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**Lab Dept:** Chemistry

**Test Name:** LYSOSOMAL ENZYMES

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***General Information***

**Lab Order Codes:** LYE

**Synonyms:** N/A

**CPT Codes:** 82657 – Enzyme activity in blood cells, cultured cells, or tissue, not elsewhere specified; nonradioactive substrate, each specimen  
82658 – Enzyme activity in blood cells, cultured cells, or tissue, not elsewhere specified; radioactive substrate, each specimen

**Test Includes:** The majority of patients are initially screened by enzyme assay, which is the most efficient method to arrive at a definitive diagnosis.

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***Logistics***

**Test Indications:** Lysosomal storage diseases are genetic disorders resulting from mutations in genes coding for proteins involved in the degradation of normal body compounds, including lipids, proteins and complex carbohydrates. While most lysosomal disorders are caused by defects in genes coding for enzymes, some are caused by defects in genes coding for transport proteins, activator proteins, protective proteins or enzymes involved in the processing of lysosomal enzymes or substrates. The lack of one of these proteins leads to the accumulation of undegraded compounds which can disrupt the normal functioning of the cells involved. Most of these disorders are autosomal recessively inherited, however a few are X-linked recessively inherited, such as Fabry disease and Hunter syndrome (MPS II).

**Lab Testing Sections:** Chemistry - Sendouts

**Referred to:** Jefferson Medical College, Dr. David Wenger's Lab

**Phone Numbers:** MIN Lab: 612-813-6280

STP Lab: 651-220-6550

**Test Availability:** Monday – Wednesday (anytime), Thursday before Noon

**Turnaround Time:** Approximately 1 week from the time of arrival at the reference lab

**Special Instructions:** Specimen **must arrive** in the lab within 4 hours of draw. See [Test Availability](#) for restricted draw times. Please include a [Clinical History form](#).

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## ***Specimen***

<b>Specimen Type:</b>	Whole blood
<b>Container:</b>	Green top (Li or Na Heparin) tube Alternate: Lavender (EDTA) tube
<b>Draw Volume:</b>	4 -6 mL (Minimum: 2 mL) blood
<b>Processed Volume:</b>	Same as Draw Volume
<b>Collection:</b>	Routine venipuncture
<b>Special Processing:</b>	Lab Staff: <b>Do Not</b> centrifuge. Specimen should remain in original collection container and be kept at room temperature. Promptly send specimen Monday – Wednesday (anytime) and Thursday by Noon <b>only</b> . Ship Federal Express at ambient temperatures. Fax health history to 1-215-955-9554. Never draw or ship on Friday.
<b>Patient Preparation:</b>	None
<b>Sample Rejection:</b>	Mislabeled or unlabeled specimens; improper specimen handling; frozen specimens

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## ***Interpretive***

<b>Reference Range:</b>	Interpretive report
<b>Critical Values:</b>	N/A
<b>Limitations:</b>	N/A
<b>Methodology:</b>	Spectrophotometric Enzyme Measurement
<b>References:</b>	<a href="#">Jefferson Medical College, Philadelphia, PA, Dr. David Wenger's Laboratory</a> December 2017
<b>Updates:</b>	12/20/2017: Added alternate collection container and volume requirements.