

| Certificate of Analysis   |  |                            |  |                                 |                                 |
|---|--|----------------------------|--|---------------------------------|---------------------------------|
| Name: DEPFMU [DIFMUP, Diethyl Ester] Diethylphospho-6,8-difluoro-4-methyl-umbelliferone |  |                            |  |                                 |                                 |
| Catalog Number:   | 7643   | Lot: 52391                 |  |                                 |                                 |
| CAS Number:   | N/A  | Formula: C <sub>14</sub> H |  | C <sub>14</sub> H <sub>15</sub> | F <sub>2</sub> O <sub>6</sub> P |
| Molecular Weight:   | 348.24 (g/mol)   |                            |  |                                 |                                 |
|   |  |                            |  |                                 |                                 |
|   | Observed   | Standar                    |  |                                 |                                 |
| HPLC Purity:  | 99% at 254 nm  |                            | ≥ 95% at 254 nm                              |                                 |                                 |
| Absorption (Methanol)   |  |                            |  |                                 |                                 |
| Wavelength (λ <sub>max</sub> ):   | 313 nm   |                            | 312 ± 3 nm                                   |                                 |                                 |
| Extinction:   | 5,700 cm <sup>-1</sup> M <sup>-1</sup>   |                            | 6,200 ± 600 cm <sup>-1</sup> M <sup>-1</sup> |                                 |                                 |
| TLC Purity:   | > 99%  |                            | ≥ 95%  |                                 |                                 |
| TLC System:   | 1:1 Hexane/ Ethyl ace  | xane/ Ethyl acetate        |  |                                 |                                 |
| Storage:  | Freeze: Store at -5 to -30°C ( <b>F</b> ), Protect from moisture ( <b>D</b> ), Protect from light ( <b>L</b> ) |                            |  |                                 |                                 |
| Production Lot: 149   | 928 Release:   | 26-May-20                  | 15 Exp                                       | oiration:                       | 26-May-2025                     |
| Structure:  O  O  O  O  O  O  O  O  O  CH <sub>2</sub> O  CH <sub>3</sub>               |  |                            |  |                                 |                                 |

This data reflects the accuracy of the analysis of the subject lot For research use only. Not for human use. No animal source. This material is chemically synthesized and manufactured in the USA

Approved by: Dianna M Wineinger

**Analytical Services Manager** 

Signature:

**Date:** 26-May-2015