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Species of tree in the soapberry family Sapindaceae "Horse-chestnut" redirects here. For other uses, see Horse chestnut (disambiguation). Aesculus hippocastanum Botanical illustration (1885) Conservation status Vulnerable (IUCN 3.1)[1] Scientific classification Kingdom: Plantae Clade: Tracheophytes Clade: Angiosperms Clade: Eudicots Clade
Rosids Order: Sapindales Family: Sapindaceae Genus: Aesculus Species: A. hippocastanum, the horse chestnut,[1][2][3] is a species of flowering plant in the maple, soapberry and lychee family Sapindaceae. It is a large, deciduous, synoecious (hermaphroditic-flowered) tree.[4] It is
also called horse-chestnut,[5] European horsechestnut,[6] buckeye,[7] and conker tree.[8] It is not to be confused with the sweet chestnut or Spanish chestnut, Castanea sativa, which is a tree in another family, Fagaceae.[9]:371 Aesculus hippocastanum is a large tree, growing to about 39 metres (128 ft) tall[9] with a domed crown of stout branches.
On old trees, the outer branches are often pendulous with curled-up tips. The leaves are opposite and palmately compound, with 5-7 leaflets 13-30 cm (3-8 in) petiole. The leaf scars left on twigs after the leaves have fallen have a distinctive horseshoe shape, complete
with seven "nails". The flowers are usually white with a yellow to pink blotch at the base of the petals; [9] they are produced in spring in erect panicles 10-30 cm (4-12 in) tall with about 20-50 flowers on each panicle. The shell is a green, spiky capsule
containing one (rarely two or three) nut-like seeds called conkers or horse-chestnuts. Each conker is 2-4 cm (3/4-1+1/2 in) in diameter, glossy nut-brown with a whitish scar at the base.[11] Inflorescence Floral diagram of A. hippocastanum. The light green structure denotes nectary. Floral formula: \( \subseteq K5 C2:2 A5+2 G(3) \). The common name horse
chestnut originates from the similarity of the leaves and fruits to sweet chestnuts, Castanea sativa (a tree in a different family, the Fagaceae),[9] together with the alleged observation that the fruit or seeds could help panting or coughing horses.[12][13] Although it is sometimes known as buckeye,[7] for the resemblance of the seed to a deer's eye, the
term buckeye is more commonly used for New World members of the genus Aesculus.[14] The native distribution of Aesculus hippocastanum given by different sources varies. As of March 2023[update], Plants of the World Online considered it to be native to the Balkans (Albania, Bulgaria, Greece and former Yugoslavia), but also to Turkey and
Turkmenistan.[15] A 2017 assessment for the IUCN Red List restricted the native distribution to the Balkan area: Albania, Bulgaria, mainland Greece and North Macedonia.[1] It has been introduced and planted around the world. It can be found in many parts of Europe as far north as Harstad north of the Arctic Circle in Norway,[16] and Gästrikland
in Sweden as well as in many parks and cities around the northern United States and Canada such as Edmonton in Canada.[17] The compact native population of horse chestnut forests of northern Wacedonia and Albania. It is limited to an area of 9 ha in the Preslav Mountain north
of the Balkan Mountains, in the valleys of the Dervishka and Lazarska rivers. Bulgaria's relict horse chestnut forests are critically endangered at the national level and protected as part of the Dervishka and Lazarska rivers. Bulgaria's relict horse chestnut forests are critically endangered at the national level and protected as part of the Dervishka and Lazarska rivers.
places like Ireland, Great Britain and New Zealand, where they are commonly found in parks, streets and avenues. Cultivation for its spectacular spring flowers is successful in a wide range of temperate climatic conditions provided summers are not too hot, with trees being grown as far north as Edmonton, Alberta, Canada, [19] the Faroe Islands, [20]
 Reykjavík, Iceland and Harstad, Norway. In Britain and Ireland, the seeds are used for the popular children's game conkers. During the First World War, there was a campaign to ask for everyone (including children) to collect the seeds and donate them to the government. The conkers were used as a source of starch for fermentation using the
Clostridium acetobutylicum method devised by Chaim Weizmann to produce acetone for use as a solvent for the production of cordite, which was then used in military armaments. Weizmann's process could use any source of starch, but the government chose to ask for conkers to avoid causing starvation by depleting food sources. But conkers were
found to be a poor source, and the factory only produced acetone for three months; however, they were collected again in the Second World War for the same reason. [21] A selection of fresh conkers The seeds, especially those that are young and fresh, are slightly poisonous, containing alkaloid saponins and glucosides. Although not dangerous to
touch, they cause sickness when eaten; consumed by horses, they can cause tremors and lack of coordination.[22] The horse-chestnut is a favourite subject for bonsai.[23] Though the seeds are said to repel spiders there is little evidence to support these claims. The presence of saponin may repel insects but it is not clear whether this is effective on
spiders.[24] Aesculus hippocastanum is affected by the leaf-mining moth Cameraria ohridella, whose larvae feed on horse chestnut leaves. The moth was described from North Macedonia where the species was discovered in 1984 but took 18 years to reach Britain.[25] In Germany, they are commonly planted in beer gardens, particularly in Bavaria.
Prior to the advent of mechanical refrigeration, brewers would dig cellars from the summer heat, they would plant horse chestnut trees, which have spreading, dense canopies but shallow roots which would not intrude on the caverns. The practice of serving beer at these sites evolved into the modern beer
garden.[26] An inexpensive detergent for washing clothes can be made at home from conkers, and this is said to be an environmentally benign ('eco-friendly') detergent.[27] Aescin The seed extract standardized to around 20 percent aescin (escin) is possibly useful in traditional medicine for its effect on venous tone.[28][29] A Cochrane Review
suggested that horse chestnut seed extract may be an efficacious and safe short-term treatment for chronic venous insufficiency, but definitive randomized controlled trials had not been conducted to confirm the efficacy. [30] Remainders of horse chestnut flower spikes found on the ground below. The chestnuts themselves have separated with their
burs from the small branches shown. Remainders of two horse chestnut flower spikes - one 27 cm long - with two chestnuts flower spikes - one 27 cm long - with two chestnuts flower spikes - one 27 cm long - with two chestnuts flower spikes - one 27 cm long - with two chestnuts flower spikes - one 27 cm long - with two chestnuts flower spikes - one 27 cm long - with two chestnuts flower spikes - one 27 cm long - with two chestnuts flower spikes - one 27 cm long - with two chestnuts flower spikes - one 27 cm long - with two chestnuts flower spikes - one 27 cm long - with two chestnuts flower spikes - one 27 cm long - with two chestnuts flower spikes - one 27 cm long - with two chestnuts flower spikes - one 27 cm long - with two chestnuts flower spikes - one 27 cm long - with two chestnuts flower spikes - one 27 cm long - with two chestnuts flower spikes - one 27 cm long - with two chestnuts flower spikes - one 27 cm long - with two chestnuts flower spikes - one 27 cm long - with two chestnuts flower spikes - one 27 cm long - with two chestnuts flower spikes - one 27 cm long - with two chestnuts flower spikes - one 27 cm long - with two chestnuts flower spikes - one 27 cm long - with two chestnuts flower spikes - one 27 cm long - with two chestnuts flower spikes - one 27 cm long - with two chestnuts flower spikes - one 27 cm long - with two chestnuts flower spikes - one 27 cm long - with two chestnuts flower spikes - one 27 cm long - with two chestnuts flower spikes - one 27 cm long - with two chestnuts flower spikes - one 27 cm long - with two chestnuts flower spikes - one 27 cm long - with two chestnuts flower spikes - one 27 cm long - with two chestnuts flower spikes - one 27 cm long - with two chestnuts flower spikes - one 27 cm long - with two chestnuts flower spikes - one 27 cm long - with two chestnuts flower spikes - one 27 cm long - with two chestnuts flower spikes - one 27 cm long - with two chestnuts flower spikes - one 27 cm long - with two chestnuts flower spikes - one 27 cm long - with two chestnuts f
high doses of horse chestnut extract i.v. for postoperative oedema. The phenomenon was dose dependent as no alteration in kidney function impairment developed with 340 µg/kg and acute kidney function was recorded with 340 µg/kg, mild kidney function impairment developed with 360 µg/kg and acute kidney function in ki
presence of aesculin and should not be ingested. Horse chestnut seed is classified by the FDA as an unsafe herb.[32] The glycoside can also be found in horse chestnut seeds.[33] Leucocyanidin, leucodelphinidin and procyanidin A2 can also be found in
horse chestnut. Main article: Anne Frank tree A fine specimen of the horse-chestnut was outside the window of the "secret annex" in the centre of Amsterdam, which Anne Frank mentioned in her diary and which survived until August 2010, when a heavy wind blew it over.[34][35] Eleven young specimens, sprouted from seeds from this tree, were
transported to the United States. After a long quarantine in Indianapolis, each tree was shipped off to a new home at a notable museum or institution in the United States, such as the 9/11 Memorial Park, Little Rock Central High School, and two Holocaust Centers. One of them was planted outdoors in March 2013 in front of The Children's Museum
of Indianapolis, where they were originally quarantined.[36] The horse chestnut tree is one of the symbols of Kyiv, the capital of Ukraine.[37] Horse-chestnut leaf miner (Cameraria ohridella) tree damage in Parma, Italy Bleeding canker. Half of all horse-chestnut leaf miner (Cameraria ohridella) tree damage in Parma, Italy Bleeding canker.
bacterial infection. [38][39] Guignardia leaf blotch, caused by the fungus Guignardia aesculi Wood rotting fungi, e.g. such as Armillaria and Ganoderma Horse chestnut leaf miner, Cameraria ohridella, a leaf mining moth. [40] The larvae of this moth species bore through the leaves of the
horse chestnut, causing premature colour changes and leaf loss. [39] Phytophthora bleeding canker, a fungal infection. [41] Chisholm, Hugh, ed. (1911). "Chestnut". Encyclopædia Britannica (11th ed.). Cambridge University Press. Leach, M (2001). "Aesculus hippocastanum". Australian Journal of Medical Herbalism. 13 (4). "Castanea sativa (European
chestnut, Spanish Chestnut, Sweet chestnut, Sw
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"Bleeding Canker". Royal Horticultural Society. 11 November 2009. Archived from the original on 16 January 2010. Retrieved 2010-01-09. Retrieved from " Species of deciduous tree Senegalia senegal Scientific classification Kingdom: Plantae Clade: Tracheophytes Clade: Angiosperms Clade: Eudicots Clade: Rosids Order: Fabales Family: Fabaceae
Subfamily: Caesalpinioideae Clade: Mimosoid clade Genus: Senegalia Species: S. senegal Binomial name Senegalia Species: S. senegal Binomial name Senegalia Species: S. senegal Binomial name Senegalia Species: S. senegalia
senegal subsp. modesta (Wall.) Roberty Acacia senegal subsp. senegal ensis Roberty Acacia senegal (also known as Acacia senegal) is a small thorny deciduous tree from the genus Senegalia,
which is known by several common names, including gum acacia, gum arabic tree, Sudan gum ar
30 cm (1') in diameter.[4] Sudan is the source of the world's highest quality gum arabic, known locally as hashab gum in contrast to the related, but inferior, gum arabic it produces which is used as a food additive, in crafts, and as a cosmetic. The gum is
drained from cuts in the bark, and an individual tree will yield 200 to 300 grams (7 to 10 oz). Eighty percent of the world's gum arabic is produced in Sudan.[6] The Chauhatan area of Barmer district in Rajasthan is also famous for gum production, this is called [1] [7] (Kummat) in local language there. New foliage is very useful as forage.[8]
Leaves and pods of S. senegal are browsed by domestic and wild ruminants.[9] Like other legume species, S. senegal fixes nitrogen within Rhizobia or nitrogen fixation enriches the poor soils where it is grown, allowing for the rotation of other crops in naturally nutrient-poor regions. It has been
reportedly used for its astringent properties, to treat bleeding, bronchitis, cough, diarrhea, dysentery, catarrh, gonorrhea, leprosy, typhoid fever and upper respiratory tract infections.[8][unreliable medical source?][10] Roots near the surface of the ground are quite useful in making all kinds of very strong ropes and cords. The tree bark is also used
to make rope.[8] The wood of S. senegal can be used to make handles for tools, and parts for weaving looms.[8] It is also valued as firewood and can be used to produce charcoal.[9] S. senegal contains the psychoactive alkaloid dimethyltryptamine.[11] Senegalia senegal A
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Photo Guide. PROTA on Pl@ntUse Retrieved from Properties and Uses of over 400 common names, to find information on a popular herb like ginger, or find it listed by its botanical name, Zingiber officinale. Herbs are also grouped by their
properties and actions. All-Heal, Prunella vulgaris L. Aloe Vera Gel, Aloe vera American Ginseng, Panax quinquefolius Angelica archangelica Arnica, Arnica montana Basil, Ocimum basilicum Bilberry, Vaccinium myrtillus Black Cohosh root, Cimicifuga racemosa Black Pepper, Piper
nigrum Black Walnut, Juglans nigra Cacao, Theobroma cacao L. Calendula, Calendula officinalis Caraway Seed, Carum carvi Cardamomum Carob, Ceratonia siligua Castor Oil, Ricinus communis Cayenne Pepper, Capsicum minimum Celery Seed, Apium graveolens Chamomile, Matricaria recutita Cilantro, Coriandrum sativum
Cinnamon, Cinnamomum zeylanicum, C. cassia Clove Oil, Syzygium aromaticum Coconut oil, Cocos nucifera Coffee, Coffee arabica Comfrey Leaf and root, Symphytum officinale Cranberry, Vaccinium macrocarpon Dandelion Root, Taraxacum officinale Dill, Anethum graveolens Echinacea, Echinacea angustifolia Eucalyptus, Eucalyptus globulus
Fennel Seed, Foeniculum vulgare Garlic, Allium sativum Ginger Root, Zingiber officinale Ginseng Root, American, Panax quinquefolius Hawthorn Berry, Crataegus monogyna Hibiscus, Hibiscus sabdariffa Horseradish root, Armoracia rusticana Juniper Berries, Juniperus communis Lavender, Lavandula spp Lemon, Citrus limonum Lemon Balm, Melissa
officinalis Lemongrass, Cymopogon citratus, C.flexuosus Mint, Mentha piperita Mustard, Brassica nigra Oats, Avena sativa L. Olive Oil, Olea europea Orange, Citrus spp. Oregano, Origanum vulgare Peppermint, Mentha piperita Pinus sylvestris Pumpkin Seed, Cucurbita pepo Rose, Rosa spp Rosemary, Rosmarinus officinalis
Hamamelis virginiana A B C D E F G H I J K L M N O P Q R S T U V W X Y Z Join Melissa EtheridgeTogether we can find new answers for opioid use disorder Check out our latest initiatives and updates. LIST OF COMMON HERBS: 100 MEDICINAL PLANTS, HERBS AND THEIR USES? If you are in the search for traditional herbs that can be used for
medicinal purposes, then you are in the right place. This piece will take a look at 100 medicinal plants and herbs and their uses. Cloves have analgesic properties, calendula is used for pain relief. The elderberry flower has antiviral properties which
conditions like sunburns and zits. It can also be used for relieving constipation. Chasteberry is a common herb used by women having PMS (Pre-Menstrual Syndrome). It is used in relieving the associated symptoms. Garlic has strong antimicrobial properties that make it good in the treatment of colds and flu. In addition, it can be used as a soothing
leaves is a natural way of relieving constipation. Ginger is used for treating vomiting and ginger tea helps to warm up the body during colds. Cayenne pepper is a common kitchen ingredient for the treatment of aches and arthritis. This herb can be used as a mild sedative and for treating bloating. Turmeric contains a chemical substance, curcumin
which gives the herb antioxidant and anti-inflammatory properties for relieving pains. This medicinal plant is used as a first aid to stop bleeding associated with cuts and bruises. Bearberry is a diuretic herb that can be used for treating
relief, drinking catnip tea is a quick remedy. The leaves of the chamomile tree have great relaxing and laxative effects for digestion problems and pains. Besides its culinary use, cinnamon has been used over time as treatment for diabetes due to the presence of insulin. Originally used for its blood purifying property, this Native American herb is now
used for treating indigestion and loss of appetite. Echinacea root has immune-boosting properties that help in treating respiratory problems. The leaves of the Ginkgo tree contain antioxidants that help in treating respiratory problems. The leaves of the brain. Kava is used for its analgesic property. Consuming it as a tea or drinking its extract
also gives a calming effect to the nerves and muscles. Lemongrass is common in Asia and is effective for the treatment of flu, stomach upset, body aches, and stress. Licorice root is beneficial for treating coughs and sore throats as well as for gastrointestinal wounds. This is a healthy mushroom that helps in stimulating digestion, lowering blood
pressure and for anxiety relief, among other uses. Just like ginseng, maca belongs to the family of adaptogens? herbal plants that help in stress relief. Consuming maca root offer the benefits of increased energy and libido. Valerian root has been used for the treatment of digestive problems as well as been used as an analgesic. Drinking cranberry
 juice is a healthy and natural way of treating bladder infection and chronic prostatitis. Milk thistle has good benefits for the liver and kidney. The plant which is native to China. It helps in the treatment of bronchitis and coughs. Chaparral was used by Native Americans as a
cure for GI problems, diarrhea, and rheumatism. Now, however, the plant is known for its antioxidants. The alfalfa plant or buffalo grass is a common herb for the treatment of arthritis, indigestion, and for boosting the immune system. Comfrey is used externally for relieving pains and as a wound-healing oil. Long ago, Native Americans used the
skullcap roots in treating kidney problems. Nowadays, skullcap is common for its sedative effect. For heartburns, sore throats, or gastrointestinal inflammation, drinking marshmallow tea? made from dried marshmallow roots or leaves? is a natural remedy. The extracts from horse chestnut seeds are effective in treating varicose veins, while the gels
have anti-inflammatory properties. Hops are highly effective for the treatment of the symptoms of anxiety such as restlessness. It can also be used by women during menopause. The diuretic effects of hibiscus make it a natural choice for treating digestion problems; it is also effective for controlling high blood pressure and for treating sore throats.
Southern America, this herb is common for its anti-inflammatory and immune-boosting properties. Its use also extends to the treatment of rheumatism and bruises. Boswellia is a well-known herb in India. It is used for treating joint pains, fevers, diabetes
and rheumatism. The leaves of this plant are used for treating sore throat and cough. When mixed with black cohosh, St. John?s wort can help women having PMS and those in their menopause period reduce the accompanying symptoms. This common kitchen ingredient has antispassmodic and antimicrobial properties that help in treating colds and
also used for treating skin diseases like scabies and eczema. Just like horse chestnut, Gotu kola is used as a remedy for varicose veins. The leaves and stems of this plant are also effective in treating colds and respiratory infections. Boneset is effective in the treatment of influenzas and the symptoms. In the past, it was used as a laxative and anti-
malarial medicine. Popular in Russia, Rhodiola roots are used for boosting physical strength and as an anti-depressant. In addition, Rhodiola is an adaptogen and, hence, helps the body to cope with stress. Suma is popular in South Americ where it is also known as Brazilian ginseng. Since it is a type of ginseng, it is also an adaptogen and is used as a
stress reliever. Borage oil is a good source of a linoleic acid? GLA? which is a good immune booster. Saw palmetto is commonly used by men for treating hair loss and a disease of the prostate gland called BPH (Benign Prostatic Hyperplasia). The Japanese and Chinese people use this mushroom for the treatment of cancer. The fruit of the Lycium
tree is rich in essential body nutrients that it is used as food. The fruit also contains high levels of antioxidants. Fo-Ti is a traditional Chinese herb used in making the tea used as a remedy for constipation and flatulence. Bacopa is an Asian herb that has been used in India for treating
brain problems. Today, it finds use in the treatment of anxiety, bronchitis, and allergies. Astralagus is commonly used in China for enhancing energy and treating health problems such as high blood pressure and diarrhea. The leaves of the bee balm tree are used for making tea for fever and indigestion treatment. Moreover, the oil extract of the plant
has antibacterial substances that make it a major component in mouthwash. Schizandra fruit is used for treating stress. Aside from this, the fruits are also rich in nutritious minerals that provide energy. The Dong Quai (Angelica Sinensis) is a popular herb with Chinese women. It is used in treating the symptoms of PMS and menopause. This is also a
popular women?s herb. Just like the Dong Quai, this herb is used as a remedy for PMS. Amla fruit is a rich source of Ascorbic acid (vitamin C) and fiber. This makes it a good remedy for constipation and swellings. Bilberry contains anthocyanosides which are strong antioxidants. The leaves of this plant are used for the prevention of night blindness, in
chemical substances that help in the healing of wounds. A common herb, chickweed is a good remedy for skin problems like eczema and rashes. Butterbur is a natural remedy for migraines as well as good for its antispasmodic properties. Tarragon is rich in minerals and vitamins that make it a health herb for consumption. It is used to prevent health
diseases. Trikatu Churna is used for treating nausea and stomach congestion. Its anti-inflammatory property also makes good for treating swellings. The most common use of rhubarb is as a laxative. Other uses include for the treatment of diarrhea, and heartburn. Uses of rosemary include treatment of toothaches, eczema, myalgia, as well as for
promoting menstrual flow in women. Polygala has nootropic properties that are beneficial for brain functioning. This herb helps in improving memory and cognitive ability in older people. Rehmannia finds usage in the treatment of diabetes, anemia, allergies, and osteoporosis. Parsley leaves are rich in flavonoids? a type of antioxidants? which help in
combating cancer, stroke, and heart disease. Pomegranate contains a lot of antioxidants and vitamins. It is used in treating anxiety and its symptoms. It is also used by some people as a remedy for hemorrhoids and inflammations. Saffron is used as an expectorant for
the treatment of coughs and whooping cough. Juniper is a common herbal remedy for joint pains as well as for treating urinary tract infections, and gallbladder stones. Motherwort is used for treating flu and for boosting
the immune system against infections. When consumed moderately, nutmeg can be used for treating insomnia due to its calming effect. Papayas are rich in fiber and water which make them good for relieving constipation. Kola nut is an African herb used as a flavoring for drinks. The nut contains caffeine which can help with digestion problems. The
root of the osha plant is used for treating flu and the symptoms such as cold, cough and sore throat. This herb is known for its use in treating indigestion, body aches, cramps, and for treating hirsutism in women. The leaves, stems, and bark of
this ornamental plant can be used for treating cancer tumors, and inflammation. Natural gum obtained from Acacia trees For the chewable resin known as Arabic gum, see Mastic (plant resin). This article by introducing more
precise citations. (November 2022) (Learn how and when to remove this message) Acacia gum, pieces and powder Acacia senegal, pictured in the medicinal handbook Köhler's Medizinal-Pflanzen (1887) by Franz Eugen Köhler Gum acacia, gum sudani, Senegal gum and by other names[a]) (Arabic: صمغ عربي) is a tree gum exuded by two
species of Acacia sensu lato: Senegalia senegal,[2] and Vachellia seyal. However, the term "gum arabic" does not indicate a particular botanical source.[1] The gum is harvested commercially from wild trees, mostly in Sudan (about 70% of the global supply) and throughout the Sahel, from Senegal to Somalia. The name "gum Arabic" (al-samgh al-
'arabi) was used in the Middle East at least as early as the 9th century. Gum arabic first found its way to Europe via Arabic ports and retained its name of origin.[3] Gum arabic is a complex mixture of glycoproteins and polysaccharides, predominantly polymers of arabinose and galactose. It is soluble in water, edible, and used primarily in the food
industry and soft drink industry as a stabilizer, with E number E414 (I414 in the US). Gum arabic is a key ingredient in traditional lithography and is used in printing, paints, glues, cosmetics, and various industrial applications, including viscosity control in inks and in textile industries, though less expensive materials compete with it for many of these
roles.[citation needed] Gum arabic was defined by the 31st Codex Committee for Food Additives, held at The Hague from 19 to 23 March 1999, as the dried exudate from the trunks and branches of Acacia senegal or Vachellia (Acacia) seval in the family Fabaceae (Leguminosae).[4]: 4 A 2017 safety re-evaluation by the Panel on Food Additives and
Nutrient Sources of the European Food Safety Authority (EFSA) said that although the above definition holds true for most internationally traded samples, the term "gum arabic" may not even have been collected from Acacia (in the broad sense) species, instead
coming from e.g. Combretum or Albizia.[1] Gum arabic is a rich source of dietary fibers, and in addition to its widespread use in food and pharmaceutical industries as a safe thickener, emulsifier, and stabilizer, it also possesses a broad range of health benefits that have been proven through in vitro and in vivo studies.[5] Gum arabic is not degraded
in the stomach, but fermented in the large intestine into a number of short chain fatty acids. It is regarded as a prebiotic that enhances the growth and proliferation of beneficial intestinal microbiota, therefore its intake is associated with many healthful effects.[6] These health benefits include:[5][7][8][9][10][11] Improved absorption of calcium from
the gastrointestinal tract Anti-diabetic Anti-obesity (gum arabic lowers body mass index and body fat percentage) Lipid-lowering potential (gum arabic decreases total cholesterol, LDL, and triglyceride) Antioxidant activities Kidney and liver support Immune function via modulating the release of some inflammatory mediators Improving intestinal
barrier function, preventing colon cancer, and alleviating symptoms of irritable bowel diseases In rats, a protective effect on the intestine against the adverse actions of the NSAID drug meloxicam Gum arabic exuding from Acacia nilotica from Acacia nilotica from Acacia nilotica from A
edible by humans. Other substances have replaced it where toxicity is not an issue, as the proportions of chemicals in gum arabic vary widely and make it unpredictable. It remains an important ingredient in soft drink syrup and "hard" gummy candies such as gumdrops, marshmallows, and M&M's chocolate candies. For artists, it is the traditional
binder in watercolor paint and in photography for gum printing, and it is used as a binder, emulsifier, and suspending agent. [13] It is an important ingredient in
shoe polish, and can be used in making homemade incense cones. It is also used as a lickable adhesive, for example on postage stamps, envelopes, and cigarette papers. Lithographic printers employ it to keep the non-image areas of the plate receptive to water. [14] This treatment also helps to stop oxidation of aluminium printing plates in the interval
between processing of the plate and its use on a printing press. Gum arabic is used in the food industry as a stabiliser, emulsifying agent, and thickening agent in icing, fillings, soft candy, chewing gum, and other confectionery,[15] and to bind the sweeteners and flavorings in soft drinks.[16] A solution of sugar and gum arabic in water, gomme syrup
is sometimes used in cocktails to prevent the sugar from crystallising and provide a smooth texture. Gum arabic is a complex polysaccharide and soluble dietary fibre that is generally recognized as safe for human consumption. An indication of harmless flatulence occurs in some people taking large doses of 30 g (1 oz) or more per day.[1] It is not
degraded in the intestine, but fermented in the colon under the influence of microorganisms; it is a prebiotic (as distinct from a probiotic). No regulatory or scientific consensus has been reached about its caloric value; an upper limit of 2 kcal/g (8.4 kJ/g) was set for rats, but this is invalid for humans. The US FDA initially set a value of 4 kcal/g
(17 kJ/g) for food labelling, but in Europe no value was assigned for regulatory purposes".[17] In 2008, the FDA sent a letter of no objection in response to an application to reduce the rated caloric value of gum arabic to
1.7 kcal/g (7.1 kJ/g).[18] Powdered gum arabic for artists, one part of which is dissolved in four parts distilled water to make a liquid suitable for adding to pigments A selection of gouaches, some containing gum arabic Gum arabic is used as a binder for watercolor painting because it dissolves easily in water. Pigment of any color is suspended within
the acacia gum in varying amounts, resulting in watercolor paint. Water acts as a vehicle or a diluent to thin the watercolor paint to a surface such as paper. When all moisture evaporates, the acacia gum typically does not bind the pigment to the paper surface, but is totally absorbed by deeper layers.[19] If little water
is used, after evaporation, the acacia gum functions as a true binder in a paint film, increasing luminosity and helping prevent the colors from lightening. Gum arabic allows more subtle control over washes, because it facilitates the dispersion of the pigment particles. In addition, acacia gum functions as a true binder in a paint film, increasing luminosity and helping prevent the colors from lightening.
time.[citation needed] The addition of a little gum arabic to watercolor pigment and water allows for easier lifting of pigment from paper, thus can be a useful tool when lifting out color when painting in watercolor.[19] Gum arabic has a long history as additives to ceramic glazes. It acts as a binder, helping the glaze adhere to the clay before it is
fired, thereby minimising damage by handling during the manufacture of the piece. As a secondary effect, it also acts as a deflocculant, increasing the fluidity of the glaze mixture, but also making it more likely to sediment out into a solution in hot water (typically
10-25 g/L; ¼ to ½ oz per pint), and then added to the glaze. [20] On firing, the gum burns out at a low temperature, leaving no residues in the glaze. More recently, particularly in commercial manufacturing, gum arabic is often replaced by
 more refined and consistent alternatives, such as carboxymethyl cellulose. The historical photography process of gum bichromate photography uses gum arabic mixed with ammonium or potassium dichromate and pigment to create a coloured photography uses gum arabic mixed with ammonium or potassium dichromate and pigment to create a coloured photography uses gum arabic mixed with ammonium or potassium dichromate and pigment to create a coloured photography uses gum arabic mixed with ammonium or potassium dichromate and pigment to create a coloured photography uses gum arabic mixed with ammonium or potassium dichromate and pigment to create a coloured photography uses gum arabic mixed with ammonium or potassium dichromate and pigment to create a coloured photography uses gum arabic mixed with ammonium or potassium dichromate and pigment to create a coloured photography uses gum arabic mixed with a mixed with 
Unreacted gum remains soluble and can be washed off in warm water so that the reacted gum arabic permanently binds the pigments onto the paper in the final print. [21] Gum arabic is also used to protect and etch an image in lithography, gum by itself may be used to etch
very light tones, such as those made with a number-five crayon. Phosphoric, nitric, or tannic acid is added in varying concentrations to the acacia gum to etch the darker tones up to dark blacks. The etching process creates a gum adsorb layer within the matrix that attracts water, ensuring that the oil-based ink does not stick to those areas. Gum is
also essential to what is sometimes called paper lithography, printing from an image created by a laser printer or photocopier.[citation needed] Gum arabic is a biopolymer consisting of arabinose and galactose monosaccharides. It is a major component of many plant of 
gums, including gum arabic. 8-5' Noncyclic diferulic acid has been identified as covalently linked to carbohydrate moieties of the arabinogalactan-protein fraction. [23] Acacia senegal from Paul Hermann Wilhelm Taubert's Leguminosae, in Engelmann (ed.): Natürliche Pflanzenfamilien. Vol. III, 3., 1891 Vachellia seyal from Paul Hermann Wilhelm
Taubert's Leguminosae, in Engelmann (ed.): Natürliche Pflanzenfamilien. Vol. III, 3., 1891 While gum arabic has been harvested in Arabia and West Asia since antiquity, sub-Saharan acacia gum has a long history as a prized export. The gum exported came from the band of acacia trees that once covered much of the Sahel region, the southern littoral
of the Sahara Desert that runs from the Atlantic Ocean to the Red Sea. Today, the main populations of gum-producing Acacia species are found in Mauritania, Senegal, Mali, Burkina Faso, Niger, Nigeria, Chad, Cameroon, Sudan, Eritrea, Somalia, Ethiopia, Kenya, and Tanzania.[citation needed] Acacia is tapped for gum by stripping bits off the bark,
from which gum then exudes. Traditionally harvested by seminomadic desert pastoralists in the course of their transhumance cycle, acacia gum remains a main export were estimated in 2019 at 160,000 tonnes, having recovered from 1987 to
1989 and 2003-2005 crises caused by the destruction of trees by the desert locust. [citation needed] In 1445, Prince Henry the Navigator set up a trading post on Arguin Island (off the coast of modern Mauritania), which acquired acacia gum and slaves for Portugal. With the merger of the Portuguese and Spanish crowns in 1580, the Spaniards
became the dominant influence along the coast. In 1638, however, they were replaced by the Dutch, who were the first to begin exploiting the acacia gum was considered superior to that previously obtained in Arabia. By 1678, the French had driven out the Dutch and
established a permanent settlement at Saint Louis at the mouth of the Senegal River. [24] Gum Arabic came to play an essential role in textile printing and therefore in pre-industrial economies of France, Great Britain and other European countries. Throughout the 18th century, their competition over the commodity was so fierce, that some have
referred to it as the gum wars.[25] West African tribes meet to trade gum arabic at Bakel on the Senegal River, 1890 (illustration from "Côte occidentale d'Afrique du Colonel Frey", pl. en reg. p. 100) For much of the 18th and 19th centuries, gum arabic was the major export from French and British trading colonies in modern Senegal and Mauritania
West Africa had become the sole supplier of world acacia gum by the 18th century, and its export at the French colony of Saint-Louis doubled in the decade of 1830 alone. A threat to bypass Saint-Louis doubled in the decade of 1830 alone. A threat to bypass Saint-Louis and taxes by sending gum to the British traders at Portendick, eventually brought the Emirate of Trarza into direct conflict with the French. In the
1820s, the French launched the Franco-Trarzan War of 1825.[citation needed] The new emir, Muhammad al Habib, had signed an agreement with the Waalo Kingdom, directly to the south of the river. In return for an end to raids in Waalo territory, the emir took the heiress of Waalo as a bride. The prospect that Trarza might inherit control of botheria.
gum arabic in large quantities—from the Sahel areas of French West Africa (modern Senegal, Mauritania, Mali, Burkina Faso, and Niger) and French Equatorial Africa (modern Chad) as well as British-administered Sudan, until these nations gained their independence in 1959-61. Since the 1950s, the global supply of gum arabic has been dominated
 by Sudan.[27] In the early 2020s, about 70% of the global supply has been sourced from Sudan,[28] with approximately 5 million Sudanese people (more than 10 percent of a country's population) being directly or indirectly or in
market as a leverage against other countries.[27][31] Since the 2023 Sudan conflict, the export of gum arabic and find alternative
ingredients that can be used as a replacement.[27][32] Gum arabic slows the rate of absorption of some drugs, including amoxicillin, from the gut.[33] In the works of English playwright William Shakespeare, Dutch poet Jacob Cats and other European poets of the 13th to 17th centuries, gum arabic represented the "noble Orient". In the Sahel, it is a
symbol of the purity of youth.[25] Mastic (plant resin) also known as acacia gum, acacia, Arabic gum, acacia, Arabic gum, and Indian gum[1] ab c d Mortensen A, Aguilar F, Crebelli R, Di Domenico A, Frutos MJ, Galtier P, et al. (April 2017). "Re-evaluation of acacia gum (E 414) as a food additive". EFSA Journal. 15 (4): e04741. doi:10.2903/j.efsa.2017.4741.
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