

# Glutamine Synthetase (GS) Activity Assay Kit

## Product Information

### Product Overview

**Significance of Measurement:** Glutamine synthetase (GS, EC 6.3.1.2) is a key enzyme in ammonia assimilation in plants. It catalyzes the conversion of ammonium ions and glutamate to glutamine, preventing ammonium toxicity and providing a major storage and transport form of nitrogen.

**Principle of Measurement:** GS catalyzes the formation of glutamine in the presence of ATP and  $Mg^{2+}$ . Glutamine is further converted to  $\gamma$ -glutamyl hydroxamate, which forms a red complex with ferric ions under acidic conditions. The complex exhibits maximum absorbance at 540 nm.

### Size

100t/48s

### Storage

Store at -20 °C. Shelf life: 6 months.

### Synonyms

GS Kit

**Detection method** Spectrophotometer/Microplate Reader

### Materials Required but Not Supplied

Visible spectrophotometer or microplate reader, water bath, benchtop centrifuge, adjustable pipettes, quartz cuvettes or 96-well plates, mortar, ice, and distilled water.