

## violaxanthin de-epoxidase

Cat. No. EXWM-1269

Lot. No. (See product label)

### Introduction

**Description** Along with EC 1.14.13.90, zeaxanthin epoxidase, this enzyme forms part of the xanthophyll (or violaxanthin) cycle for controlling the concentration of zeaxanthin in chloroplasts. It is activated by a low pH of the thylakoid lumen (produced by high light intensity). Zeaxanthin induces the dissipation of excitation energy in the chlorophyll of the light-harvesting protein complex of photosystem II. In higher plants the enzyme reacts with all-trans-diepoxides, such as violaxanthin, and all-trans-monoepoxides, but in the alga *Mantoniella squamata*, only the diepoxides are good substrates.

**Synonyms** VDE

### Product Information

**Form** Liquid or lyophilized powder

**EC Number** EC 1.23.5.1

**CAS No.** 57534-73-3

**Reaction** violaxanthin + 2 L-ascorbate = zeaxanthin + 2 L-dehydroascorbate + 2 H<sub>2</sub>O (overall reaction); (1a) violaxanthin + L-ascorbate = antheraxanthin + L-dehydroascorbate + H<sub>2</sub>O; (1b) antheraxanthin + L-ascorbate = zeaxanthin + L-dehydroascorbate + H<sub>2</sub>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.