



Product Sheet

Oxalate - Oxalic Acid

BioSystems

What is Oxalate?

Oxalate is a natural end product of metabolism in the body. It is excreted from the body by urine. If oxalate levels are too high, the extra oxalate can combine with calcium to form kidney stones. These stones are hard masses of chemicals that can get stuck in the urinary tract. They commonly cause severe pain. Calcium-oxalate kidney stones are the most common type. High levels of oxalate may be caused by foods rich in oxalate and by absorption or overproduction of oxalate by the body.

Why measure Oxalate?

Reagent for the measurement of oxalate concentration in human urine for the assessment of its variations in general population. An increased excretion of oxalate in urine may occur as a result of an excessive ingestion of oxalate rich foods, because of malabsorption due to different gastrointestinal disorders (enteric hyperoxaluria) or because of an inborn error of metabolism (primary hyperoxaluria). Low oxalate values in urine are associated with hyperglycinemia or hyperglycinuria.

Reference values and pathologies

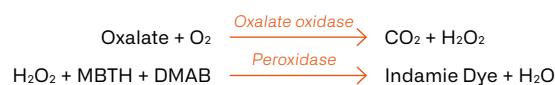
Normal values: the plasma concentration of oxalate is 1.0 to 2.4 mg/L (11–27 mol/L), and it is excreted in the urine at a rate of 17.5 to 35.1 mg/d (200–400 mol/d).

These ranges are given for orientation only; each laboratory should establish its own reference range.

Decreased levels: low oxalate values in urine sample have no clinical significance

Increased levels: hyperoxaluria (primary and enteric)

Method



Performance characteristics

Method:	Oxalate Oxidase/Peroxidase
Analysis mode:	Differential bireagent
Detection limit:	0.630 mg/L
Linearity limit:	180 mg/L
Wavelength:	600 nm
On board stability:	2 months at 2-8 °C
Repeatability:	0.3% at 80.5 mg/L
Reproducibility:	2% at 80.5 mg/L
Sample type:	24h urine sample. It is recommended that patients refrain from taking vitamin C rich food for at least 48 hours prior to urine collection
Interferences:	Bilirubin (up to 30 mg/dL), hemolysis (hemoglobin up to 450 mg/dL) and the Ascorbic acid (up to 16 mmol/L) do not interfere. Other drugs and substances may interfere

Reagents

Product	Code	Kit format	Format
A15/A25 Automated System*	12539	1 x 20 mL + 1 x 5 mL + 20 purification tubes + 25 mL diluent	Liquid, Lyophilized
BA Automated System*	23539	1 x 20 mL + 1 x 5 mL	Liquid, Lyophilized
Pretreatment Reagents	11839	100 tubes + 5 x 25 mL diluent	Activated charcoal tubes
Oxalate Control Urine Level I	18080	1 x 5 mL	Lyophilized
Oxalate Control Urine Level II	18062	1 x 5 mL	Lyophilized

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