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March 6, 2008

Submission of Petition for National List Amendment:
Non-organic agricultural substances allowed in or on processed products
labeled as "organic," Sec. 205.606.

1. Substance's chemical or material common name.

Myrrh essential oil, *Commiphora myrrha*

2. Manufacturer/producer's name, address, phone, contact.

**Norfolk Essential Oils LTD.
Pates Farm, Risbech Road
Tipton, Welney, PE14 9SQ
United Kingdom.
Phn: 011 44 1354638065**

3. Intended or current use of substance, such as processing aid, nonagricultural ingredient, disinfectant. If the substance is an agricultural ingredient, the petition must provide a list of the types of product(s) (eg cereals, salad dressings) for which the substance will be used and a description of the substance's function in the product(s) (e.g., ingredient, flavoring agent, emulsifier, processing aid).

To be used as a scent in a perfume

4. List of the handling activities for which the substance will be used. If used for handling (including processing) the substance's mode of action must be described.

To be mixed with jojoba oil, vitamin E and other essential oils to manufacture perfumes.

5. Source of the substance and a detailed description of its manufacturing or processing procedures from the basic component/s to the final product.

Myrrh grows as a wild shrub in north east Africa and south west Asia. The trunk exudes a natural oleoresin, which is collected and steam distilled to produce the essential oil. (Battaglia, Salvatore, The Complete Guide to Aromatherapy, p.182)

6. A summary of any available previous reviews by State or private certification programs or other organizations of the petitioned substance. If this information is not available, the petitioner should state so in the petition.

Not available

7. Information regarding EPA, FDA, and State regulatory authority registrations, including registration numbers. If this information does not exist, the petitioner should state so in the petition.

Myrrh is on the 'Inert Ingredients in Pesticides' list from the EPA. It is on GRAS (generally recognized as safe) list and approved by FDA as a food flavor.

Neither of these two agencies distinguish between organic and non-organic myrrh. Based on FDA approval as a food flavor, non-organic myrrh is no more toxic, nor environmentally hazardous, than organic myrrh.

8. The Chemical Abstract Service (CAS) number or other product numbers of the substance and labels of products that contains the petitioned substance. If the substance does not have an assigned product number, the petitioner should state so in the petition.

8016-37-3

9. The substance's physical properties and chemical mode of action including

(a) Chemical interactions with other substances, especially substances used in organic production;

N/A

(b) toxicity and environmental persistence;

Non-toxic and Non-persistent.

(c) environmental impacts from its use and/or manufacture;

Myrrh is gathered in its wild state and as such, it is not farmed with the use of herbicides or pesticides. There is no adverse environmental impact from its use or in the distilling of its essential oil.

(d) effects on human health;

A Natural fragrance. No adverse health effects except for the following: Irritating to the eyes only if applied directly to the eyes. May be irritating to the skin if it is applied directly (that is, without diluting it in another vegetable oil or lotion. May be toxic if ingested in large doses. There is no different effect on human health between organic and non-organic myrrh. See MSDS below for further information.

(e) effects on soil organisms, crops, or livestock.

Myrrh has anti-microbial properties. Under normal

use, myrrh would not come into contact with soil, crops or livestock.

10. Safety information about the substance including a Material Safety Data Sheet (MSDS) and a substance report from the National Institute of Environmental Health Studies. If this information does not exist, the petitioner should state so in the petition.

MSDS sheet attached at the end of this document.

11. Research information about the substance which includes comprehensive substance research reviews and research bibliographies, including reviews and bibliographies which present contrasting positions to those presented by the petitioner in supporting the substance's inclusion on the National List. (For petitions to include non-organic agricultural substances onto the National List, this information item should include research concerning why the substance should be permitted in the production or handling of an organic product, including the availability of organic alternatives.) Commercial availability does not depend upon geographic location or local market conditions. If research information does not exist for the petitioned substance, the petitioner should state so in the petition.

No known relevant research reviews are available.

12. A "Petition Justification Statement" which provides justification for any of the following actions requested in the petition.

Myrrh organic essential oil is a relatively rare commodity.

Myrrh is only grown in certain regions of the world, including Yeman, Ethiopia and most notably, Somalia. Lately, these regions are unstable due to civil war and unrest, making it difficult to secure a fixed and tangible source of the oil. See:

<http://www.globalsecurity.org/military/world/war/somalia-south.htm>

http://en.wikipedia.org/wiki/War_in_Somalia_%282006%E2%80%93present%29

Organic myrrh is even more difficult to obtain, because it is usually collected in the wild; It is not available at the following major essential oil companies:

S & D Aroma, (www.sdaroma.com)

Earthoil, (www.earthoil.com)

Lebermuth, (www.lebermuth.com)

The fragrance of essential oils can vary from batch to batch, depending on factors such as the amount of rainfall and temperature during a particular growing season, the time of harvest and the region in which it was grown, as well as the expertise of the distiller. Thus only a few samples can be selected that would offer the particular fragrance needed for our product.

Since organic myrrh is relatively rare compared to other organic essential oils, the likelihood of obtaining an oil that would be suitable for Amrita's perfumes is less than for other essential oils, such as lavender or peppermint. Therefore, we could not always be assured of being able to manufacture our perfume if we are limited to organic myrrh exclusively.

Based on myrrh's approval by FDA as a food flavor, myrrh being on the EPA inert ingredients list and organic myrrh not being readily available on a consistent basis and at the quality level required for a perfume, Amrita requests that non-organic myrrh essential oil be allowed on the National List as an acceptable non-organic ingredient in an organic product.

Material Safety Data Sheet

Amrita Aromatherapy
1900 W. Stone Avenue
Fairfield, IA 52556
Phone: 515-472-9136

National Poison Control Center (24 hours): 800-222-1222
Revised: 10/1/99

Section I: Product Identification

Name: **Myrrh – essential oil**
Latin Binomial: *Commiphora myrrha*
Fema Number: 2766
CAS Number: 8016-37-3
Ingredients: N/A

Section II: Physical Data

Odor /Appearance: Warm, spicy, balsamic; brown-red liquid
Boiling Point: Not Determined
Melting Point: Not Determined
Specific Gravity (Water=1.0): 1.0100 – 1.0350
Solubility in Water: Not Soluble
Vapor Density (Air=1): > 1
Vapor Pressure: Not Determined

Section III: Fire, Explosion and Reactivity

Flash Point: 212 Deg F

Extinguishing Media: Water CO2 Foam Dry Chemical

Special Firefighting Procedures: Never use water directly; avoid inhalation of smoke and fumes; wear protective equipment for the respiratory system

Unusual Fire and Explosion Hazards: Avoid excessive temperatures

Hazardous Decomposition Products: Burning liberates carbon monoxide, carbon dioxide and smoke.

Stability: Stable under normal conditions

Conditions to Avoid: Excess heat; ignition sources; open flame

Materials to Avoid: Strong oxidizing materials

Hazardous Polymerization: Will not occur

Section IV: Protection Information

Eye: Industrial safety glasses; splash goggles when necessary

Respiratory: Avoid breathing warm vapors; use artificial ventilation if necessary

Skin: Industrial gloves

Ventilation: Mechanical; general

Other Protective Devices: Eye bath; safety shower

Section V: Occupational Exposure Limit

Threshold Limit Value (TLV): Not determined

OSHA Permissible Exposure Limit (PEL): Not determined

Has the Substance been Listed as a Carcinogen? Yes No

Section VI: Health Hazard Information

Undiluted material may be irritating to skin and eyes.

Section VII: Emergency and First Aid Information

Inhalation Exposure: Provide fresh air and rest; obtain medical advice immediately

Eye Contact: Rinse with water for at least 15 minutes. If irritation continues, obtain medical advice.

Skin Contact: Remove contaminated clothing; wash with water and soap. If irritation continues, obtain medical advice.

Ingestion: Induce vomiting; follow with oral ingestion of milk, gelatin, egg or other protein to decrease absorption. Consult physician for follow-up.

Section VIII: Spills, Leaks and Disposal Procedures

If Material Spill or Released: Remove all potential sources of ignition. Contain spill with inert non-combustible absorbent material and place in approved containers.

Waste Disposal Methods: Dispose of in accordance with local, state and federal regulations; should not be disposed of in any type of effluent.

Section IX: Handling and Shipping Procedures

Store in full sealed containers in cool dry place away from sources of ignition, heat or direct sunlight. Follow good industrial and hygienic practices.

Myrrh

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From Wikipedia, the free encyclopedia

Myrrh is a reddish-brown resinous material, the dried sap of the tree *Commiphora myrrha*, native to Yemen, Somalia and the eastern parts of Ethiopia. The sap of a number of other *Commiphora* and *Balsamodendron* species are also known as myrrh, including that from *C. erythraea* (sometimes called East Indian myrrh), *C. opobalsamum* and *Balsamodendron kua*. Its name entered English via the Ancient Greek, *μύρρα*, which is probably of Semitic origin. Myrrh is also applied to the potherb *Myrrhis odorata* otherwise known as "Cicely" or "Sweet Cicely".

High quality myrrh can be identified through the darkness and clarity of the resin. However, the best method of judging the resin's quality is by feeling the stickiness of freshly broken fragments directly to determine the fragrant-oil content of the myrrh resin. The scent of raw myrrh resin and its essential oil is sharp, pleasant, somewhat bitter and can be roughly described as being "stereotypically resinous". When burned, it produces a smoke that is heavy, bitter and somewhat phenolic in scent, which may be tinged with a slight vanillic sweetness. Unlike most other resins, myrrh expands and "blooms" when burned instead of melting or liquefying.

The scent can also be used in mixtures of incense, to provide an earthy element to the overall smell, and as an additive to wine, a practice alluded to by ancient authorities such as Fabius Dorsennus. It is also used in various perfumes, toothpastes, lotions, and other modern toiletries.

Myrrh was used as an embalming ointment and was used, up until about the 15th century, as a penitential incense in funerals and cremations. The "holy oil" traditionally used by the Eastern Orthodox Church for performing the sacraments of chrismation and unction is traditionally scented with myrrh, and receiving either of these sacraments is commonly referred to as "receiving the Myrrh".

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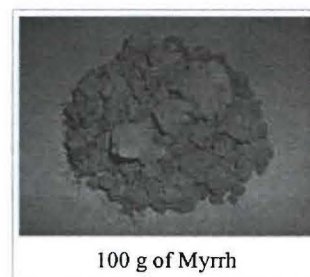
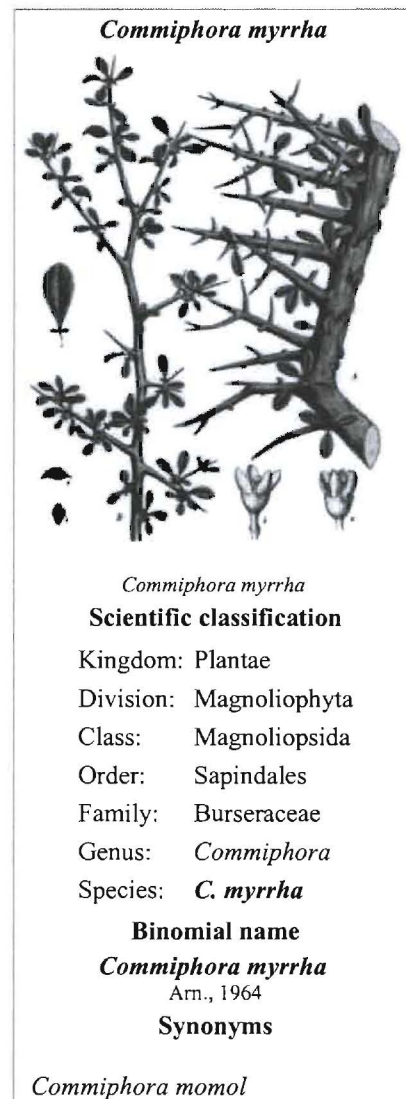
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History

Myrrh is a constituent of perfumes and incense, was highly valued in ancient times, and was often worth more than its weight in gold. The Greek word for myrrh, *μύρρον*, came to be synonymous with the word for "perfume". In Ancient Rome myrrh was priced at five times as much as frankincense, though the latter was far more popular. Myrrh was burned in ancient Roman funerals to mask the smell emanating from charring corpses. It was said that the Roman Emperor Nero burned a year's worth of myrrh at the funeral of his wife, Poppaea. Pliny the Elder refers to myrrh as being one of the ingredients of perfumes, and specifically the "Royal Perfume" of the Parthians. He also says myrrh was used to fumigate wine jars before bottling.

Religious context

In Christian Scriptures, Myrrh was one of the gifts of the Magi to the infant Jesus according to Matthew, and is cited in Mark as an intoxicant that was offered to Jesus during the crucifixion:



“ Then, opening their treasures, they offered him gifts, gold and frankincense and myrrh.”
 -Matthew 2:11b, RSV

“ And they brought him to the place called Gol'gotha (which means the place of a skull). And they offered him wine mingled with myrrh; but he did not take it.”
 - Mark 15:22,23 RSV

Because of both of these contexts, myrrh is a common ingredient in incense offered during Christian liturgical celebrations (see Thurible). In Roman Catholic liturgical tradition, pellets of myrrh are traditionally placed in the Paschal candle during the Easter Vigil.

In Eastern Christianity, the use of incense is much more frequent than in the West. In some traditions, special emphasis is placed on the offering of incense at Vespers and Matins, because of the Old Testament regulation regarding the evening and morning offering of incense.

Because myrrh was the primary ingredient in the anointing oil God commanded Moses to make (Exodus 30:23-33), it is used in the preparation of chrism which is used by many churches, both Eastern and Western.

Traditional medicine



In Chinese medicine, myrrh is classified as bitter, spicy, neutral in temperature and affecting the heart, liver, and spleen meridians. Its uses are similar to those of frankincense, with which it is often combined in decoctions, liniments and incense. Myrrh is said to be blood-moving, while frankincense is said to move the *Qi* more, and is better for arthritic conditions. It is said to be useful for amenorrhea, dysmenorrhea, menopause and uterine tumors, as it is said to purge stagnant blood out of the uterus.

Myrrh is said to help toothache pain, and can be used in liniment for bruises, aches and sprains.

Myrrh is most commonly used in Chinese medicine for rheumatic, arthritic and circulatory problems. It is combined with such herbs as notoginseng, safflower stamens, Angelica sinensis, cinnamon and Salvia miltiorrhiza, usually in alcohol, and used both internally and externally.^[1]

Myrrh is used more frequently in Ayurveda, Unani medicine and Western herbalism, which ascribe to it tonic and rejuvenative properties. A related species, known as guggul in Ayurvedic medicine is considered one of the best substances for the treatment of circulatory problems, nervous system disorders and rheumatic complaints, Myrrh (Daindhava) is used in many rasayana formulas in Ayurveda.

However rasayana herbs have special processing. Outside of this form myrrh is said to be contraindicated for pregnant women or women with excessive uterine bleeding, and not be used with evidence of kidney dysfunction or stomach pain.^{[2][3]}

Modern medicinal usage

In western pharmacy, Myrrh is used as an antiseptic and is most often used in mouthwashes, gargles and toothpastes for prevention and treatment of gum disease. Myrrh is currently used in some liniments and healing salves that may be applied to abrasions and other minor skin ailments. It is also used in the production of Fernet Branca.

Research

- In an attempt to determine the cause of its effectiveness, researchers examined the individual ingredients of an herbal formula used traditionally by Kuwaiti diabetics to lower blood glucose. Myrrh and aloe gums effectively improved glucose tolerance in both normal and diabetic rats.^[4]
- Mixing myrrh gum into vinegar increases its ability to remove blood congestion and relieve pain.^{[5][6]}

Further reading

- Massoud A, El Sisi S, Salama O, Massoud A (2001). "Preliminary study of therapeutic efficacy of a new fasciolicidal drug derived from *Commiphora molmol* (myrrh)". *Am J Trop Med Hyg* **65**: 96–99.
- Dalby, Andrew (2000), written at London, *Dangerous Tastes: the story of spices*, British Museum Press, ISBN 0714127205 (US ISBN 0-520-22789-1), pp. 107–122.
- Dalby, Andrew (2003), written at London, New York, *Food in the ancient world from A to Z*, Routledge, ISBN 0415232597, pp. 226–227, with additions
- Monfieur Pomet (1709). "Abyssine Myrrh)". *History of Druggs*. Abyssine Myrrh
- *The One Earth Herbal Sourcebook: Everything You Need to Know About Chinese, Western, and Ayurvedic Herbal Treatments* by Ph. D., A.H.G., D.Ay, Alan Keith Tillotson, O.M.D., L.Ac., Nai-shing Hu Tillotson, and M.D., Robert Abel Jr.

References

1. ^ Michael Tierra. "The Emmenagogues"
2. ^ Michael Moore *Materia Medica*
3. ^ Alan Tillotson "Myrrh"
4. ^ Al-Awadi FM, Gumaa KA. Studies on the activity of individual plants of an antidiabetic plant mixture. *Acta Diabetol Lat*. 1987 Jan-Mar;24(1):37-41.
5. ^ Yeung, HC, *Handbook of Chinese Herbs and Formulas*, vol. 1, Institute of Chinese Medicine, Los Angeles, 1983.
6. ^ Alan Tillotson "Myrrh"

See also

- Chrism
- *Naturalis Historia*
- Pliny the Elder
- Theophrastus

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