Octyldodecanol

» Octyldodecanol contains not less than 90.0 percent of 2-octyldodecanol, the remainder consisting chiefly of related alcohols.

Packaging and storage— Preserve in tight containers.

USP Reference standards ⟨ 11 ⟩ **—** *USP Octyldodecanol RS*. *USP Stearyl Alcohol RS*.

Identification— The retention time of the major peak in the chromatogram of the *Assay preparation* corresponds to that of the major peak in the chromatogram of the *System suitability solution*, as obtained in the *Assay*.

Acid value ⟨ 401 ⟩ : not more than 0.5.

Iodine value ⟨ 401 ⟩ : not more than 8.

Hydroxyl value ⟨ 401 ⟩ : between 175 and 190.

Saponification value ⟨ 401 ⟩ : not more than 5.

Organic volatile impurities, *Method V* ⟨ 467 ⟩ : meets the requirements.

Solvent: dimethyl sulfoxide.

Residual solvents ⟨ 467 ⟩ **:** meets the requirements.
(Official January 1, 2007)

Assay—

System suitability solution— Dissolve accurately weighed quantities of *USP Octyldodecanol RS* and *USP Stearyl Alcohol RS* in alcohol to obtain a solution having known concentrations of about 9 mg per mL and 1 mg per mL, respectively.

Assay preparation— Dissolve 90 mg of Octyldodecanol in 10.0 mL of alcohol, and mix.

Chromatographic system (see *Chromatography* ⟨ 621 ⟩)—The gas chromatograph is equipped with a flame-ionization detector and a 2-mm × 2-m column packed with 3% liquid phase G2 on support S1A. The carrier gas is nitrogen. The column temperature is programmed as follows. Initially it is equilibrated at about 80°, then increased at a rate of 6° per minute to 300°. The detector and the injection port temperatures are both

maintained at about 280°. Chromatograph the *System suitability solution*, and record the peak responses as directed for *Procedure:* the resolution, *R,* between octyldodecanol and stearyl alcohol is not less than 4.0; and the relative standard deviation for replicate injections is not more than 1.5%.

Procedure— Inject about 2 µL of the *Assay preparation* into the chromatograph, record the chromatogram, and measure the areas for the major peaks. Calculate the percentage of $C_{20}H_{42}O$ in the portion of Octyldodecanol taken by the formula:

$$100(r_U / r_s),$$

in which r_U is the peak area for octyldodecanol obtained from the *Assay preparation;* and r_s is the sum of the areas of all the peaks except the solvent peak.

Auxiliary Information— *Staff Liaison* : Catherine Sheehan, B.Sc., Scientist
Expert Committee : (EM105) Excipient Monographs 1
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Phone Number : 1-301-816-8262