

SEABERRY FRUIT OIL (cosmetic)

This product is the oil derived from the fruit of *Hippophae rhamnoides* L. (*Elaeagnaceae*).

Manufacturing method

Extract oil ingredient from the fruit of *Hippophae rhamnoides* L. (*Elaeagnaceae*) with n-hexane, remove n-hexane by distillation and add Caprylic/Capric Triglyceride, Tocopherol and Ascorbyl Palmitate to obtain the product.

Raw material: dried fruit of *Hippophae rhamnoides* 7 kg → Product: about 0.8 – 1.0 kg

Description

This product is reddish brown to brown oil, and it is having characteristic odor.

Identification

Determine the infrared absorption spectrum of this product as directed in the liquid film method under Infrared Spectrophotometry : it exhibits absorption at the wave numbers of about 2930 cm^{-1} , 2850 cm^{-1} , 1745 cm^{-1} , 1460 cm^{-1} and 1165 cm^{-1} .

Carotenoid

Weigh accurately about 0.5 g of this product, add *n*-hexane to make exactly 10 mL, then mix and filter this solution through a membrane filter with a pore size not exceeding $0.45\text{ }\mu\text{m}$, use this solution as the sample solution. Separately, weigh accurately about 0.002 g of the standard of β -carotene, add 0.1 w/v% of 2,6-*tert*-butyl-4-methylphenol with acetone : methanol (7:3) to make exactly 10 mL as the stock solution. Weigh accurately about 1 mL of the stock solution, add 0.1 w/v% of 2,6-*tert*-butyl-4-methylphenol with acetone : methanol (7:3) to make exactly 5 mL, then mix and filter this solution through a membrane filter with a pore size not exceeding $0.45\text{ }\mu\text{m}$, use this solution as the standard solution. Perform the test with $10\text{ }\mu\text{L}$ each of the sample solution and the standard solution as directed under Liquid Chromatography according to the following conditions: the peak obtained with the sample solution show the same retention time with that obtained with the standard solution.

Operating conditions

Detector : An ultraviolet-Visible absorption photometer (wavelength 470 nm)

Column : A stainless steel column 4.6 mm in inside diameter and 25 cm in length, packed with octadecylsilanized silica gel for liquid chromatography ($5\text{ }\mu\text{m}$ particle in diameter).

Column temperature : A constant temperature of about 30°C .

Mobile phase : acetonitrile : methanol : 2-propanol (44:54:2, v:v:v)

Flow rate : 1 mL/min

Saponification value

Take 2.0 g of this product, determine saponification value: 170~260

Acid value

Take 3 g of this product, determine acid value according to method 1: the limit is not more than 5.0.

Iodine value

Take 0.2 g of this product, determine iodine value: 40~90

Purity

- Heavy metals

Take 1.0 g of this product, determine heavy metals according to method 2: the limit is not more than 20 ppm. Use 1.0mL of standard lead solution as the control solution.

- Arsenic

Take 1.0 g of this product, prepare the test solution according to method 3, and perform the test: the limit is not more than 1 ppm.

Palmitoleic acid

Weigh accurately about 0.05 g of this product, add exactly 1 mL of 0.5 mol/L sodium hydroxide methanol solution. Heat this solution with reflux condenser until disappearance the oil droplet, keep heating for 10 minutes. After cooling, add 3 mL of boron trifluoride-methanol TS, heat for 5 minutes (by mantle heater or water bath). After methyl esterification, add 4 mL of *n*-hexane and 7 mL of saturated sodium chloride solution and mix well. Allow to stand, take the *n*-hexane layer, add 2 g of anhydrous sodium sulfate. Allow to stand for 1 hour, filter the *n*-hexane layer through a membrane filter with a pore size not exceeding 0.45 μm, use this solution as the sample solution. Use Supelco™37 Component FAME Mix (SUPELCO) as the standard solution of fatty acid components. Perform the test with 1 μL each of the sample solution and the standard solution as directed under Gas Chromatography according to the following conditions, and confirm that each peaks obtained with the sample solution show the same retention times with those obtained with the standard solution. Calculate fatty acid ratio of the sample solution by rate of each fatty acids : the ratio of palmitoleic acid is 30.0% min.

Operating conditions

Detector : Flame ionization detector

Column : column 0.25 mm in inside diameter and 100 m in length, packed with fused silica for gas chromatography (0.2 μm particle in diameter).

Carrier gas : Helium (purity 99.99% min.)

Detector gas : Hydrogen (purity 99.99% min.) and dry air

Column temperature : A constant temperature of about 200°C.

Detector temperature : A constant temperature of about 250°C(FID).

Injector temperature : A constant temperature of about 250°C.

Flow rate : 3.0 mL/min.

Split ratio : 1/80

Bacterial Count

Take 5 g of this solution, make 50mL test solution with diluent and perform the bacterial count test according to Hygiene Test Method; the limit is not more than 1×10^2 cfu/g.

Mold Count

Take 5 g of this solution, make 50mL test solution with diluent and perform the mold count test according to Hygiene Test Method; Negative / Not observe any colony.

Coli form

Take 1 mL of the solution which prepare the bacterial count test, and perform the coli form test according to Hygiene Test Method; Negative / Not observe any colony.

These standards and test method are referred to General Notices and General Tests, Processes and Apparatus of The Japanese Standards of Quasi-drug Ingredients, unless otherwise specified.

Product Name	: SEABERRY FRUIT OIL
Expiry date	: 2 years from date of manufacturing
Storage	: Store in a cool dry, ventilated location. Keep away from high temperature and sunlight, store in the closed containers
Manufacturer	: ORYZA OIL & FAT CHEMICAL CO., LTD. 1 Aza Numata Kitagata Kitagata-cho Ichinomiya-city, Aichi-pref. 493-8001 JAPAN

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