

# Pyrazinamide Ph. Eur.

## PRODUCT IN FOCUS



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### INTRODUCTION

Pyrazinamide is a first-line antitubercular drug used in combination therapy for the treatment of tuberculosis (TB). It is a synthetic pyrazine derivative and acts as a prodrug, which is converted into its active form (pyrazinoic acid) inside *Mycobacterium tuberculosis*.

It is particularly effective in the initial intensive phase of TB therapy, where it helps shorten the total duration of treatment recommended by the World Health Organization.

### MANUFACTURE

Pyrazinamide is typically produced from pyrazine intermediates through carboxamide formation.

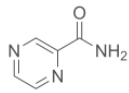
### APPLICATIONS

#### Pharmaceutical

- First-line antituberculosis medication
- Used in combination with drugs such as:
  - ✓ Isoniazid
  - ✓ Rifampicin
  - ✓ Ethambutol

#### Therapeutic role

- Active against semi-dormant tubercle bacilli
- Helps reduce TB treatment duration from ~9–12 months to ~6 months
- Improves sterilizing activity in acidic environments (e.g., macrophages)

<b>Synonym(s)</b>	Pyrazine-2-carboxamide
<b>CAS no.</b>	98-96-4
<b>EINECS no.</b>	202-717-6
<b>Molecular formula</b>	C <sub>5</sub> H <sub>5</sub> N <sub>3</sub> O
<b>Molecular weight</b>	123.11
<b>Structure</b>	

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### SPECIFICATIONS

Test	Unit	Specification
Appearance	-	A white or almost white crystalline powder
Solubility	-	Sparingly soluble in water, slightly soluble in ethanol (96%) and in methylene chloride
Identification C	-	Test C – IR spectrum of should be concordant to that of similar recorded spectrum of WRS of Pyrazinamide
Appearance of solution	-	Solution S is clear and colourless
Acidity or Alkalinity	-	Complies as per EP
Related substances		
1. Impurity A	%	NMT 0.05%
2. Impurity B	%	NMT 0.05%
3. Unspecified impurities	%	NMT 0.05%
4. Total impurity	%	NMT 0.2%
Water (by KF)	%	Max 0.5
Sulfated ash	%	Max 0.1
Assay (by Potentiometrically)	%	Between 99.0 to 101.0

### PACKING

25 kg HDPE drum

### STORAGE

Store in cool place protected from Light and Moisture

### CERTIFICATIONS

WHO-GMP, WC, CEP

ExSyn offers Pyrazinamide on commercial scales and welcomes enquiries. Our exceptional quality and service will make ExSyn your supplier of choice! If you need additional information or SDS, please contact us.