CERTIFICATE OF ANALYSIS

Caution: The product is for research only, not for human use!

DESCRIPTION: Plain HSPC/CHOL/mPEG2000-DSPE Liposomes

CATALOGUE #: F10204 BATCH #: 09231101

PRODUCT VOLUME: 100mL (5x20mL)
DATE OF PRODUCTION: 09/25/2011

LIPID COMPOSITION: HSPC/CHOL/mPEG2000-DSPE (50:45:5 mol/mol)

ACTIVE: None

PRODUCTION METHOD: Hydration of sucrose/ethanolic lipid solution and

extrusionthrough polycarbonate membranes

ANALYTICAL DATA:

Total Lipid Concentration: $60.0 \pm 2.0 \text{ mM} (42.7 \pm 1.5 \text{ mg/mL}) \text{ (Stewart assay)}$

HSPC: $30.0 \pm 1.0 \text{ mM} (23.7 \pm 0.9 \text{ mg/mL})$ CHOL: $27.0 \pm 1.0 \text{ mM} (10.5 \pm 0.4 \text{ mg/mL})$ mPEG2000-DSPE: $3.0 \pm 0.1 \text{ mM} (8.4 \pm 0.3 \text{ mg/mL})$

Hydration solution: 10% sucrose, 20mM HEPES, 10 % ethanol, pH 7.0 Final buffer solution: 10% sucrose, 20mM HEPES, < 7.0 % ethanol, pH 7.0 Particle size (by ZetaPALS): Mean diameter: 85.0 ± 0.2 nm; Half-width: 21.2 ± 0.2 mm; Half-width: $21.2 \pm$

3.8 nmPolydispersity: 0.07

Form/Color: Translucent, off white and free flow liposomal dispersion,

no visible particles/aggregates with naked eye or under microscope

Stability: Product is sterile filtered (0.2m). Free from bacteria growth for 3

month in original unopened vials stored at 2-8°C.

STORAGE AND HANDLING:

Store in closed vials at $2-8^{\circ}$ C. DO NOT FREEZE. Warm to room temperature before use. Visually exam the uniformity of the product. Mix before opening the vial. Close opened containers immediately.

HSPC: fully hydrogenated phosphatidylcholine (SPC-3 from Lipoid)

CHOL: cholesterol (Lipoid)

mPEG2000-DSPE: 18:0 PEG2000 PE:1,2-distearoyl-sn-glycero-3-

phosphoethanolamine-N-[methoxy(polyethylene glycol)-2000](ammonium salt)

FormuMax Scientific Inc.

4062 Fabian Way, Palo Alto, CA 94303

Tel: (650) 856-7948 Fax: (408) 465-5338

E-mail:<u>service@FormuMax.com</u> Homepage:www.FormuMax.com