

## manganese peroxidase

Cat. No. EXWM-0494

Lot. No. (See product label)

### Introduction

**Description** A hemoprotein. The enzyme from white rot basidiomycetes is involved in the oxidative degradation of lignin. The enzyme oxidizes a bound Mn<sup>2+</sup> ion to Mn<sup>3+</sup> in the presence of hydrogen peroxide. The product, Mn<sup>3+</sup>, is released from the active site in the presence of a chelator (mostly oxalate and malate) that stabilizes it against disproportionation to Mn<sup>2+</sup> and insoluble Mn<sup>4+</sup>. The complexed Mn<sup>3+</sup> ion can diffuse into the lignified cell wall, where it oxidizes phenolic components of lignin and other organic substrates. It is inactive with veratryl alcohol or nonphenolic substrates.

**Synonyms** peroxidase-M2; Mn-dependent (NADH-oxidizing) peroxidase

### Product Information

**Form** Liquid or lyophilized powder

**EC Number** EC 1.11.1.13

**CAS No.** 114995-15-2

**Reaction**  $2 \text{Mn(II)} + 2 \text{H}^+ + \text{H}_2\text{O}_2 = 2 \text{Mn(III)} + 2 \text{H}_2\text{O}$

**Notes** This item requires custom production and lead time is between 5-9 weeks. We can custom produce according to your specifications.

### Storage and Shipping Information

**Storage** Store it at +4 °C for short term. For long term storage, store it at -20 °C~-80 °C.