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Vanadium Pentoxide,

V_2O_5 181.88 CAS RN®: 1314-62-1.—Fine, yellow to orange-yellow powder. Slightly soluble in water; soluble in concentrated acids and in alkalies; insoluble in alcohol.

Assay: Transfer about 400 mg, accurately weighed, to a 500-mL conical flask, and add 150 mL of water and 30 mL of dilute sulfuric acid (1 in 2). Boil the solution on a hot plate for 5 minutes, add 50 mL of water, and continue boiling until a yellow solution is obtained. Transfer the hot plate and the flask to a well-ventilated hood, and bubble sulfur dioxide gas through the solution for 10 minutes, or until the solution is a clear, brilliant blue color. Rinse the gas delivery tube into the flask with a few mL of water, then bubble carbon dioxide gas through the solution for 30 minutes while continuing to boil the solution gently. Cool the solution to about 80°, and titrate with 0.1 N potassium permanganate VS to a yellow-orange endpoint. Perform a complete blank determination, and make any necessary correction. Each mL of 0.1 N potassium permanganate is equivalent to 9.095 mg of V_2O_5. Not less than 99.5% is found.

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

Topic/Question	Contact	Expert Committee
VANADIUM PENTOXIDE	Margareth R.C. Marques Principal Scientific Liaison	HDQ Headquarters

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