

Specification of Isopropylmethylphenol

— Test procedures and Acceptance criteria —

Product name		Isopropylmethylphenol	No.	1/1
Chemical name		4-isopropyl-3-methylphenol	Manufacturer	Osaka Kasei Co., Ltd.
Item		Test procedures and Acceptance criteria		
Appearance		Colorless or white, crystals		
Smell		Little		
Identification	Identification(1) Mixing with camphor	Triturate this product with an equal mass of camphor: the mixture liquefies.		
	Identification(2) Reaction with sulfuric and nitric acids	When a small piece of this product is dissolved in 1mL of glacial acetic acid, and then 6 drops of sulfuric acid and 1 drop of nitric acid are added to this test solution, the solution turns reddish brown.		
	Identification(3) Chloroform reaction	When 1g of this product is added to 5mL of sodium hydroxide solution (1→10) and heated on a water bath, it turns to colorless to light yellow liquid. The liquid turns yellowish green when shaken with 2-3 drops of chloroform while heated.		
	Identification(4) Maximum absorption	Weigh 0.05g of this product, and add ethanol to make exactly 100mL. Then, dilute 5mL of this solution with ethanol to make exactly 50mL. This solution has the maximum absorption at the wavelength of 279 ± 2 nm.		
Melting point		110 - 113°C Instrumental analysis is performed by the general tests of melting point determination in Japanese Pharmacopoeia.		
Purity	Purity(1) Property of solution	When 3.0g of this product is dissolved in 10 mL of ethanol, the solution is clear.		
	Purity(2) Organic impurities	Dissolve 1.0 g of this product in 50 mL of ethanol and spot 10 μL of the solution on a thin-layer plate. Thin-layer chromatography is performed by the general tests in Japanese Pharmacopoeia using hexane/ethanol mixture (20:1) as the developing solvent. When the thin-layer plate is exposed to iodine vapor for a few minutes after air-drying, the number of yellow or yellowish brown spot observed is one.		
	Heavy metals	≤ 10 ppm 2g of this product is tested by Method 3 of the general tests of heavy metal in Japanese Pharmacopoeia. Lead standard solution 2.0 mL is added as a comparative solution.		
	Arsenic	≤ 2 ppm 1.0g of this product is tested by Method 3 of the general tests of arsenic in Japanese Pharmacopoeia.		
Assay		$\geq 97.0\%$ In accordance with the general tests of spectrophotometry in Japanese Pharmacopoeia, determine the absorbance of test solution and standard solution at maximum absorption wave length (279 ± 2 nm).		

References

1. Japanese Pharmacopoeia, 16th ed.: Explanatory Edition, Tokyo, Hirokawa Shoten, 2011