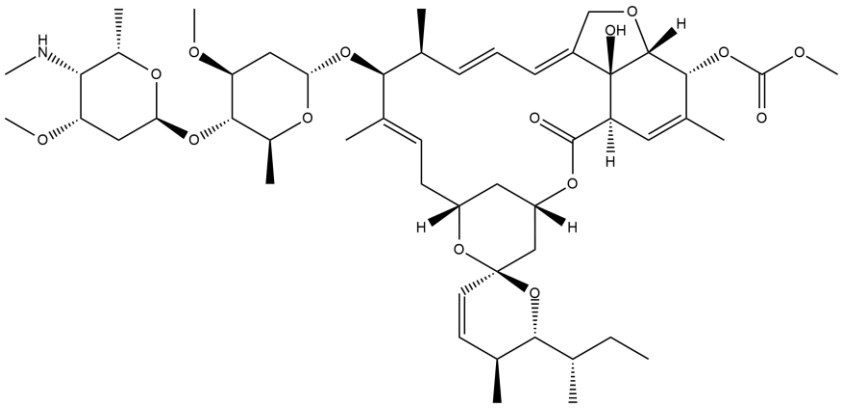
461 Danbury Rd. Suite 10
New Milford, CT 06776
Phone: (860) 799 5356
info@plantaanalytica.com
https://plantaanalytica.com

Certificate of Analysis

Product Information



PRODUCT	**Emamectin Impurity E**
BATCH #	055-067-201
ASSAY METHOD	HPLC-UV, MS, 1H-NMR, 13C-NMR
REPORT DATE	10/7/2025
CHEMICAL NAME	(1'R,2R,3S,4'S,6S,8'R,10'E,12'S,13'S,14'E,16'E,20'R,21'R,24'S)-2-[(2S)-butan-2-yl]-21'- (methoxycarbonyl)oxy -24'-hydroxy-12'-[(2R,4S,5S,6S)-4-methoxy-5-[(2S,4S,5R,6S)-4-methoxy-6-methyl-5-(methylamino)oxan-2-yl]oxy-6-methyloxan-2-yl]oxy-3,11',13',22'-tetramethylspiro[2,3-dihydropyran-6,6'-3,7,19-trioxatetracyclo[15.6.1.14,8.020,24]pentacosa-10,14,16,22-tetraene]-2'-one
SMILES STRUCTURE	C[C@@H](CC)[C@H]1O[C@@]2(C[C@H]3OC([C@@H]4C=C([C@H]([C@H]5OC\C(=C/C=C/[C@@H]([C@@H](/C(=C/C[C@@H](O2)C3)/C)O[C@@H]3O[C@H]([C@@H]([C@H](C3)OC)O[C@@H]3O[C@H]([C@H]([C@H](C3)OC)NC)C)C)C)\[C@@]45O)OC(=O)OC)C)=O)C=C[C@@H]1C
OTHER NAMES	4”-Epi-(methylamino)-4”-deoxy-5-methylcarbonate-avermectin B1a
CHEMICAL FORMULA	$C_{51}H_{77}NO_{15}$
MOLECULAR WEIGHT	944.16 g/mol
CAS REGISTRY #	N/A
STORAGE	<-18 °C; in dark
EXPIRATION DATE	6/7/2027
NOTES	The atom number convention has been updated to reflect the commonly accepted IUPAC naming/number for Emamectin B1a.

Analytical Data

TEST	METHOD	SPECIFICATION	RESULT
HPLC-UV	245 nm	>95%	99.2%
MS	ESI Positive	943.5	944.5 $[M+H]^+$
^{1}H-NMR		Conforms	Conforms
^{13}C-NMR		Conforms	Conforms
Appearance	Off-white solid		

Planta Analytica, Inc. certifies that this reference material meets the specifications stated in this certificate until the expiration date, provided it is stored unopened at the recommended conditions. All analytical data is prepared and stored following GLP guidelines.

CERTIFIED BY	CERTIFIER TITLE	CERTIFIED ON	SIGNATURE
Robert Gallucci	Scientist II	10/7/2025	
REVIEWED BY	**REVIEWER TITLE**	**REVIEWED ON**	**SIGNATURE**
Vitold Glinski	President	10/8/2025	

Intended Use
This reference material is intended for laboratory use in analytical applications and as a quality control standard.

Safety
Proper precautions should be observed while handling, as defined in the Materials Safety Data Sheet (MSDS).

Storage
The product should be stored in the original packaging, sealed, and in the conditions dedicated in this certificate