Heart CA
Cardiolipin (Heart, Bovine) (sodium salt)
840012P-100mg

<table>
<thead>
<tr>
<th>Property</th>
<th>Specification</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Molecular Weight</td>
<td>1493.895 (average based on fatty acid distribution in product)</td>
<td></td>
</tr>
<tr>
<td>Physical State</td>
<td>Powder</td>
<td></td>
</tr>
<tr>
<td>Storage</td>
<td>-20°C</td>
<td></td>
</tr>
<tr>
<td>Expiration Date</td>
<td>Three months from date of receipt</td>
<td></td>
</tr>
<tr>
<td>M Lot Number</td>
<td>5484PLB545</td>
<td></td>
</tr>
<tr>
<td>Avanti Lot Number</td>
<td>840012P-100MG-B-545</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Analysis</th>
<th>Specification</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical Examination</td>
<td>Powder: White solid which contains no foreign matter</td>
<td>Pass</td>
</tr>
<tr>
<td>TLC</td>
<td>&gt;99% Purity</td>
<td>All Pass</td>
</tr>
<tr>
<td></td>
<td>Ninhydrin: negative</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Iodine: one major spot</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Phosphorus: positive</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Charring: positive</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Water dip: one major spot</td>
<td></td>
</tr>
<tr>
<td>FAME (GC/FID)</td>
<td>Consistent with historical data</td>
<td>Consistent with historical data</td>
</tr>
<tr>
<td></td>
<td>18:1 = ~5%</td>
<td></td>
</tr>
<tr>
<td></td>
<td>18:2 = ~90%</td>
<td></td>
</tr>
<tr>
<td>UV Oxidation</td>
<td>NMT 5% total all wavelengths</td>
<td>4.67% total</td>
</tr>
<tr>
<td>Calcium (ICP/MS)</td>
<td>NMT 500 ppm</td>
<td>None Detected</td>
</tr>
<tr>
<td>Mass Spectroscopy</td>
<td>Exact Mass: [M-2Na+H]\ = 1447.94 ± 1 amu; [M-2Na]^2 = 723.47 ± 1 amu</td>
<td>[M-2Na+H]\ = 1448.4 amu; [M-2Na]^2 = 724.5 amu</td>
</tr>
</tbody>
</table>

Approved By:

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