Chlorothiazide
Item No. 17909

CAS Registry No.: 58-94-6
Formal Name: 6-chloro-2H-1,2,4-benzothiadiazine-7-sulfonamide, 1,1-dioxide
Synonyms: Diuril, NSC 25693
MF: C_{7}H_{6}ClN_{3}O_{4}S_{2}
FW: 295.7
Purity: ≥95%
Stability: ≥2 years at -20°C
Supplied as: A crystalline solid
UV/Vis.: \lambda_{max} : 226, 279 nm

Laboratory Procedures
For long term storage, we suggest that chlorothiazide be stored as supplied at -20°C. It should be stable for at least two years.

Chlorothiazide is supplied as a crystalline solid. A stock solution may be made by dissolving the chlorothiazide in the solvent of choice. Chlorothiazide is soluble in organic solvents such as DMSO and dimethyl formamide (DMF), which should be purged with an inert gas. The solubility of chlorothiazide in these solvents is approximately 20 and 30 mg/ml, respectively.

Chlorothiazide is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, chlorothiazide should first be dissolved in DMF and then diluted with the aqueous buffer of choice. Chlorothiazide has a solubility of approximately 0.5 mg/ml in a 1:1 solution of DMF:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description
Chlorothiazide is a first-in-class thiazide diuretic initially discovered from its ability to inhibit carbonic anhydrase in vitro.\(^1\) As an antihypertensive agent, this thiazide increases renal excretion of sodium, potassium, chloride, and bicarbonate ions by inhibiting tubular reabsorptive mechanisms.\(^1\)

Reference