

# VETIVER OIL

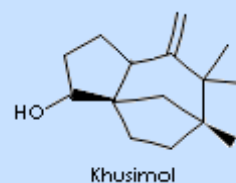
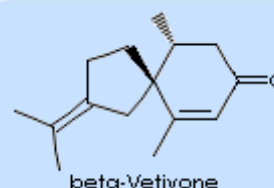
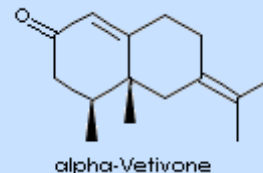
## SYNONYMS

Extract of *Vetiveria zizanioides*; Vetivert;

## PRODUCT IDENTIFICATION

CAS RN	8016-96-4; 84238-29-9
EINECS RN	282-490-8
H.S.CODE	3301.26.0000
MAJOR COMPONENTS	alpha-Vetivone (CAS RN.: 15764-04-2) beta-Vetivone (CAS RN.: 18444-79-6) Khusimol (CAS RN.: 16223-63-5)

FORMULA  
MOLE WEIGHT



## PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE	yellow to brown liquid
MELTING POINT	
BOILING POINT	
DENSITY	0.985 - 1.025
SOLUBILITY IN WATER	Insoluble (soluble in alcohol)
pH	
VAPOR DENSITY	
REFRACTIVE INDEX	1.520 – 1.530
FLASH POINT	130 C

## STABILITY AND REACTIVITY

STABILITY	Stable under normal conditions.
INCOMPATIBLE MATERIALS	Strong oxidizing agents, Strong reducing agents, Strong bases
DECOMPOSITION PRODUCTS	Carbon monoxide, Carbon dioxide.
POLYMERIZATION	Has not been reported
NFPA RATINGS	Health: 2, Flammability: 0, Reactivity: 0

## SAFETY

HAZARD NOTES	Irritating to eyes and skin.
EYE	Irritating to eyes.
SKIN	Irritating to skin.
INGESTION	May be harmful.
INHALATION	Irritating to respiratory system.
CHRONIC	

## TRANSPORT & REGULATORY INFORMATION

UN NO.	
HAZARD CLASS	
PACKING GROUP	
HAZARD SYMBOL	XI
RISK PHRASES	22-36/38
SAFETY PHRASES	26-36



# VETIVER OIL

## GENERAL DESCRIPTION

The essential oil of vetiver, *Vetiveria zizanioides* (L.) Nash is one of the most important raw materials in perfumery both as a fixative and in its own right as a fragrance ingredient. It has extensive applications in toiletries and cosmetic industries and vetiver root is also important in traditional medicine as a carminative, stimulant and diaphoretic. Vetiver oil possesses sedative property and has been traditionally used in aromatherapy for relieving stress, anxiety, nervous tension and insomnia for a long time (Fischer-Rizzi, 1990).

Vetiver oil consists of a complex mixture of more than 150 sesquiterpenoid constituents. The composition and odor quality of the oil is dependent upon its origin. Among the 60 components identified to date, the sesquiterpene alpha-vetivone, beta-vetivone, and khusinol always occur in the oil in amounts up to 35%. As a result, they are considered to be fingerprints of the oil even though they do not possess the typical odor characteristics associated with vetiver.

The roots of the Vetiver grass contain an essential oil, known as Vetiver oil or 'khus oil', which can be extracted for a number of uses; Vetiver oil has been utilized as raw material for various fragrant products such as perfumes, including several famous brands, deodorants, lotions, and soaps. Apart from the medicinal uses found in the roots, leaves and oil, stated above, the oil also has pesticidal properties.

Vetiver oil is known to repel insects, flies and cockroaches, moths and termites. (source: <http://www.vetiver.com>)

Vetiver oil is dominated by a complex mixture of oxygenated sesquiterpenes. The ketones alpha-vetivone (compare with nootkatone from grapefruit) and beta-vetivone, which usually form more than 10 % of the oil, as well as khusimol, ca. 15 %, and its derivatives, contribute significantly to its odour. Vetiver oil is used in luxury perfumes for persistent green-woody notes. An even finer product, called vetiveryl acetate, is created by acetylating the sesquiterpene alcohols present in the oil. It has an elegant, soft, fruity-woody character. In classical perfumery, the oils of vetiver, patchouli and sandalwood in combination with a jasmine and gardenia complex was the base of the famous Crepe de Chine note [3]. Vetiver products are used in many modern men's colognes, e.g. Vetiver (Guerlain 1959), and the newer Hugo Dark Blue (Boss 1999) and Azzura (Azzaro 1999). Lately, vetiver grass has gained focus for quite another reason. Its very excessive roots are effective in preventing soil erosion in the tropics where the original forest has been destroyed. Vetiver oil is also called vetivert, khus-khus, khas-khas or 'oil of tranquillity' in India. (source: <http://www.bojensen.net>)

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### Typical Components

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Benzoic acid  
Furfurol  
Vetivene  
Vetivenyl vetivenate  
Terpinen-4-ol  
5-Epiprezizane  
Khusimene  
alpha-Muurolene  
Khusimone  
Calacorene  
beta-Humulene  
alpha-Longipinene  
gamma-Selinene  
delta-Selinene  
delta-Cadinene  
Valencene  
Calarene,-gurjunene



# VETIVER OIL

alpha-Amorphene  
Epizanal  
3-Epizanol  
Khusimol  
Isokhusimol  
Valerenol  
beta-Vetivone  
alpha-Vetivone  
Vetivazulene

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## SALES SPECIFICATION

APPEARANCE	yellow to brown liquid
OPTICAL ROTATION	17° ~ 46°
ACIDITY	10 – 70 mgKOH/g
DENSITY	0.985 - 1.025
REFRACTIVE INDEX	1.520 – 1.530

## PACKING

## PRICE

