

# PRODUCT DATA SHEET

USP XXIV

## TRYPTOPHAN

CAS No. [73-22-3]

$C_{11}H_{12}N_2O_2$

M.W.: 204.23

Tryptophan: White to slightly yellowish white crystals or crystalline powder, having a slightly bitter taste. Soluble in hot alcohol and in dilute hydrochloric acid.

Tryptophan contains not less than 98.5 percent and not more than 101.5 percent of  $C_{11}H_{12}N_2O_2$ , as L-tryptophan, calculated on the dried basis.

Packaging and storage Preserve in well-closed containers. USP Reference standards (11)  $\tilde{N}$ USP L-tryptophan RS.

Identification, Infrared Absorption (197K). Specific rotation (781S): between  $-29.4^{\circ}$  and  $-32.8^{\circ}$ .

Test solution: 10 mg per mL, in water (heat gently to dissolve, if necessary).

pH (791): between 5.5 and 7.0, in a solution (1 in 100).

Loss on drying (731)-Dry it at  $105^{\circ}$  for 3 hours: it loses not more than 0.3% of its weight.

Residue on ignition (281): not more than 0.1%.

Chloride (221)-A 0.73-g portion shows no more chloride than corresponds to 0.50 mL of 0.020 N hydrochloric acid (0.05%)

Sulfate (221)-A 0.33-g portion shows no more sulfate than corresponds to 0.10 mL of 0.020 N sulfuric acid (0.03%).

Arsenic (211): 1.5 ppm.

Iron (241): 0.003%.

Heavy metals, Method II (231): 0.0015%.

Organic volatile impurities, Method IV (467): meets the requirements.

Assay-Transfer about 200 mg of Tryptophan, accurately weighed, to a 125-mL flask, dissolve in a mixture of 3 mL of formic acid and 50 mL of glacial acetic acid, and titrate with 0.1 N perchloric acid VS, determining the endpoint potentiometrically. Perform a blank determination, and make any necessary correction. Each mL of 0.1 N perchloric acid is equivalent to 20.42 mg of  $C_{11}H_{12}N_2O_2$