

## D-Lactate in Plasma

<b>Specimen Type</b>	Plasma
<b>Specimen Volume</b>	2.5 mL
<b>Collection</b>	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.
<b>Minimum Volume</b>	0.5 mL
<b>Handling</b>	Ship frozen on dry ice.
<b>Rejection Criteria</b>	Specimens received unfrozen. Specimens outside of listed stability.
<b>Stability</b>	Refrigerated for 14 days. Frozen for 60 days.
<b>Methodology</b>	Endpoint Enzyme Assay
<b>Reference Range</b>	< 0.5 mM
<b>Turnaround Time</b>	Up to 7 business days.
<b>CPT Code</b>	83605
<b>Clinical Significance</b>	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.
<b>Principle</b>	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.