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Lead Monoxide

(Litharge), PbO 223.20 CAS RN[®]: 1317-36-8.—Heavy, yellowish or reddish-yellow powder. Insoluble in water and in alcohol; soluble in acetic acid, in diluted nitric acid, and in warm solutions of the fixed alkali hydroxides.

Assay: Accurately weigh about 300 mg, freshly ignited in a muffle furnace at $600 \pm 50^\circ$, and dissolve it by warming with 10 mL of water and 1 mL of glacial acetic acid. Dilute with 75 mL of water, heat to boiling, add 50.0 mL of 0.1 N potassium dichromate VS, and boil for 2 to 3 minutes. Cool, transfer to a 200-mL volumetric flask with the aid of water, dilute with water to volume, mix, and allow to settle. Withdraw 100.0 mL of the clear liquid, and transfer to a glass-stoppered flask. Add 10 mL of diluted sulfuric acid and 1 g of potassium iodide, insert the stopper, mix gently, and allow to stand for 10 minutes. Then titrate the liberated iodine, representing the excess of dichromate, with 0.1 N sodium thiosulfate VS, adding 3 mL of starch TS as the endpoint is approached: each mL of 0.1 N potassium dichromate is equivalent to 7.440 mg of PbO. Not less than 98% is found.

Insoluble in Acetic Acid: Dissolve 2 g in 30 mL of dilute glacial acetic acid (1 in 2), boil gently for 5 minutes, filter, wash the residue with diluted acetic acid, and dry at 105° for 2 hours: the residue weighs not more than 10 mg (0.5%).

Substances Not Precipitated By Hydrogen Sulfide: Completely precipitate the lead from the filtrate obtained in the test for *Insoluble in Acetic Acid* by passing hydrogen sulfide into it, filter, and wash the precipitate with 20 mL of water. To one-half of the mixed filtrate and washings add 5 drops of sulfuric acid, evaporate to dryness, and ignite at $800 \pm 25^\circ$ for 15 minutes: the residue weighs not more than 5 mg (0.5%).

Volatile Substances: Accurately weigh about 5 g, and heat strongly in a covered porcelain crucible: it loses not more than 2.0% of its weight.

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

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

Most Recently Appeared In:

Pharmacopeial Forum: Volume No. Information currently unavailable

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