

Vitamin B1

CAS Number: 67-03-8

Storage Temperature: Room Temperature

Product Description :

Appearance: White Powder

Molecular formula: $C_{12}H_{17}ClN_4OS \cdot HCl$

Molecular Weight: 337.27

Synonyms: Thiamine hydrochloride, Aneurine hydrochloride

Thiamine (Vitamin B1) is one of the essential vitamins and is required for carbohydrate metabolism. Thiamine is biosynthesized by microorganisms and plants, and may be found in whole grains, meat products, milk, vegetables, legumes, and fruit. Deficiency of thiamine in the diet leads to a syndrome known as beri-beri. This is characterized by peripheral neuritis, muscle wasting, and muscle weakness.

Preparation Instructions

This product is soluble in water (50 mg/ml), yielding a clear, colorless solution. It is also soluble in glycerol (1g/18 ml), 95% ethanol (1 g/100 ml), absolute ethanol (1 g/315 ml). It is practically insoluble in ether, benzene, hexane, and chloroform.

Thiamine hydrochloride is destroyed by alkali solutions and alkaline drugs, such as sodium phenobarbital, and by oxidizing and reducing agents. It can be precipitated with tannins (source is wine) and reagents which precipitate alkaloids such as Mayer's reagent, mercuric chloride, picric acid, and iodine.

Storage/Stability:

Store thiamine hydrochloride at room temperature. Aqueous solutions at pH 3.5 can be sterilized at 120 °C, but solutions above pH 5 are heat sensitive.

Precautions and Disclaimer :

For Laboratory Use Only. Not for drug, household or other uses.