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Change to read:

0.01 M Bismuth Nitrate VS

▲ (USP 1-Aug-2020)

Dissolve 4.86 g of [bismuth nitrate pentahydrate](#) in 60 mL of [diluted nitric acid](#), and add [0.01 N nitric acid](#) to make 1000 mL.

Standardization

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

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

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

Standardization with visual endpoint:▲ (USP 1-Aug-2020) Accurately measure 25 mL of the prepared bismuth nitrate solution, add 50 mL of [water](#) and 1 drop of [xylenol orange TS](#), and titrate the solution with [0.01 M edetate disodium VS](#) until the red color changes to yellow.

$$\Delta M = \frac{\text{mL EDTA} \times M_{\text{EDTA}}}{\text{mL bismuth nitrate}}$$

Standardization with potentiometric endpoint

Acetate buffer, pH 4.7: Transfer 116 g of [ammonium acetate](#) to a 1000-mL volumetric flask containing about 200 mL of [water](#), and swirl until dissolved. Add 86 mL of [glacial acetic acid](#) and dilute with [water](#) to volume.

Accurately measure 25 mL of the bismuth nitrate solution into a titration vessel, add 5 mL of *Acetate buffer, pH 4.7* and 5 mL of [0.01 M edetate disodium VS](#). After a reaction time of 1 min, titrate potentiometrically with [0.1 N cupric nitrate VS](#) using a copper ion-selective electrode.

$$M = \frac{(\text{mL EDTA} \times M_{\text{EDTA}}) - (\text{mL cupric nitrate} \times N_{\text{cupric nitrate}})}{\text{mL bismuth nitrate}} \quad \Delta \text{ (USP 1-Aug-2020)}$$

[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
0.01 M BISMUTH NITRATE VS	Margareth R.C. Marques Principal Scientific Liaison	HDQ Headquarters

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