

Certificate of Analysis

12:0 N-Biotinyl Fatty Acid

N-biotinyl-dodecanoic acid

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 $\begin{tabular}{lll} \textbf{Molecular Weight} & 441.628 \\ \textbf{Chemical Formula} & C_{22}H_{39}N_3O_4S \\ \textbf{Physical State} & Powder \\ \textbf{Storage} & -20^{\circ}C \\ \end{tabular}$

Expiration Date One year from date of receipt

M Lot Number 6004PHD011

Avanti Lot Number 860557P-5MG-D-011

ANALYSIS	SPECIFICATION	RESULTS
Physical examination	Powder : White solid which contains no foreign matter.	Pass
TLC 65:25:4 Chloroform: Methanol: Ammonium Hydroxide	>99% Purity Ninhydrin: negative lodine: one major spot Phosphorus: negative Charring: negative Water dip: one major spot	All Pass
Proton NMR	NMR spectrum consistent with structure	Consistent with structure
Mass Spectroscopy	[M-H] ⁻ = 440.628 ± 1 amu	[M-H] ⁻ = 440.4 amu

Approved by: