

EUGENYL METHYL ETHER

Prepared at the 29th JECFA (1985), published in FNP 34 (1986) and in FNP 52 (1992). No ADI allocated at the 25th JECFA (1981)

SYNONYMS Methyl eugenol, 4-allyl veratrol

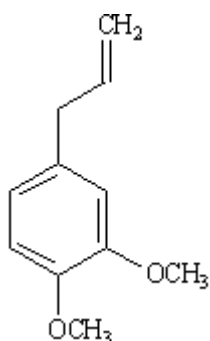
DEFINITION

Chemical names 1,2-Dimethoxy-4-(2-propenyl)-benzene

C.A.S. number 93-15-2

Chemical formula $C_{11}H_{14}O_2$

Structural formula



Formula weight 178.23

Assay Not less than 98%

DESCRIPTION Pale yellow liquid having a clovy odour.

FUNCTIONAL USES Flavouring agent

CHARACTERISTICS

IDENTIFICATION

Solubility (Vol. 4) Soluble in ethanol and in most fixed oils; insoluble in glycerin, propylene glycol

Refractive index (Vol. 4) $n(20, D): 1.532 - 1.535$

Specific gravity (Vol. 4) $d(25, 25): 1.032 - 1.036$

Infrared absorption The infrared spectrum of the sample corresponds with the reference infrared spectrum below

PURITY

Solubility in ethanol (Vol. 4) 1 ml dissolves in 2 ml of 70% ethanol at 25°

Acid value (Vol. 4)

Not more than 10

METHOD OF ASSAY

Method A:

Determine the content of methoxyl group (CH₃O), as directed under *Ethoxyl and Methoxyl Group Determination* and calculate the content of C₁₁H₁₄O₂ as follows:

$$C_{11}H_{14}O_2 (\%) = \text{content of } CH_3O \text{ groups } (\%) \times \frac{178.2}{31.03}$$

Method B:

Prepare a 1 in 100 solution of the sample in acetone and determine by *gas-liquid chromatography* using the following conditions:

Column

- length: 50 m
- material: glass
- packing: CW 20M (Carbowax 2000)
- Fuel gas: Hydrogen/air 35:300
- Carrier gas: Helium
- Flow rate: 1.9 ml/min
- Detector type: FID
- Temperatures
 - injection: 250°
 - column: 80°/0 min, then 4°/min, to 210°
- Split: 1:30
- Attenuation: 64
- Retention time: 27.5 min.
- Sample size: 2 µl

Infrared spectrum

Eugenyl methyl ether

