



## Direct-measure Low Density Lipoprotein (DLDL)

Laboratory Alliance of Central New York offers direct measurement of LDL (low-density lipoprotein). This test may be ordered in several ways:

- by provider request (Order code DLDL)
- as a component of the Extended Lipid Panel (Order code LPEX)
- reflexively ordered based on elevated triglyceride value as part of a Lipid Panel (Order code RSK)

Within the Lipid Panel, the Friedewald equation<sup>1</sup> is used to calculate LDL. However, this equation is known to become less accurate as triglyceride levels increase<sup>2</sup> and is not recommended to be used when triglyceride levels are greater than 400 mg/dL<sup>1</sup>.

Currently, Laboratory Alliance reflexively orders DLDL when triglycerides exceed 300 mg/dL, but will revert to the original Friedewald recommended decision point of 400 mg/dL effective July 11, 2023. Laboratory Alliance will then reflexively order direct-measure LDL (DLDL) from a Lipid Panel request ONLY if triglycerides exceed 400 mg/dL.

Direct-measure DLDL may be added to existing samples for up to 5 days after collection. If added testing is desired, please contact the laboratory at (315) 461-3008.

### Assay Details: Direct-measure LDL

Method	Spectrophotometry	
Adult Reference Range	Less than 130 mg/dL	
NCEP ATP III Guidelines	Optimal	Less than 100 mg/dL
	Near Optimal	100 - 129 mg/dL
	Borderline High	130 - 159 mg/dL
	High	160 - 189 mg/dL
	Very High	Greater than 189 mg/dL
Specimen Requirements	One 5 mL gold (SST) top tube. Also acceptable: Lithium heparinized plasma.	
Specimen Stability	Refrigerated: 5 days	
Schedule of Testing	Monday - Saturday	
CPT Code	83721	

Questions may be directed to Cheryl Haskins, MS, MT(ASCP)SC, Chemistry Special Projects Coordinator, at 315-410-7014 or [cherylhaskins@lacny.com](mailto:cherylhaskins@lacny.com).

### References:

1. Friedewald, W.T., Levy, R.I., and Frederickson, D.S. 1972. Estimation of the concentration of low-density lipoprotein cholesterol in plasma, without use of the preparative ultracentrifuge. *Clinical Chemistry* 18: 499-502.
2. Martin, S.S., et al. 2013. Friedewald-estimated versus directly measured low-density lipoprotein cholesterol and treatment implication. *Journal of the American College of Cardiology* 62:8 732-739.