

Product Data Sheet (PDS)

Ferulic Acid

PRODUCT NAME : Ferulic Acid (COSMETIC)

This product is extracted and refined from the rice bran of *Oryza sativa* Linne (Gramineae). Dried product contains minimum of 98.0 % ferulic acid (C₁₀H₁₀O₄).

Appearance White or light yellowish brown crystalline powder.

It has no smell or lightly unique smell.

Certification Test

(1) This product has maximum values of absorption spectrum at wavelength 236 nm. and 322 nm respectively under the measurement of extinction spectra of ethanol solution. (1-100000)

(2) When 0.01 g of this product is dissolved in 10 ml of potassium hydroxide ethanolic solution, solution turns to yellow colour.

(3) 0.01 g of this product is dissolved in 2 ml of acetone and 0.1 ml solution of ferric chloride ethanol(1-50), solution turns to reddish brown colour.

Content of Ferulic Acid

Min. 98.0 %

(QUANTITATIVE ANALYSIS)

Dry this product with P₂O₅ under reduced pressure for 4 hours at 40 °C. Dissolve 0.02g in ethanol in a 50 ml volumetric flask, add ethanol to volume. (solution A) On the other hand, dissolve 0.02g of standard Ferulic Acid in ethanol in a 50 ml volumetric flask, and add ethanol to volume. (solution B). Analysis is performed by High Performance Liquid Chromatography (HPLC) as follows using 5 µl of solution A and B. Measure the area of solution A & solution B respectively.

Column : capcellpak C18 (4.6 mm × 250 mm)

Column Temperature : 35

Mobile phase : Methanol/0.1% phosphoric acid=50/50

Flow rate : 1.0 ml/min

Detection : UV(322 nm)

$$\text{Quantity of Ferulic Acid (\%)} = \frac{\text{WS(g)} \times \text{PS(\%)}}{\text{WT(g)} \times 100} \times \frac{\text{AT}}{\text{AS}} \times 100$$

WT : Weight of sample (g)
 WS : Weight of standard (g)
 AT : Area of solution A
 AS : Area of solution B
 PS : Purity of standard

Loss on Drying Max. 0.5 % (1g,105 ,3h)
 Ignition Residue Max. 0.1 % (The First Method of The Japanese Standards of Quasi-Drug Ingredients, 5 g)
 Melting Point 171 ~ 174

Purity Test

(1) Heavy Metals (as Pb) Max. 10 ppm (The Second Method of The Japanese Standards of Quasi-Drug Ingredients)

(2) Arsenic (as As₂O₃) Max. 1 ppm (The Third Method of The Japanese Standards of Quasi-Drug Ingredients)

Standard Plate Counts Max. 1×10² cfu/g (Analysis for Hygienic Chemists)

Moulds and Yeasts Max. 1×10² cfu/g (Analysis for Hygienic Chemists)

Coliforms Negative (Analysis for Hygienic Chemists)

Composition	Ingredient	Content
	Ferulic Acid	100 %

Ref: The Japanese Standards of Quasi-Drug Ingredients.