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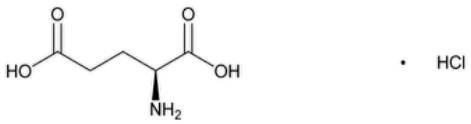
L-Glutamic Acid, Hydrochloride



$C_5H_9NO_4 \cdot HCl$ 183.59

L-2-Aminoglutaric acid, hydrochloride;

2-Aminopentanedioic acid, hydrochloride CAS RN®: 138-15-8.

DEFINITION

L-Glutamic Acid, Hydrochloride, contains NLT 98.5% and NMT 101.5% of $C_5H_9NO_4 \cdot HCl$, calculated on the dried basis.

IDENTIFICATION

Change to read:

• ▲**Spectroscopic Identification Tests ⟨197⟩, *Infrared Spectroscopy*: 197K**▲ (CN 1-May-2020)

ASSAY

• **Procedure**

Sample: 100 mg of L-Glutamic Acid, Hydrochloride, previously dried

Analysis: Dissolve the *Sample* in 0.5 mL of water, add 15.0 mL of 0.1 N perchloric acid VS, and heat on a water bath for 30 min. After cooling, add 45 mL of glacial acetic acid, and titrate the excess perchloric acid with 0.1 N sodium acetate, determining the endpoint potentiometrically. Perform a blank determination (see *Titrimetry ⟨541⟩*). Each mL of 0.1 N perchloric acid is equivalent to 18.36 mg of $C_5H_9NO_4 \cdot HCl$.

Acceptance criteria: 98.5%–101.5% on the dried basis

IMPURITIES

Inorganic Impurities

• **Residue on Ignition ⟨281⟩:** NMT 0.25%

SPECIFIC TESTS

• **Optical Rotation, *Specific Rotation* ⟨781S⟩:** +25.2° to +25.8°, determined at 20°

Sample solution: 100 mg/mL, in 2 N hydrochloric acid

• **Loss on Drying ⟨731⟩:** Dry a sample at 80° for 4 h: it loses NMT 0.5% of its weight.

ADDITIONAL REQUIREMENTS

• **Packaging and Storage:** Store in well-closed, light-resistant containers.

• **USP Reference Standards ⟨11⟩**

USP l-Glutamic Acid, Hydrochloride RS

Auxiliary Information - Please check for your question in the FAQs before contacting USP.

Topic/Question	Contact	Expert Committee
L-GLUTAMIC ACID, HYDROCHLORIDE	Documentary Standards Support	SE2020 Simple Excipients

Chromatographic Database Information: Chromatographic Database

Most Recently Appeared In:
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