



D-Lactate in Plasma

Specimen Type	Plasma
Specimen Volume	2.5 mL
Collection	Collect blood in grey top tubes (potassium oxalate / sodium fluoride). Within 30 minutes of collection, centrifuge at 2000 x g for 15 minutes at 4°C. Move plasma into a transfer tube and freeze immediately.
Minimum Volume	0.5 mL
Handling	Ship frozen on dry ice.
Rejection Criteria	Specimens received unfrozen. Specimens outside of listed stability.
Stability	Refrigerated for 14 days. Frozen for 60 days.
Methodology	Endpoint Enzyme Assay
Reference Range	< 0.5 mM
Turnaround Time	Up to 7 business days.
CPT Code	83605
Clinical Significance	D-lactate is produced by bacteria in the colon when there is an excess supply of carbohydrates as a result of sugar malabsorption. D-lactate is absorbed from the intestine and results in D-lactate acidosis, with neurological manifestations including slurred speech, confusion, hallucinations, unsteady gait, and abusive behavior. D-lactate acidosis is typically seen in individuals with short bowel syndrome and can be indicative of sepsis, ischemia, and trauma.
Principle	This end-point assay uses D-Lactate dehydrogenase to catalyze the oxidation of D-lactate present in the sample. The product (NADH) is coupled to the reduction of MTT to formazan dye. Absorbance is measured at 565 nm and converted to concentration (in mM) by interpolation against a standard curve.