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

Molecular Weight: 1493.895 (average based on fatty acid distribution in product)
Physical State: Powder
Storage: -20°C
Expiration Date: Three months from date of receipt
M Lot Number: 5484PLA545
Avanti Lot Number: 840012P-100MG-A-545

<table>
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<th>ANALYSIS</th>
<th>SPECIFICATION</th>
<th>RESULTS</th>
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<td>Physical Examination</td>
<td><strong>Powder:</strong> White solid which contains no foreign matter</td>
<td>Pass</td>
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</table>
| TLC               | >99% Purity
Ninhydrin: negative
Iodine: one major spot
Phosphorus: positive
Charring: positive
Water dip: one major spot | All Pass                  |
| FAME (GC/FID)     | Consistent with historical data
18:1 = ~5%
18:2 = ~90%            | Consistent with historical data                                               |
| UV Oxidation      | NMT 5% total all wavelengths               | 4.67% total              |
| Calcium (ICP/MS)  | NMT 500 ppm                              | None Detected            |
| Mass Spectroscopy | Exact Mass: [M-2Na+H] = 1447.94 ± 1 amu;
[M-2Na]² = 723.47 ± 1 amu
or
Molecular Weight: [M-2Na+H] = 1448.92 ± 1 amu;
[M-2Na]² = 723.95 ± 1 amu  | [M-2Na+H] = 1448.4 amu
[M-2Na]² = 724.5 amu     |

Approved By:

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