



Product Information

GLUTATHIONE PEROXIDASE
(GSH-px; Glutathione;
hydrogen-peroxidase oxidoreductase; EC 1.11.1.9)
From Human Erythrocytes

Product No. **G4013**

Lyophilized powder containing approx.
20% protein (W/C), 25% sucrose and 3% dithiothreitol;
balance consists primarily of sodium phosphate buffer
salts.

Unit Definition:

One unit will catalyze the oxidation by H_2O_2 of 1.0
micromole of reduced glutathione (GSH) to oxidized
glutathione (GS-SG) per minute at pH 7.0 at 25 °C.

Note: At the reported pH optimum of 8.8 we have
found the activity to be approx. 10 times that at
pH 7.0. However, to remain consistent with literature
and avoid complications arising from non-enzymatic
oxidation of GSH, our unit is defined at
pH 7.0.

Reconstitution and Stability:

- a) Store lyophilized powder desiccated below 0 °C.
- b) Reconstitute in appropriate buffer containing at
least 1 mM dithiothreitol.
- c) When reconstituted as in (b), the enzyme is
stable in the frozen state. Since the enzyme loses
approx. 20% activity after 4 freeze-thaw cycles, it
is recommended that the reconstituted enzyme
be divided into smaller "working aliquots" and
frozen for later use.

Reference:

Wendel, A., Enzymatic Basis of Detoxication, Jacoby,
W.B., ed., Academic Press, N.Y., 333 (1980).