

Technical Information

OxyStat

Colorimetric assay for the quantitative determination of peroxides (Oxidative capacity)

Cat. No.:	BI-5007
Volume:	96 tests
Method:	Colorimetric Assay
Range:	0-600 $\mu\text{mol/l}$
Sensitivity:	7 $\mu\text{mol/l}$
Incubation time:	15 min
Sample volume:	10 μl
Sample type:	Serum, EDTA plasma, biological fluids (cell culture supernatant after matrix check)
Sample preparation:	We recommend EDTA-plasma as sample type because in serum a time dependent increase in peroxide concentration is observed. When serum is chosen, please make sure that during preparation of serum a time period no longer than 30 min at room temperature is allowed for clotting. Store EDTA or serum samples at -20°C . Heparinized plasma should not be used for this assay, because it often precipitates upon storage and thus changes the results. Heparin-plasma, lipemic or haemolytic samples may give erroneous results. Cloudy samples should be centrifuged at least 5 minutes at 5000xg before use in the assay. All samples should be mixed well before assaying.
Reference values:	Serum: <350 $\mu\text{mol/l}$ EDTA plasma: <400 $\mu\text{mol/l}$ Median: 372 $\mu\text{mol/l}$
Species:	Human
Intended use:	CE

Cells and tissues are sensitive to oxidative stress, caused by the formation of free radicals. If not deactivated by antioxidants, organic peroxides and hydroperoxides are the first reaction products between cellular constituents and free radicals or other reactive oxygen derivatives.

The determination of the oxidative status / oxidative stress is essential in today's medical research and diagnostics. Methods used so far were either expensive (HPLC), or detected only degradation products of polyunsaturated fatty acids, like TBARS (thiobarbituric acid reactive substances).

The Biomedica OxyStat assay measures the total peroxide concentration of a sample, utilizing a quick and simple assay procedure. Results show a direct correlation between free radicals and circulating biological peroxides and thus allow the characterization of the oxidative status in biological samples.

Intended applications:

- Cardiovascular Disease - Atherosclerosis
- Inflammatory processes
- Sepsis
- Neurodegenerative processes
- Carcinogenesis

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