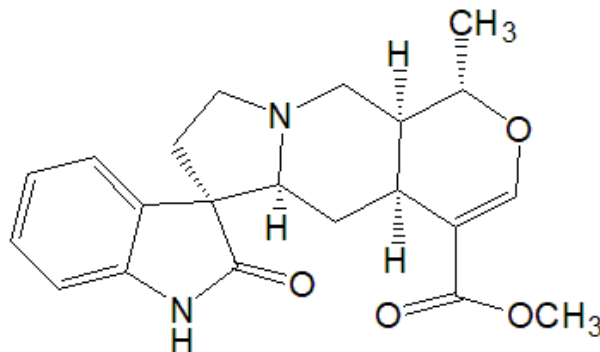


## Certificate of Analysis



<b>PRODUCT</b>	<b>Uncarine E</b>
<b>BATCH #</b>	PA-039-164-200
<b>ASSAY METHOD</b>	HPLC, <sup>1</sup> H NMR, <sup>13</sup> C NMR, Residue on Ignition, Karl Fischer Titration
<b>REPORT DATE</b>	2019-03-12
<b>CHEMICAL NAME</b>	Isopteropodine
<b>OTHER NAMES</b>	Methyl (1S, 4aS, 5aS, 6S, 10aS)-1-methyl-2'-oxospiro[1,4a,5,5a,7,8,10,10a]-octahydroprano[3,4-f]indolizine-6,3'-1H-indole]-4-carboxylate
<b>CHEMICAL FORMULA</b>	C <sub>21</sub> H <sub>24</sub> N <sub>2</sub> O <sub>4</sub>
<b>MOLECULAR WEIGHT</b>	368.43 g/mol
<b>CAS REG. #</b>	5171-37-9
<b>STORAGE</b>	<-20 degrees C; dark
<b>EXPIRATION DATE</b>	2022-03-13
<b>NOTES</b>	

### Analytical Data

TEST	METHOD	SPECIFICATION	RESULT
HPLC	240 nm	> 99.5%	100.00%
<sup>1</sup> H NMR		Conforms	Conforms
<sup>13</sup> C NMR		Conforms	Conforms
Residual Solvent		< 0.05%	
Water Content		< 0.2%	
Residue on Ignition		< 0.1%	
Appearance		White, needle-like crystals	
Adjusted Purity		100.00% HPLC purity x (100% - 0% residual solvent - 0% ash) = 100.00%	

Signed: Jan Glinski, Ph.D.  
 Planta Analytica LLC  
 March 12/April 8, 2019

