Spinosyn A, >95%
PRODUCT DATA SHEET

issue date 01/06/2020

Product Name:	Spinosyn A, >95%
Product Number:	S114
CAS Number:	131929-60-7
Molecular Formula:	$C_{41}H_{65}NO_{10}$
Molecular Weight:	731.96
Form:	Solid
Appearance:	White solid
Solubility:	soluble in ethanol, methanol, DMF and DMSO
Source:	Saccharopolyspora spinosa
Storage Conditions:	-20C
Description:	Spinosyn A, >95% is the major component of Spinosad, a complex of hydrophobic macrocyclic lactones isolated from the soil-dwelling bacterium, *Saccharopolyspora spinosa.* Spinosyn A is a potent insecticide for crop pathogens and ectoparasite control in animals. Spinosyn A disrupts nicotinic acetylcholine receptors and resembles a GABA antagonist and affects insect neurons. Spinosyn A is soluble in ethanol, methanol, DMF and DMSO. For other Spinosyn products, click here.
Mechanism of Action:	The spinosyns have a unique mechanism of action involving disruption of nicotinic acetylcholinesterase receptors (nAChRs) which lead to disruption of acetylcholine neurotransmission which affects the insect nervous system.
Plant Biology Applications	Spinosad is a natural product approved for use in organic agriculture as an insecticide and crop protectant. It has an excellent environmental and mammalian toxicological profile.
References:	Kirst HA (2010) The spinosyn family of insecticides: Realizing the potential of natural products research. J. Antibiotics 63:101-111 Kirst H.A. et al (191) A 83543A-D, unique fermentation-derived tetracyclic macrolides. Tetrahedron Lett. 32:4839 Lopez O and Fernandez-Bolanos JG ed. (2011) The Spinosyn insecticides. In: Green trends in insect control. RSC Green Chemistry Series No. 11, RSC Publishing, Ch. 5: pp 163-212