

# ORISE Beryllium Lab Guide to Results

<p><b>NORMAL</b></p>	<p>The result of the Beryllium Lymphocyte Proliferation test is NORMAL. The cells display a normal response to beryllium sulfate.</p> <p>A normal test is indicated when all the Day 5 and Day 7 Beryllium Stimulation Index (SI) values are below the Normal Beryllium SI Reference Range.</p>
<p><b>ABNORMAL</b></p>	<p>The result of the Beryllium Lymphocyte Proliferation test is ABNORMAL. The cells display an abnormal response to beryllium sulfate.</p> <p>An abnormal test is indicated when two or more Beryllium Stimulation Index (SI) values are above the Normal Beryllium SI Reference Range.</p>
<p><b>BORDERLINE</b></p>	<p>The result of the Beryllium Lymphocyte Proliferation Test is BORDERLINE. The blood cells display an abnormal response in one beryllium sulfate concentration.</p> <p>A borderline test is indicated when only one Beryllium Stimulation Index (SI) value is above the Normal Beryllium SI Reference Range.</p>
<p><b>CV UNINTERPRETABLE</b> <b>Statistical Variation</b></p>	<p>The result of the Beryllium Lymphocyte Proliferation test is UNINTERPRETABLE due to unacceptably high variability of cell growth (CV) in one or more data sets. Elevated CV(s) in control or test wells invalidates the corresponding Stimulation Index (SI) values.</p> <p><b>A repeat BeLPT is recommended.</b></p>
<p><b>CK UNINTERPRETABLE</b> <b>Cell Killing</b></p>	<p>The result of the Beryllium Lymphocyte Proliferation test is UNINTERPRETABLE due to increased cell killing in test wells.</p> <p><b>A repeat BeLPT in a secondary serum is recommended.</b></p>
<p><b>PG UNINTERPRETABLE</b> <b>Poor Growth</b></p>	<p>The result of the Beryllium Lymphocyte Proliferation test is UNINTERPRETABLE due to poor proliferative response of cells to positive growth controls (mitogens).</p> <p><b>A repeat BeLPT is recommended.</b></p>
<p><b>OP UNINTERPRETABLE</b> <b>Over Proliferation of Cells</b> <b>(Standard 5 &amp; 7 Day Culture Set-up)</b></p>	<p>The result of the Beryllium Lymphocyte Proliferation test is UNINTERPRETABLE due to over proliferation of cells in the unstimulated control wells.</p> <p><b>A repeat BeLPT using Day 4 and Day 6 culture days is recommended.</b></p> <p><b>Note: Over proliferation may mask an abnormal or a borderline.</b></p>
<p><b>OP UNINTERPRETABLE</b> <b>Over Proliferation of Cells</b> <b>(4 &amp; 6 Day Culture Set-up)</b></p>	<p>The result of the Beryllium Lymphocyte Proliferation test is UNINTERPRETABLE due to over proliferation of cells in the unstimulated control wells.</p> <p><b>A repeat BeLPT using Day 4 and Day 6 culture days and secondary serum is recommended.</b></p> <p><b>Note: Over proliferation may mask an abnormal or a borderline.</b></p>

<p><b>PM UNINTERPRETABLE</b> <b>Poor Mitogen</b></p>	<p>The result of the Beryllium Lymphocyte Proliferation test is UNINTERPRETABLE due to poor proliferative response of cells to positive growth controls (mitogens).</p> <p><b>A repeat BeLPT is recommended.</b></p>
<p><b>UNACCEPTABLE sample</b> <b>Low Cell Recovery</b></p>	<p><b>Low Cell Recovery:</b> The sample volume was adequate; however, the number of lymphocytes recovered was not sufficient to set up a Beryllium Lymphocyte Proliferation Test. Please send a minimum of 40 ml of sample if repeated.</p>
<p><b>UNACCEPTABLE sample</b> <b>&gt; 48 Hours</b></p>	<p><b>Greater Than 48 Hours:</b> The sample received by the ORISE Beryllium Laboratory was greater than 48 hours old due to shipping delay or wrong draw date. ORISE recommends that specimens be less than 30 hours old at time of processing or results could be compromised. A repeat sample is recommended to be drawn and shipped on Tuesday, Wednesday, or Thursday.</p>
<p><b>UNACCEPTABLE sample</b> <b>48 Hours</b></p>	<p><b>Receipt at 48 Hours:</b> The sample received by the ORISE Beryllium Laboratory was 48 hours old due to shipping delay or wrong draw date. Specimen age compromised sample viability and quality is not sufficient to set up a Beryllium Lymphocyte Proliferation Test. ORISE recommends that specimens be less than 30 hours old at time of processing or results could be compromised. A repeat sample is recommended to be drawn and shipped on Tuesday, Wednesday, or Thursday.</p>
<p><b>UNACCEPTABLE sample</b> <b>Quantity Not Sufficient</b></p>	<p><b>QNS (Quantity Not Sufficient):</b> Less than 30 ml of sample received. Please send 30 ml of sample at a minimum if repeated.</p>
<p><b>UNACCEPTABLE sample</b> <b>Unresolved Labeling Errors</b></p>	<p><b>Sample Unacceptable:</b> Labeling issues on the tubes or requisition prevented processing. Please resolve and recollect sample.</p> <p><b>Examples of unresolved labeling errors include:</b> Unlabeled tubes; wrong patient collected; incorrect identifiers; and/or other errors preventing confirmation of patient identity. This is the only entry that does not generate a Doctor's report from the Web App.</p>
<p><b>UNACCEPTABLE sample</b> <b>Other</b></p>	<p><b>Sample Unacceptable: XXX</b></p> <p><b>Note:</b> The laboratory will insert the reason for unacceptable status and/or other information as needed.</p>

Chronic beryllium disease (CBD), a chronic disorder mainly affecting the lungs, is found in a small percentage of persons exposed to beryllium dust. In these individuals, exposure to beryllium elicits a delayed-type hypersensitivity resulting in granulomas. The blood beryllium lymphocyte proliferation test (BeLPT) is an in-vitro test, which measures the response of an individual's lymphocytes to the presence of beryllium sulfate. An abnormal BeLPT indicates sensitivity to beryllium but alone is not diagnostic for chronic beryllium disease. However, individuals that are sensitive to beryllium are at a greater risk for developing CBD. The present lymphocyte proliferation test is the best non-invasive screening method available to detect individuals at risk.