

## Native Almonds Mandelonitrile Lyase

Cat. No. NATE-0557

Lot. No. (See product label)

### Introduction

#### Description

In enzymology, a mandelonitrile lyase is an enzyme that catalyzes the chemical reaction: mandelonitrile  $\leftrightarrow$  hydrogen cyanide + benzaldehyde. Hence, this enzyme has one substrate, mandelonitrile, and two products, hydrogen cyanide and benzaldehyde. This enzyme belongs to the family of lyases, specifically the aldehyde-lyases, which cleave carbon-carbon bonds. This enzyme participates in cyanoamino acid metabolism. It has 2 cofactors: flavin, and flavoprotein.

#### Applications

Mandelonitrile lyase from almonds has been used in a study to assess the apoplastic antioxidant system in Prunus. It has also been used in a study to investigate screening for new hydroxynitrilases from plants.

#### Synonyms

mandelonitrile lyase; EC 4.1.2.10; (R)-oxynitrilase; oxynitrilase; D-oxynitrilase; D- $\alpha$ -hydroxynitrile lyase; mandelonitrile benzaldehyde-lyase; PaHNL; AtHNL; PhaMDL; (R)-HNL; (R)-PeHNL; (R)-hydroxynitrile lyase; R-selective hydroxynitrile lyase; R-selective HNL; (R)-(+)-mandelonitrile lyase; 9024-43-5

### Product Information

#### Source

Almonds

#### Form

ammonium sulfate suspension; Suspension in 50 mM imidazole, 2.8 M (NH<sub>4</sub>)<sub>2</sub>SO<sub>4</sub>, pH 6.0

#### EC Number

EC 4.1.2.10

#### CAS No.

9024-43-5

#### Activity

80-240 units/mg protein (biuret)

#### Unit Definition

One unit will form 1.0  $\mu$ mole of benzaldehyde and HCN from mandelonitrile per min at pH 5.4 at 25°C.

### Storage and Shipping Information

#### Storage

2-8°C