

(iii) *Calculations.* Calculate the corrected specific surface area of the sample as follows:

$$\text{SSA of sample} = \frac{\text{Observed SSA of sample} \times \text{assigned SSA of standard}}{\text{Observed SSA of standard}}$$

(10) *Crystallinity.* Proceed as directed in § 436.203(a) of this chapter.

[39 FR 19134, May 30, 1974, as amended at 44 FR 20660, Apr. 6, 1979; 50 FR 19920, May 13, 1985]

§ 449.40 Natamycin.

(a) *Requirements for certification—(1) Standards of identity, strength, quality, and purity.* Natamycin is 22-[(3 - amino - 3,6 - dideoxy -β-D-mannopyranosyl) - oxy] - 1,3,26-trihydroxy - 12-methyl-10-oxo-6,11,28-trioxatricyclo [22.3.1.0^{5,7}] octacos-8,14,16,18,20 - pentaene-25-carboxylic acid. It is an off-white to cream colored powder which may contain up to 3 moles of water. It is practically insoluble in water, slightly soluble in methanol, and soluble in glacial acetic acid and dimethylformamide. It is so purified and dried that:

(i) Its potency is not less than 900 micrograms of natamycin per milligram on an anhydrous basis.

(ii) Its moisture content is not less than 6.0 percent and not more than 9.0 percent.

(iii) Its pH in a 1 percent aqueous suspension is not less than 5.0 and not more than 7.5.

(iv) It passes the identity test.

(v) It is crystalline.

(2) *Labeling.* It shall be labeled in accordance with the requirements of § 432.5 of this chapter.

(3) *Requests for certification; samples.* In addition to complying with the requirements of § 431.1 of this chapter, each such request shall contain:

(i) Results of tests and assays on the batch for potency, moisture, pH, identity, and crystallinity.

(ii) Samples required: 10 packages, each containing approximately 500 milligrams.

(b) *Tests and methods of assay.* Dilute solutions of natamycin are very sen-

sitive to light and should be kept in the dark as much as possible or substantial decomposition will take place.

(1) *Potency.* Proceed as directed in § 436.105 of this chapter, preparing the sample for assay as follows: Dissolve an accurately weighed sample in dimethylsulfoxide and further dilute with sufficient dimethylsulfoxide to give a concentration of 100 micrograms of natamycin per milliliter (estimated). Further dilute with 0.2M potassium phosphate buffer, pH 10.5 (solution 10), to the reference concentration of 5.0 micrograms of natamycin per milliliter (estimated).

(2) *Moisture.* Proceed as directed in § 436.201 of this chapter.

(3) *pH.* Proceed as directed in § 436.202 of this chapter, using a 1.0 percent aqueous suspension.

(4) *Identity.* Accurately weigh approximately 50 milligrams of the sample into a 200-milliliter volumetric flask. Add approximately 5.0 milliliters of distilled water, and completely moisten the sample. Then add approximately 100 milliliters of an acid-alcohol solvent (0.1 percent glacial acetic acid in methyl alcohol) and stir or shake mechanically in the dark until solution is complete. Dilute to volume with the acid-alcohol solvent. Transfer 2.0 milliliters of this solution to a 100-milliliter volumetric flask and dilute to volume with the acid-alcohol solvent. Using a suitable spectrophotometer with 1-centimeter cells and the acid-alcohol solvent as a blank, record the ultraviolet absorption spectrum from 215 to 330 nanometers. The spectrum compares qualitatively to that of the natamycin working standard similarly treated.

(5) *Crystallinity.* Proceed as directed in § 436.203(a) of this chapter.

[43 FR 55384, Nov. 28, 1978, as amended at 46 FR 16684, Mar. 13, 1981]