Perrine & Engelm	
Hanf	German word for hemp	Austria, Bulgaria, Chile, China, Germany, Hungary, Italy, Poland, Romania, Russia, Syria, United States, Yugoslavia
HEMP	<i>Cannabis sativa</i> L	
HENEQUEN	<i>Agave fourcroydes</i> Lem	
Hennup	Dutch word for hemp	
<i>Hesperaloe funifera</i> (Koch) Trel	ZAMANDOQUE	hard leaf fiber Mexico
<i>Hesperoyucca whipplei</i> (Torr) Trel	YUCCA	hard leaf fiber United States
<i>Hibiscus cannabinus</i> L	KENAF, MESHTA, Ambari, Bimlipatam, Awasthe, Deccan, Dha, Gambo	bast fiber Russia, Persia, India, South America, United States, Cuba
<i>Hibiscus abelmoschus</i> L	Musk hemp	soft bast fiber India
<i>Hibiscus esculentus</i> L	Ochra	soft bast fiber United States
<i>Hibiscus ferax</i> Hook	MESHTA	soft bast fiber India, Brazil
<i>Hibiscus kitaibelifolius</i> St Hil	Juta paulista	soft bast fiber Brazil
<i>Hibiscus radiatus</i> ^C	Papoula de St Francis	soft bast fiber Brazil
<i>Hibiscus sabdariffa</i> L	ROSELLA	soft bast fiber Java, Brazil
Ife hemp		
Ifé	<i>Sansevieria</i> sp (not hemp)	
Indian hemp (United States)	<i>Apocynum cannabinum</i> L (not hemp)	
Indian hemp (India)	Several unrelated plants (not hemp)	
	<i>Crotalaria</i> sp and <i>Hibiscus</i> sp (Examples are Ambari, Benares hemp, Itarsi, Sunn)	
Infuscata	<i>Billbergia infuscata</i> ^B	
ISTLE	Several <i>Agave</i> sp (word is a generic Mexican term)	
IXTLE }		
Istle Jaumave	<i>Agave funkiana</i> Koch & Bouché	
Istle, Palma	<i>Samuela carerosana</i> Trel	
Istle Pita	<i>Yucca treculeana</i> Carr	
Istle Tula	<i>Agave lophanta</i> var <i>poselgeri</i> (Salm-Dyck) Berger	
Itarsi hemp	<i>Crotalaria juncea</i> L (not hemp)	
Ixtli	<i>Hesperaloe funifera</i> (Koch) Trel	
JAUMAVE ISTLE		
Jaumave		
Jaumave lechiguilla	<i>Agave funkiana</i> Koch & Bouché	
JAVA CANTALA	<i>Agave cantala</i> Roxb different retting from maguey	
Java jute	<i>Hibiscus sabdariffa</i> L (not jute)	
JAVA SISAL	<i>Agave sisalana</i> Perrine & Engelm	
Jirica	<i>Nolina</i> sp	
Jubblepore hemp	<i>Crotalaria juncea</i> L (not hemp)	
Juta paulista	<i>Hibiscus kitaibali folius</i> St Hil	
JUTE	<i>Corchorus capsularis</i> L and <i>Corchorus olitorius</i> L	
KENAF	<i>Hibiscus cannabinus</i> L	
Kendyr	<i>Apocynum</i> sp	
KENTUCKY HEMP	<i>Cannabis sativa</i> L	
Lechuguilla (Tula istle)	<i>Agave lophanta</i> var <i>poselgeri</i> (Salm-Dyck) Berger	
Letona	<i>Agave letonae</i> F. W. Taylor	
Linen	See Flax	
Luffa gourd	<i>Linum usitatissimum</i> L	
Luffa	<i>Luffa</i> sp	
Loofah		
Macambira	<i>Bromelia laciniosa</i> Mart & Schultz L	
Madagascar bass	<i>Vonitra</i> sp	
Madras hemp	<i>Crotalaria juncea</i> L (not hemp)	
Maguey	Latin American term applied to many species of <i>Agave</i>	
MAGUEY (CEBU)	<i>Agave cantala</i> Roxb	
Maguey (Peru)	<i>Furcraea macrophylla</i> Baker	
Maguey (Cuba)	<i>Furcraea hexapetalla</i> (Jacq) Urb	

TABLE 3 *Continued*

Commercial and Botanical Name ^A	Description	Geographical Regions
Maholtine	<i>Abutilon periplocifolium</i> Sweet	
Malva	Latin American term applied to several <i>Malvaceae</i>	
MALVA	<i>Sida micrantha</i> Schrank	
Malva blanca	<i>Urena lobata</i> Cav	
Malva listro		
Malva risco }	<i>Sida micrantha</i> Schrank	
Malva roxa	<i>Urena lobata</i> Cav	
Malva velluda	<i>Malache malacophylla</i> (Néc & Mart) Stand	
Malvas	<i>Urena lobata</i> Cav	
Manila	<i>Musa textilis</i> Née (not hemp)	
Manila hemp	<i>Musa textilis</i> Née (not hemp)	
Manila maguey	<i>Agave cantala</i> Roxb	
Mano largo	<i>Agave palmaris</i> Trel	
Mauritius hemp	<i>Furcraea gigantea</i> Weber (not hemp)	
Mazatlan hemp	<i>Agave tequilana</i> Weber (not hemp)	
MESCAL	Fibre mixture, <i>Agave sp</i>	
Mescal maguey	<i>Agave tequilana</i> Weber	
MESHTA	<i>Hibiscus cananbinus</i> L H <i>ferax</i> Hook	soft bast fiber India
Mexican sisal	<i>Agar fourcroydes</i> Lem	
Milkweed fiber	<i>Asclepias sp</i> (bast)	bast fiber, also (see Sec. I) seed hair
Moorva	<i>Sansevieria sp</i>	
Musk hemp	<i>Hibiscus abelmoschus</i> L (not hemp)	
<i>Musa ensete</i> Gmel	<i>Ensete edulis</i> (Gmel) Horan	coarse leaf fiber Ethiopia
<i>Musa sapientum</i> L	Banana fiber	coarse leaf fiber Tropics
<i>Musa textilis</i> Née	ABACA, manila	coarse leaf fiber Philippine Islands, Borneo, Sumatra
Nanas sabrong	<i>Agave cantala</i> , Roxb	
Natal hemp	<i>Furcraea gigantea</i> Vent (not hemp)	
<i>Neoglaziovia variegata</i> Mez	CAROA caraua	hard leaf fiber Brazil
New Zealand flax	<i>Phormium tenax</i> Forst phormium or formio	
New Zealand hemp }	(not flax or hemp)	
<i>Nolina sp</i>	BEAR GRASS	hard leaf fiber Southwest United States, Mexico
Ochra	<i>Hibiscus esculentus</i> L	
Olona	<i>Touchar dia latifolia</i> Gaud	
Ototo grande	<i>Urena lobata</i> Cav	
Paka	<i>Urena lobata</i> Cav	
Palma	<i>Samuela carnerosana</i> Trel	
Palma barreta	<i>Samuela carnerosana</i> Trel	
PALMA ISTLE }		
Palmilla	<i>Yucca elata</i> Engelm	
Palmyra	<i>Borassus flabellifer</i> L	
Panama hat palm	<i>Carludovica palmata</i> R & P (not a palm)	
Pangane	<i>Sansevierid Kirkii</i> Bak (not hemp)	
Pangane hemp		
Papoula de St Francis	<i>Hibiscus ferax</i> Hook	
Pata de mula	<i>Agave pes-mulae</i> Trel	
Pavonia malacophylla Wright		
Pavonia schimperiana Hochst & A. Rich		
Pavonia tomentosa Hochst & A. Rich	<i>Malva relludo</i> UACIMA	bast fiber Brazil
Phillibit black hemp	<i>Crotalaria juncea</i> L (<i>C tenuifolia</i> Roxb) (not hemp)	
Philippine maguey	<i>Agave cantala</i> Roxb	
PHORMIUM	<i>Phormium tenax</i> Forst	
<i>Phormium tenax</i> Forst	PHORMIUM	hard leaf fiber Argentina, Chile, New Zealand, St. Helena
Pie de mula	<i>Agave pes-mulae</i> Trel	
Pineapple fibre (pina)	<i>Ananas comosus</i> (L) Merr	
Pineapple (wild)	<i>Aechmea magdalenae</i> André	
Pita	Latin-American name for many different hard fibers	
Pita floya (floia)	<i>Aechmea magdalenae</i> André	
PITA ISTLE	<i>Yucca treculeana</i> Carr	
Pita palma }		
PITEIRA	<i>Furcraea gigantea</i> Vent	
Pitre (peetray)	<i>Furcraea hexapetala</i> (Jacq) Urb	
POEPOES	<i>Agave cantala</i> Roxb	
Polompom	<i>Thespesia lampas</i> Dalz & Dalz & Gibs	
Pochote	<i>Ceiba aesculifolia</i> (H.B.K.) Britt & F. G. Bak	
Pseudananas sagenarius (Arruda)		
Camargo	<i>Bromelia sagenaria</i>	soft leaf fiber Brazil
Punga	<i>Cephalonema sp</i>	bast fiber Belgian Congo
Queensland hemp	<i>Sida rhombifolia</i> L (not hemp)	
RAMIE	<i>Boehmeria nivea</i> L Gaud	

TABLE 3 *Continued*

Commercial and Botanical Name ^A	Description	Geographical Regions
RATTAN	<i>Calamus</i> sp	
Rhea	<i>Boehmeria nivea</i> L Gaud	
ROSELLE, rosella	<i>Hibiscus sabdariffa</i> L	
Samandoca	<i>Hesperaloe funifera</i> (Koch) Trel	
<i>Samuela carnerosana</i> Trel	PALMA ISTLE	leaf fiber
Salvador henequen	<i>Agave letonae</i> F. W. Taylor	Mexico
SAN SALVADOR SISAL }		
<i>Sansevieria cylindrica</i> Boj	Ifé	hard leaf fiber
<i>Sansevieria Kirkii</i> Bak	Pangane	hard leaf fiber
<i>Sansevieria sp</i>	Bowstring hemp (not hemp)	hard leaf fiber
SANSEVIERIA	<i>Sansevieria sp</i>	hard leaf fiber
<i>Sansevieria trifasciata</i> Prain		hard leaf fiber
Scaahuista	<i>Nolina</i> sp	
Scioa	<i>Ensete edulis</i> (Gmel) Horan	
Seonie hemp	<i>Crotalaria juncea</i> L (not hemp)	
<i>Sida micrantha</i> Schrank	Escobilla	soft bast fiber
Sidamo	<i>Ensete edulis</i> (Gmel) Horan	India, Australia, Brazil
<i>Sida rhombifolia</i> L	Queensland hemp (not hemp)	Australia
Silk grass	<i>Aechmea magdalena</i> André	
SISAL	<i>Agave sisalana</i> Perrine & Engelm	
Sisal weisz	<i>Agave fourcroydes</i> Lem	
Soap weed	<i>Yucca glauca</i> Nutt	
Soft leaf fiber	<i>Pseudananas sagenarius</i> (Arruda) Camargo	
SOUDAN SISAL	<i>Agave sisalana</i> Perrine & Engelm	
Spanish broom	<i>Cytisus scoparius</i> (L) Link	
<i>Spartium junceum</i> L	Brom fibre	Southern Europe
Spanish dagger	<i>Yucca macro carpa</i> (Torr) Coville	
St Francis poppy	<i>Hibiscus ferax</i> Hook	
St Helena hemp	<i>Phormium tenax</i> Forst (not hemp)	
SUNN	<i>Crotalaria juncea</i> L	
Swamp milkweed	<i>Asclepias inca nata</i> L	
TAMPICO	<i>Agave funkiana</i> Koch & Bouché, and A. <i>lophantha</i> var <i>poselgeri</i> (Salm-Dyck) Berger	
TEQUILA	<i>Agave tequilana</i> Weber	
<i>Thespesia lampas</i> Dalz & Dalz & Gibs	Polom pom	soft bast fiber
<i>Thespesia populnea</i> Sol.& Correa		Indochina
Tientsin jute	<i>Abutilon theophrasti</i> Medic Medii (not jute)	
Toja	<i>Urena lobata</i> Cav	
TOSSA	<i>Corchorus olitorius</i> L	
<i>Touchardia latifolia</i> Gaud	Olona	soft bast fiber
TULA ISTLE	<i>Agave lophantha</i> var <i>poselgeri</i> (Salm-Dyck) Berger	Hawaii
Uacima	<i>Urenal lobata</i> Cav	
Uaixima		
<i>Urena lobata</i> Cav	CONGO JUTE, GUAXIMA	Belgian Congo, Venezuela, Brazil, United States, Cuba, Argentina
<i>Urena sinuata</i> Wedd	Cuban jute, Kunjia	Cuba, Bengal
<i>Urtica nivea</i> L	RAMIE, <i>Boehmeria nivea</i> (L.) Gaud	China
Victoria sisal	<i>Agave fourcroydes</i> Lem	
Warangel hemp	<i>Crotalaria juncea</i> L (not hemp)	
Yacci	<i>Agave sisalana</i> Perrine & Engelm	
Yaxi		
Yucatan sisal	<i>Agave fourcroydes</i> Lem	
YUCCA ^D		hard leaf fiber
<i>Yucca angustifolia</i> ^E	BEAR GRASS, soap weed	
<i>Yucca glauca</i> Nutt	BEAR GRASS, soap weed	
<i>Yucca treculena</i> Carr	PITA ISTLE	
<i>Yucca</i> ^D		
Zada buack	<i>Abutilon longicuspe</i> Hochst & A. Rich	
Zamandoque	<i>Hesperaloe funifera</i> (Koch) Trel	
ZAPUPE ^E	<i>Agave zapupe</i> Trel	

^A Preferred or most common names are in capital letters; botanical names are in italics. The abbreviation *sp* is for the word "species," the subdivisions of a genus.

^B Not found in botanical literature.

^C Authority cannot be determined.

^D Many *Yucca* species yield fiber; the principal ones are included in this table.

^E Many *Agave* species yield fiber known as zapupe.