

## Pyrazinamide PRODUCT DATA SHEET

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Product Name: Pyrazinamide

Product Number: P020

**CAS Number:** 98-96-4

Molecular Formula:  $C_5H_5N_3O$ 

Molecular Weight: 123.11

Form: Powder

Appearance: White crystalline powder

**Solubility:** Alcohol: Slightly soluble

Methylene Chloride: Slightly soluble

Water: Sparingly soluble

**Source:** Synthetic

Water Content (Karl

Fischer):

≤0.5%

Melting Point: 189-191°C

Storage Conditions: 2-8°C

**Description:** Pyrazinamide is a sparingly soluble bactericidal antitubercular drug.

**Mechanism of Action:** The mechanism of pyrazinamide is not entirely understood. It is speculated that

pyrazinamide enters a target cell and is converted into pyrazinoic acid (POA) which disrupts normal membrane permeability functions. Internal pH of the cell begins to decrease as POA accumulates in the cell's cytoplasm which is

thought to inhibit fatty acid synthase activity.

**Spectrum:** Pyrazinamide is used almost exclusively against *Mycobacterium tuberculosis*.

References: Cynamon, M. H., and Et Al. "Activity of N-propyl Pyrazinoate against

Pyrazinamide-resistant Mycobacterium Tuberculosis: Investigations into Mechanism of Action of and Mechanism of Resistance to Pyrazinamide." *Antimicrobial Agents and Chemotherapy* 39.6 (1995): 1269-271.

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