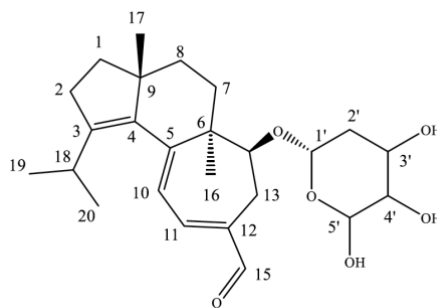




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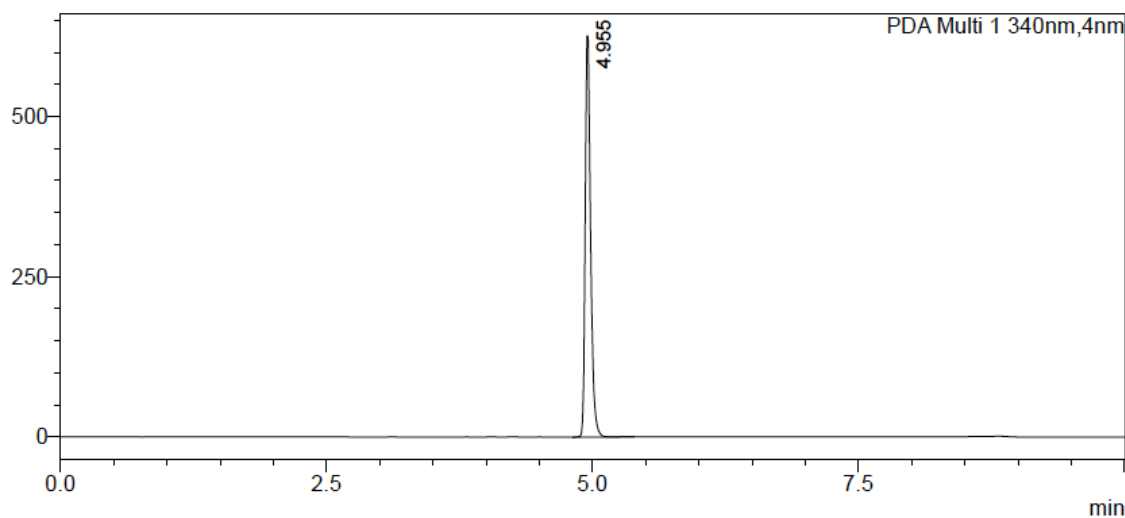
CERTIFICATE OF ANALYSIS

Sample Name: Erinacine A
CAS No.: 156101-08-5
Chemical Formula: C₂₅H₃₆O₆
Molecular Weight: 432.55
Batch No.: F23/2024
Manufacturing Date: 08/08/2024
Analysis Date: 18/09/2024
Analysis Method: HPLC-DAD C18

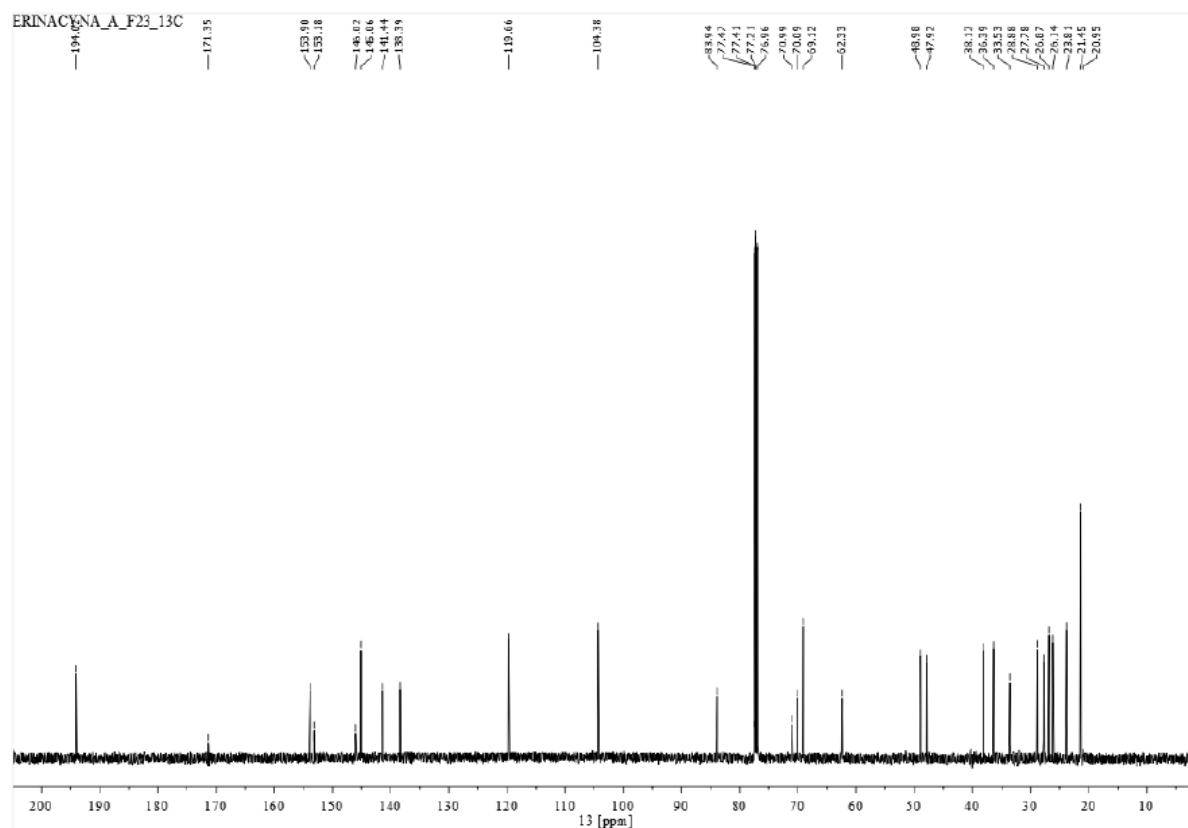


<Chromatogram>

mAU



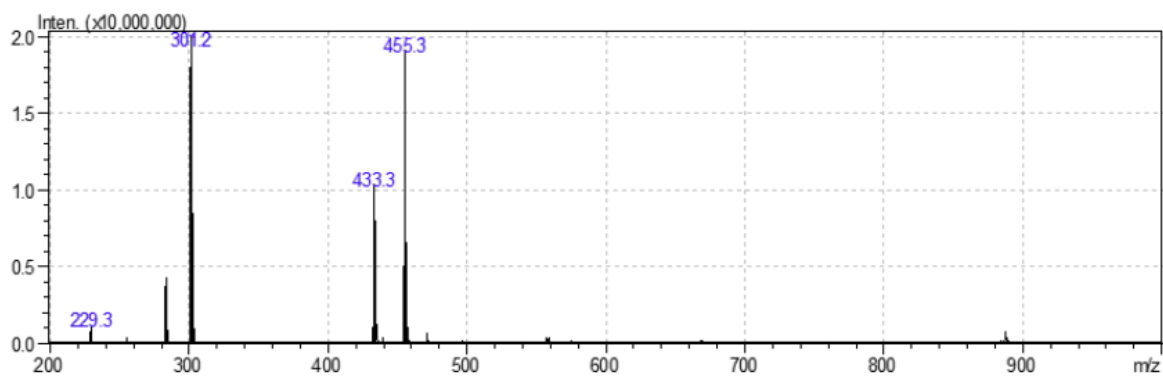
HPLC chromatogram of erinacine A (500 µg/mL) obtained using a Shimadzu LC-2050C 3D chromatograph and a Velox SP-C18 2.7 µm, 4.6 x 150 mm column.



^{13}C NMR spectrum of erinacine A obtained using a NMR Varian Unity 500 spectrometer in CDCl_3

^1H NMR (500 MHz, CDCl_3) δ 9.29 (s, 1H, H15), 6.67 (dd, $J = 8.3, 2.3$ Hz, 1H, H11), 5.87 (d, $J = 8.2$ Hz, 1H, H10), 4.75 (d, $J = 3.8$ Hz, 1H, H1'), 3.69 (dd, $J = 12.4, 2.9$ Hz, 1H, H5'a), 3.55 (d, $J = 4.8$ Hz, 1H, H14), 3.50 (t, $J = 5.4$ Hz, 1H, H4'), 3.46 (q, $J = 5.2, 2.0$ Hz, 1H, H3'), 3.41 (ddd, $J = 5.1, 3.8$ Hz, 1H, H2'), 3.28 (dd, $J = 12.3, 4.8$ Hz, 1H, H13a), 3.19 (dd, $J = 18.6, 6.0$ Hz, 1H, H5'b), 2.70 (hept, $J = 6.9$ Hz, 1H, H18), 2.42 (d, $J = 18.2$ Hz, 1H, H13b), 2.34 – 2.23 (m, 3H, H7a H2), 1.66 – 1.48 (m, 4H, H1a, H8, H1b), 1.23 (dt, $J = 13.8, 3.7$ Hz, 1H, H7b), 0.91 (d, $J = 6.9$ Hz, 3H, H19), 0.87 (s, 3H, H16/ H17), 0.86 (s, 3H, 0.95, H16/ H17), 0.84 (d, $J = 6.8$ Hz, 3H, H20).

^{13}C NMR (125 MHz, CDCl_3) δ 194.02, 171.35, 153.90, 153.18, 146.02, 145.06, 141.44, 138.39, 119.66, 104.38, 83.94, 77.47, 77.41, 77.21, 76.96, 70.99, 70.09, 69.12, 62.33, 48.98, 47.92, 38.12, 36.39, 33.53, 28.88, 27.78, 26.87, 26.14, 23.81, 21.45, 20.95.



Positive ionization mass spectrum of erinacine A obtained using a LC-MS Shimadzu Nexera X2 chromatograph consistent with literature data.

Appearance:	Pale yellow solid
^{13}H NMR Spectrum:	Consistent with structure
Purity (HPLC, NMR):	min. 99%

Conclusion: The product has been tested and complies with the given specifications.

Approved by: Wojciech Krzyczkowski, PhD
Position: Chief Technology Officer
Date: 09/20/2024