**PRODUCT INFORMATION**

**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:** C₇H₆ClN₃O₄S₂  
**FW:** 295.7  
**Purity:** ≥95%  
**Supplied as:** A crystalline solid  
**Storage:** -20°C  
**Stability:** ≥4 years

*Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.*

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**Laboratory Procedures**

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

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**Description**

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

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**Reference**