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Change to read:

0.5 N Hydrochloric Acid VS

▲ (USP 1-May-2021)

To a 1000-mL volumetric flask containing 40 mL of [water](#) slowly add 43 mL of [hydrochloric acid](#). Cool, and add [water](#) to volume.

Standardization

▲ See [Volumetric Solutions, 1. Introduction](#).

See [Titrimetry \(541\)](#).

Standardize by one of the following procedures. [NOTE—Other standardization procedures may be used. See [Volumetric Solutions, 2. Preparations and Standardization, 2.3 Standardization](#).]

Standardization with visual endpoint: ▲ (USP 1-May-2021) Accurately weigh about 2.5 g of [tromethamine](#), dried according to the label instructions or, if this information is not available, dried at 105° for 3 h. Dissolve in 50 mL of [water](#), and add 2 drops of [bromocresol green TS](#). Titrate with the hydrochloric acid solution to a pale yellow endpoint. Each 60.57 mg of tromethamine is equivalent to 1 mL of 0.5 N hydrochloric acid.

$$\Delta N = \frac{\text{mg tromethamine} \times (\text{Assay}/100)}{121.14 \times \text{mL HCl}}$$

Standardization with potentiometric endpoint: Accurately weigh about 0.5 g of [tromethamine](#), dried according to the label instructions or, if this information is not available, dried at 105° for 3 h. Dissolve in 50 mL of [water](#). Titrate potentiometrically with the hydrochloric acid solution using a combined pH electrode. Each 60.57 mg of tromethamine is equivalent to 1 mL of 0.5 N hydrochloric acid.

$$N = \frac{\text{mg tromethamine} \times (\text{Assay}/100)}{121.14 \times \text{mL HCl}} \quad \Delta \text{ (USP 1-May-2021)}$$

[NOTE—If this volumetric solution is used in a qualitative application such as pH adjustment, dissolution medium, or diluent, its standardization is not required.]

Auxiliary Information - Please [check for your question in the FAQs](#) before contacting USP.

Topic/Question	Contact	Expert Committee
0.5 N HYDROCHLORIC ACID VS	Margareth R.C. Marques Principal Scientific Liaison	HDQ Headquarters

Most Recently Appeared In:
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