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Spinosad Matrix (USEPA Subm.)

"Spinosyn A" EPA Chem. Code: 110003
"Spinosyn D" EPA Chem. Code: 110004

Guideline Number	Guideline Title	MRID	EPA Review Status	DER Date	EPA Notes	Study Title	Author	Study ID	Study Completion Date	Submission Date	Dow AgroSciences Notes

Petition Information: PP 6F4735 (Under same petition as Tracer*) NOPR dated 4/15/98 (Unconditional)

Product Chemistry (Spinosad Technical) 62719-266 (Previously XDE-105 Technical, 62719-EAA)

61	Product Identity	43450304	Accepted	4/24/96		Series 61: Product Identity and Composition of XDE-105 Insecticide	Cobb	GH-C 3322	10/31/94	10/31/94	
62	Analytical Methods to Verify Certified Limits	43450305	Accepted	4/24/96		Series 62: Analysis and Certification of Product Ingredients of XDE-105 Technical Grade of Active Ingredient (TGAI)	Jones-Jefferson	GH-C 3442	10/28/94	10/31/94	
830.1550, 1620, 1670, 1750, 1800	Product Identity and Composition, Description of Production Process, Discussion of Formation of Impuurities, Certified Limits, Enforcement Analytical Method	44521801	Accepted	5/13/98 (Review dated 5/7/98)		Group A-Product Identity, Composition, and Analysis for Spinosad Technical Addendum to MRID #43450304 and MRID#43450305	Hamilton	GH-C 4636	3/13/98	3/23/98	
63	Physical and Chemical Characteristics	43450306	Accepted	4/24/96		Series 63: Physical and Chemical Characteristics of the Technical Grade of Active Ingredient, XDE-105	Jones-Jefferson	FOR94036	10/28/94	10/31/94	
N/A		44214901				Characterization of Pyrolysis Products of Spinosad by Gas Chromatography/Mass Spectrometry	Litwinski	DECO GL-AL 96-005552 (FOR96157)	1/27/97	2/7/97	
N/A		44214904				Thermogravimetric Analysis of Spinosad and Evolved Gas Analysis by Gas Chromatography/Mass Spectrometry	Litwinski	DECO GL-AL 96-005553 (AS-PR 96-034 FOR96158)	2/6/97	2/7/97	

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Guideline Number	Guideline Title	MRID	EPA Review Status	DER Date	EPA Notes	Study Title	Author	Study ID	Study Completion Date	Submission Date	Dow AgroSciences Notes
Wildlife and Aquatic Organisms 1 of 2 (Spinosad Technical) 62719-266											
71-1	Avian Oral LD50	43414528	Supplemental, not upgradeable, but do not have to repeat.	4/7/95		The Toxicity of XDE-105 to Juvenile Mallards in a 14-Day Acute Oral Study.	Murray	A00991	12/11/92	09/30/94	
71-1	Avian Oral LD50	43414529	Supplemental, not upgradeable, but do not have to repeat.	4/7/95		The Toxicity of XDE-105 to Bobwhite in a 14-Day Acute Oral Study.	Murray	A01091	11/9/92	09/30/94	
71-1	Avian Oral LD50	43571201				Additional Information in Response to MRID #43414528 on the Toxicity of XDE-105 to Mallards in a 14-Day Acute Oral Study and MRID #43414529 on the Toxicity of XDE-105 to Bobwhite in a 14-Day Acute Oral Study	Mayes	DECO-ES-2967	3/2/95	3/6/95	
71-2	Avian Dietary LC50	43414530	Core	4/7/95		The Toxicity of XDE-105 to Juvenile Mallards in a 5-Day Dietary Study	Murray	A00891	11/6/92	09/30/94	
71-2	Avian Dietary LC50	43414531	Core	4/7/95		The Toxicity of XDE-105 to Juvenile Bobwhite in a 5-Day Dietary Study	Murray	A00791	11/20/92	09/30/94	
71-4(a)	Avian Reproductive Toxicity in Bobwhite Quail	43414533	Core	4/27/96		XDE-105 Insecticide: A Reproduction Study with the Northern Bobwhite (Colinus virginianus)	Beavers	ES-2575 (103-387)	5/18/94	09/30/94	
71-4(b)	Avian Reproductive Toxicity in Mallard Duck	43414532	Core	4/27/96		XDE-105 Insecticide: A Reproduction Study with the Mallard (Anas platyrhynchos)	Beavers	ES-2576 (103-388)	5/18/94	09/30/94	
72-1	Freshwater Fish LC50	43444103	Core	4/7/95		Evaluation of the Acute Toxicity of XDE-105 Insecticide to the Rainbow Trout, Oncorhynchus Mykiss Walbaum	Weinberg	DECO-ES-2570	2/18/93	09/30/94	
72-1	Freshwater Fish LC50	43414534	Core	4/7/95		The Acute toxicity of XDE-105 to Bluegill (Lepomis macrochris) in a Static Test System	Newsted	F00491	11/19/92	09/30/94	
72-2	Acute LC50 Freshwater Invertebrate	43414537	Core	4/7/95		XDE-105 (Lot # ACD 13651): Evaluation of the Acute Toxicity to the Daphnid, Daphnia Magna Straus	Milazzo	DECO-ES-2736B	9/26/94	09/30/94	
72-2	Acute LC 50 Freshwater Invertebrate	43571202				XDE-105 Acute Toxicity to Daphnia magna (MRID #43414537): Sublethal Effects Data (Supplemental Information)	Mayes	DECO-ES-2969	3/2/95	3/6/95	

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Spinosad Matrix (USEPA Subm.)

"Spinosyn A" EPA Chem. Code: 110003
"Spinosyn D" EPA Chem. Code: 110004

Guideline Number	Guideline Title	MRID	EPA Review Status	DER Date	EPA Notes	Study Title	Author	Study ID	Study Completion Date	Submission Date	Dow AgroSciences Notes
Wildlife and Aquatic Organisms 2 of 2 (Spinosad Technical) 62719-266											
072-2(c) (850.1010?)	Aquatic Invertebrate Acute Toxicity, Test, Freshwater Daphnids	**44597731**				Evaluation of the Acute Toxicity of Spinosyn Factor B Exposed Daphnid, Daphnia magna STRAUS	Kirk	981026	5/7/98	7/1/98	
72-3	Acute LC50 Estuarine and Marine Organisms	43414539	Supplemental, not upgradeable, but do not have to repeat.	4/7/95		Acute Toxicity of XDE-105 Insecticide to the Grass Shrimp (Palaemonetes pugio)	Yurk	DECO-ES-2539	8/27/93	09/30/94	
72-3	Acute LC50 Estuarine and Marine Organisms	43444104	Core	4/7/95		Effect of XDE-105 Insecticide on New Shell Growth in Eastern Oyster (Grassostera virginica)	Yurk	DECO-ES-2538	8/27/93	09/30/94	
72-3	Acute LC50 Estuarine and Marine Organisms	43571203				Response to Query on XDE-105 Oyster Shell Growth Study (MRID #43444104) (Supplemental Information)	Mayes	DECO-ES-2968	3/2/95	3/6/95	
72-3	Acute LC50 Estuarine and Marine Organisms	43414540	Core	4/7/95		Acute Toxicity of XDE-105 Insecticide to the Sheepshead Minnow (Cyprinoden variegatus)	Yurk	DECO-ES-2540	8/27/93	09/30/94	
72-4	Early Life Stage in Fish	43414541	Core	4/27/96		Evaluation of the Toxicity of XDE-105 Insecticide to the Early Life Stages of the Rainbow Trout, Oncorhynchus mykiss Walbaum	Weinberg	DECO-ES-2613	12/10/93	09/30/94	
72-4	Life-Cycle Daphnia	43848801	Core	4/27/96		Evaluation of the Chronic Toxicity of XDE-105 Insecticide to the Daphnid, Daphnia magna Straus Following Flow-Through Exposure	Kirk	DECO-ES-3018	11/9/95	11/16/95	
72-4(a)	Early Life Stage in Fish	44420601	Core	3/6/98		DE-105: Early Life Stage Toxicity in the Sheepshead Minnow, Cyprinodon variegatus	Boeri	1237-DO	8/7/97	11/7/97	
72-4(b)	Life Cycle in Aquatic Invertebrates (Daphnia/Mysid)	44420602	Core	3/6/98		DE-105: Chronic Toxicity to the Mysid, Mysidopsis bahia	Boeri	1238-DO	8/6/97	11/7/97	
N/A	N/A	43478105				A Review of the Toxicity of Spinosad (XDE-105) to Fish and Wildlife	Mayes	DECO-ES-2885	11/28/94	11/30/94	
N/A	N/A	43477901				Ecological Risk Assessment for Spinosad Use on Cotton	Laskowski	GH-C 3464	11/22/94	11/30/94	
N/A	N/A	43848803				Aquatic Microcosm Dissipation of Spinosad (XDE-105)	McGibbon	GH-C 3562	5/15/95	11/16/95	
N/A	N/A	43918401				Assessment of Ecological Risk for Spinosad Use on Cotton Part II (MRID #43848801 and MRID #43477901)	Laskowski	GH-C 3930	1/26/96	2/1/96	

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R. F. Bischoff
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Spinosad Matrix (USEPA Subm.)

"Spinosyn A" EPA Chem. Code: 110003
"Spinosyn D" EPA Chem. Code: 110004

Guideline Number	Guideline Title	MRID	EPA Review Status	DER Date	EPA Notes	Study Title	Author	Study ID	Study Completion Date	Submission Date	Dow AgroSciences Notes
Mammalian Toxicology 1 of 3 (Spinosad Technical) 62719-266											
81-1	Acute Oral Toxicity in the Rat and Mouse	43414515	Acceptable	5/30/97	Tox III (5/30/97)	XDE-105: Acute Oral Toxicity Study in Fischer 344 Rats and CD-1 Mice	Gilbert	DR-0323-1194-017A	8/2/94	09/30/94	See MRID #43770701 for data to upgrade.
81-1	Acute Oral Toxicity in the Rat	43770701	Acceptable	5/30/97		The Acute Toxicity of XDE-105 Administered Orally to Fischer 344 Rats (Upgrade to previously submitted #43414515 above.)	Wright	R42590	11/9/92	8/28/95	Upgrade to prev. study (MRID 43414515)
81-2	Acute Dermal Toxicity in the Rabbit	43414516	Core	7/6/95	Tox III (1/9/97)	XDE-105: Acute Dermal Toxicity Study in New Zealand White Rabbits	Gilbert	DR-0323-1194-017D	8/2/94	09/30/94	
81-2	**Acute Dermal Toxicity in the Rabbit**	**44596203**	**Acceptable**	**10/7/98 (NOPR 10/28/98)**	**Tox. Cat. IV**	**XDE-105: Acute Dermal Toxicity Study in New Zealand White Rabbits**	**Gilbert**	**DR-0323-1194-017D1**	**11/30/94**	**7/2/98**	
81-3	Acute Inhalation Toxicity in the Rat	43414517	Core	7/6/95	Tox IV (1/9/97)	The Acute Inhalation Toxicity in the Fischer 344 Rat of Technical XDE-105	Wolff	R33491	8/10/94	09/30/94	
81-4	Primary Eye Irritation in the Rabbit	43414518	Core	7/6/95	Tox IV (1/9/97)	XDE-105: Primary Eye Irritation Study in New Zealand White Rabbits	Gilbert	DR-0323-1194-017C	8/2/94	09/30/94	
81-5	Primary Dermal Irritation in the Rabbit	43414519	Core	7/6/95	Tox IV (1/9/97)	XDE-105: Primary Dermal Irritation Study in New Zealand White Rabbits	Gilbert	DR-0323-1194-017B	8/2/94	09/30/94	
81-6	Dermal Sensitization in the Guinea Pig	43414520	Core	7/6/95		XDE-105: Dermal Sensitization Potential in the Hartley Albino Guinea Pig	Gilbert	DR-0323-1194-017E	8/2/94	09/30/94	
81-8	Acute Neurotoxicity in the Rat	43557501	Acceptable	5/30/97		XDE-105: Acute Neurotoxicity Study in Fischer 344 Rats	Albee	DR-0323-1194-009	3/11/94	2/22/95	See MRID #43701503 for data to upgrade. (EPA show GLN 81-7)
82-1	90-Day Feeding Study -- Dog	43444102	Core	7/6/95		XDE-105: 13-Week Oral Subchronic Toxicity Study in Dogs	Harada	IET 910079	9/1/94	09/30/94	
82-1	90-day Feeding Study-- Rat	43566601	Acceptable	7/6/95		A Subchronic Toxicity Study in Fischer 344 Rats Administered XDE-105 in the Diet for 3 Months	Grothe	T6P TBRATS AM 120-568 (R20690)	11/20/92	2/22/95	
82-1	90-day Feeding Study-- Mouse	43566602	Core	7/6/95		A Subchronic Toxicity Study in CD-1 Mice Administered XDE-105 in the Diet for 3 Months.	Grothe	T6P TBMICE AM 94-476 (MO 1290)	12/4/92	2/22/95	

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Guideline Number	Guideline Title	MRID	EPA Review Status	DER Date	EPA Notes	Study Title	Author	Study ID	Study Completion Date	Submission Date	Dow AgroSciences Notes
Mammalian Toxicology 2 of 3 (Spinosad Technical) 62719-266											
82-1	90-day Feeding Study--Rat	43557502	Acceptable	7/6/95		XDE-105: 13-Week Dietary Toxicity and 4-Week Recovery Studies in Fischer 344 Rats	Yano	DR-0323-1194-001A	9/15/94	2/22/95	
82-2	21-Day Dermal	43557503	Core	7/6/95		XDE-105: Probe and 21-Day Repeated Dose Dermal Toxicity Study in New Zealand White Rabbits	Vedula	DR-0323-1194-018	8/26/94	2/22/95	Upgrade to prev. study (MRID 43557504)
82-7	13-Week Dietary/Neurotoxicity in Rats	43557504	Acceptable	5/30/97		XDE-105: 13-Week Neurotoxicity Study in Fischer Rats.	Wilmer	DR-0323-1194-001B	7/13/93	2/22/95	See MRID #43701503 for data to upgrade. (EPA shows GLN 82-5)
83-1	Chronic feeding--2 spp. rodent and nonrodent.	43701503	Acceptable	5/30/97		XDE-105: Chronic Neurotoxicity Study in Fischer 344 Rats	Spencer	DECO-HET DR-0323-1194-005N	4/28/95	6/28/95	
83-1	Chronic feeding--2 spp. rodent and nonrodent	43701504	Acceptable	5/30/97		XDE-105: 12-Month Oral Chronic Toxicity Study in Dogs	Harada	DECO-HET DR-0323-1194-021 (IET 91-0080)	1/30/95	6/28/95	
83-2	Oncogencity study--2 Spp. rat and mouse preferred.	43701505	Acceptable	5/30/97		XDE-105: 18-Month Dietary Oncogenicity Study in CD-1 Mice	Bond	DR-0323-1194-006	4/7/95	6/28/95	
83-2	Oncogencity study--2 Spp. rat and mouse preferred.	44123601	Acceptable	5/30/97		XDE-105: 18-Month Dietary Oncogenicity Study in CD-1 Mice	Bond	DR-0323-1194-006A	3/4/96	9/27/96	Transmittal Letter has error on Study ID. Shows 066A.
83-3(a)	Teratogenicity in the Rat	43557505	Acceptable	5/30/97		XDE-105: Oral Gavage Teratology Study in Sprague-Dawley Rats	Liberacki	DR-0323-1194-003	2/1/93	2/22/95	See MRID #43770702 for data to upgrade.
N/A	N/A	43770702	Acceptable Supplementary Data	5/30/97		XDE-105: Oral Gavage Teratology Probe Study in Sprague-Dawley Rats (Upgrade to previously submitted #43414505 above.)	Liberacki	DECO-HET DR-0323-1194-002	12/10/92	8/28/95	
83-3(b)	Teratogenicity in the Rabbit	43414521	Acceptable	5/30/97		XDE-105: Oral Gavage Teratology Study in New Zealand White Rabbits	Vedula	DR-0323-1194-011	1/7/94	09/30/94	See MRID #43770703 for date to upgrade.
N/A	N/A	43770703	Acceptable Supplementary Data	5/30/97		XDE-105: Oral Gavage Teratology Probe Study in New Zealand White Rabbits (Upgrade to previously submitted #43414521 above.)	Breslin	DR-0323-1194-007	12/18/92	8/28/95	
83-4	2-Generation Reporduction Study in the Rat	43701506	Acceptable	5/30/97		XDE-105: Two-Generation Dietary Reproduction Study in Sprague-Dawley Rats	Breslin	DR-0323-1194-008	12/20/94	6/28/95	

Mammalian Toxicology 3 of 3 (Spinosad Technical) 62719-266

Guideline Number	Guideline Title	MRID	EPA Review Status	DER Date	EPA Notes	Study Title	Author	Study ID	Study Completion Date	Submission Date	Dow AgroSciences Notes
83-5	Chronic Feeding Oncogenicity in the Rat	43701507	Acceptable	5/30/97		XDE-105: Two-Year Chronic Toxicity, Chronic Neurotoxicity and Oncogenicity Study in Fischer 344 Rats	Bond	DR-0323-1194-005	4/7/95	6/28/95	
84-2	Gene Mutagenicity	43414522	Unacceptable	7/6/95		The Effect of XDE-105 on the Induction of Reverse Mutations in Salmonella typhimurium and Escherichia coli Using the Ames Test	Garriott	910820AMS3162/ 910917AMS31	12/3/92	09/30/94	
84-2	Gene Mutagenicity	43414523	Acceptable	6/25/95 (Recd 3/6/98)		The Effect of XDE-105 on the Induction of Forward Muttation of the Thymidine Kenase Locus of L5178Y Mouse Lymphoma Cells	Garriott	910910MLA3162	7/17/92	09/30/94	
84-2/84-4	Other Genotoxic Effects	43414524	Acceptable	6/25/95 (Recd 3/6/98)		The Effect of XDE-105 on the Invitro Induction of Chromosome Aberrations in Chinese Hamster Ovary Cells	Garriott	910918CAB3162/ 911009CAB31	7/17/92	09/30/94	
84-2/84-4	Other Genotoxic Effects	43414525	Acceptable	6/25/95 (Recd 3/6/98)		The Effect of XDE-105 on the In Vivo Induction of Micronuclei in Bone Marrow of ICR Mice	Garriott	910916MNT3162/ 911007MNT31	7/17/92	09/30/94	
84-2/84-4	Other Genotoxic Effects	43414526	Acceptable	6/25/95 (Recd 3/6/98)		The Effect of XDE-105 on the Induction of Unscheduled DNA Synthesis in Primary Cultures of Adult Rat Hepatocytes	Garriott	910806UDS3162/ 910827UDS31	6/10/92	09/30/94	
85-1	General Metabolism	43701508	Acceptable	5/14/97		XDE-105 (Factor A): Metabolism and Tissue Distribution of 14C-Labeled XDE-105 (Factor A) in Fischer 344 Rats	Domoradski	DR-0323-1194-012	4/10/95	6/28/95	
85-1	General Metabolism	43701509	Acceptable	5/14/97		XDE-105 (Factor D): Metabolism and Tissue Distribution of 14C-Labeled XDE-105 (Factor D) in Fischer 344 Rats	Mendrala	DECO-HET-DR-0335-0070-001	3/31/95	6/28/95	
85-1	General Metabolism	43701510	Acceptable	5/14/97		Bile Elimination of XDE-105 (Factor D) in Fischer 344 Rats	Mendrala	DECO-HET-DR-0335-0070-002	3/31/95	6/28/95	
NA	NA	43701511	Acceptable	5/14/97		XDE-105: Comparison of the Metabolism and Tissue Distribution of 14C-Labeled XDE-105 (Factor A) and 14C-Labeled XDE-105 (Factor D) in Fischer 344 Rats	Domoradski	DECO-HET-T2.2-187-19	5/5/95	6/28/95	
NA	NA	43478106				Spinosad (XDE-105): Review of Mammalian Toxicology	Yano	T2.2-175-19	11/28/94	11/30/94	
NA	NA	43701501				Spinosad (XDE-105): Review of Mammalian Toxicology	Yano	T2.2-175-(19R)	5/7/95	6/28/95	

Guideline Number	Guideline Title	MRID	EPA Review Status	DER Date	EPA Notes	Study Title	Author	Study ID	Study Completion Date	Submission Date	Dow AgroSciences Notes
Plant Protection (Spinosad Technical) 62719-266											
122-1	Tier 1 Seed Germination and Seedling Emergence	43848802	Core	3/4/96		Evaluating the Effects of XDE-105 on the Germination, Emergence, and Vegetative Vigor of Non-Target Terrestrial Plants	Schwab	RES94062 (41704)	12/5/94	11/16/95	
122-1 (850.4100, 850.4150, 850.4200)	Tier 1: Seed Germination/Seedling Emergence and Vegetative Vigor	**44597732**				Evaluating the Effects of Spinosad (XDE-105) on the Emergence and Vegetative Vigor of Non-Target Terrestrial Plants	McCormick	RES96153 (GH-C 4381)	4/28/97	7/1/98	
122-2	Aquatic Plant Growth	43414542	Core	3/26/96		Toxicity of XDE-105 to a Freshwater Green Alga (Selenastrum capricornutum) in a 7-Day Static Test System	Brock	J00992	12/3/92	09/30/94	Prev. classified as Supplemental on DER dated 4/27/96 that was received 4/29/96 w/ review date 3/29/96.
123-2	Aquatic Plant Growth	43414546	Core	4/27/96		The Toxicity of XDE-105 Insecticide (Lot # ACD 13651) To The Aquatic Plant, Duckweed, Lemna gibba L. G-3	Milazzo	DECO-ES-2803	9/26/94	09/30/94	
123-2	Aquatic Plant Growth	43414544	Core	4/27/96		The Toxicity of XDE-105 Insecticide to Anabaena flos-aquae	Hughes	DECO-ES-2671 (B460-154-1)	10/22/93	09/30/94	
123-2	Aquatic Plant Growth	43414545	Core	4/27/96		The Toxicity of XDE-105 Insecticide to Skeletonema costatum	Hughes	DECO-ES-2672 (B460-154-3)	10/22/93	09/30/94	
123-2	Aquatic Plant Growth	43414543	Core	4/27/96		The Toxicity of XDE-105 Insecticide to Navicula pelliculosa	Hughes	ES-2673 (B460-154-2)	1/19/94	09/30/94	

Guideline Number	Guideline Title	MRID	EPA Review Status	DER Date	EPA Notes	Study Title	Author	Study ID	Study Completion Date	Submission Date	Dow AgroSciences Notes
Nontarget Insects (Spinosad Technical) 62719-266											
141-1	Honey Bee Acute Contact (LD50)	43414547	Core	4/27/96		XDE-105 Insecticide: An Acute Contact Toxicity Study with the Honey Bee	Hoxter	DECO-ES-2551 (103-384)	12/14/92	09/30/94	
141-2	Honey Bee Toxicity of Residues on Foliage	44420603	Supplemental/ Repairable (Acceptable/Tree crops, not acceptable/Row crops)	9/17/98 (8/28/98) (Prev. 3/6/98)		NAF-315: A Foliage Residue Toxicity Study with the Honey Bee	Palmer	103-420	10/29/97	11/7/97	Upgrade request submitted in letter dated 5/29/98. (6/10/98…jla) (See EPA Response 9/17/98)
143-1 143-2	Non-target Insect Testing -- Predators and Parasites	43444105	Invalid	8/12/97		Activity of Spinosad and the Killed Saccharopolyspora Spinosa Broth Microbial Pest Control Agent Aganist Non-Target Beneficial Arthropods	Schoonover	FOR93127	1/28/94	09/30/94	
N/A	N/A	43414548				Acute Toxicity of XDE-105 Insecticide to the Earthworm	Ward	DECO-ES-2559	1/20/93	09/30/94	

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Spinosad Matrix (USEPA Subm.)

"Spinosyn A" EPA Chem. Code: 110003
"Spinosyn D" EPA Chem. Code: 110004

Guideline Number	Guideline Title	MRID	EPA Review Status	DER Date	EPA Notes	Study Title	Author	Study ID	Study Completion Date	Submission Date	Dow AgroSciences Notes
Environmental Fate 1 of 2 (Spinosad Technical) 62719-266											
161-1	Hydrolysis	43507301	Accepted	7/31/95		Hydrolysis of XDE-105 Factors A and D in Aqueous Buffer	Saunders	GH-C 3228 (ENV91068)	7/22/94	1/6/95	
161-2	Photodegradation in Water	43507302	Accepted	7/31/95		Photodegradation of XDE-105 Factors A and D in pH 7 Buffer	Saunders	GH-C 3044 (ENV91069)	4/18/94	1/6/95	
161-3	Photodegradation on soil	43507303	Accepted	7/31/95		Photolysis of XDE-105 Factors A and D on Soil	Saunders	GH-C 2874 (ENV91070)	2/18/93	1/6/95	
161-3	Photodegradation On Soil	**44597733**				Photolysis of Spinosad Factor A on Wet Soil	Saunders	ENV94008 (GH-C 3503)	3/27/95	7/1/98	
162-1	Aerobic Soil Metabolism Study	43507304	Accepted	2/28/96		The Aerobic Soil Metabolism of (14C)-XDE-105	Hale	GHE-P-3355R (4N)	7/22/94	1/6/95	
162-3	Anaerobic Aquatic Metabolism Study	43507305	Accepted	2/28/96		The Anaerobic Aquatic Metabolism of (14C)-XDE-105	Reeves	GHE-P-2989R (3N)	6/10/93	1/6/95	
162-1, 162-3	Aerobic Soil Metabolism, Anaerobic Aquatic Metabolism	44420604				Response to EPA Review of Spinosad Aerobic Soil and Anaerobic Aquatic Metabolism Studies to Address Qeustions Concerning the Inactivation of Spinosyn D (Supplement to MRIDs 43507304 and 43507305)	Magnussen	GH-C 4495 (RFB100197)	10/1/97	11/7/97	
163-1	Leaching and Adsorption/Desorption	43507306	Accepted	2/28/96		Soil Adsorption and Desorption of XDE-105 Factor A	Saunders	GH-C 3298 (ENV 91093)	7/27/94	1/6/95	
162-1, 162-3, 163-1	Aerobic Soil Metabolism, Anaerobic Aquatic Metabolism, Leaching and Adsorption/Desorption	43816601	Accepted	2/28/96		Response to EPA Review of Spinosad Aerobic Soil, Anaerobic Aquatic, and Soil Adsorption and Desorption Studies: (MRID #'s 43507304, 43507305, 43507306, previously submitted 1/6/95)	Rainey	RFB101095	10/10/95	10/13/95	
163-1	Leaching and Adsorption/Desorption	43816602	Accepted	2/28/96		Soil Adsorption and Desorption of XDE-105 Metabolite Factor B	Saunders	GH-C 3295 (ENV94023)	7/20/94	10/13/95	
164-1	Soil Field Dissipation	43714301	Accepted	2/28/96		Terrestrial Field Dissipation of 14C Spinosad Factor A	Saunders	GH-C 3550 (ENV93017)	4/27/95	6/28/95	
164-1	Soil Field Dissipation Study	44045101				Validation Report for the Determination of Residues of Spinosad in Water by Immunoassay	Mihaliak	GH-C 3541 (RES94093)	5/2/95	6/24/96	164-2 (Aquatic Sediment Field Dissipation Study)
164-1	Soil Field Dissipation Study	44045102				Validation Report for the Determination of Residues of Spinosad in Sediment by Immunoassay	Young & Mihaliak	GH-C 3579 (RES94138)	5/16/95	6/24/96	164-2 (Aquatic Sediment Field Dissipation Study)

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(To EPA 1/18/99)

Guideline Number	Guideline Title	MRID	EPA Review Status	DER Date	EPA Notes	Study Title	Author	Study ID	Study Completion Date	Submission Date	Dow AgroSciences Notes
Environmental Fate 2 of 2 (Spinosad Technical) 62719-266											
164-1 & 164-2	Soil Field Dissipation Study & Aquatic Sediment Field Dissipation Study	44045103				Residue Method Validation Report for the Determination of XDE-105 and Metabolites in Soil and Sediment by High Performance Liquid Chromatography with Ultraviolet Detection.	West	GH-C 3539 (RES94124)	3/27/95	6/24/96	
164-1 & 164-2	Soil Field Dissipation Study & Aquatic Sediment Field Dissipation Study	44045104				Independent Laboratory Validation of Method GRM 94.20 - Determination of XDE-105 and Metabolites in Soil and Sediment by High Performance Liquid Chromatography with Ultraviolet Detection	Lochhass	GH-C 3212 RES95038)	4/12/95	6/24/96	
164-2	Aquatic Sediment Field Dissipation Study.	44045105				Residue Method Validation Report for the Determination of XDE-105 and Metabolites in Water by High Performance Liquid Chromatography with Ultraviolet Detection	West	GH-C 3530 (RES94092)	3/27/95	6/24/96	
171-4(c) & (d)	Residue Analytical Method (Plants) & Residue Analytical Method (Animals)	44045106				Independent Laboratory Validation of Method GRM 94.12-Determination of XDE-105 and Metabolites in Water by High Performance Liquid Chromatography with Ultraviolet Detection	Stenzel	GH-C 3603 (RES95037)	3/30/95	6/24/96	164-2 (Aquatic Sediment Field Dissipation Study)
165-4 & 072-6	165-4 Accumulation in Fish (Environmental Fate) 72-6 Aquatic Organism Accumulation Study (Wildlife & Aquatic)	**44597734**				The Bioconcentration of XDE-105 (Factor D) in Rainbow Trout, Oncorhynchus mykiss Walbaum	Woodburn	DECO-ES-2632	7/3/96	7/1/98	
165-4	Fish Accumulation	43557601	Acceptable (7/31/95)			The Bioconcentration of XDE-105 (Factor A) in Rainbow Trout, Oncorhynchus Mykiss Walbaum	Woodburn	DECO-ES-2471	11/9/94	2/22/95	
N/A	N/A	43478104				Summary of the Environmental Fate of Spinosad	Saunders	GH-C 3458	11/22/94	11/30/94	
N/A	N/A	43816603				A Summary of the Envronmental Fate of Spinosad	Saunders	GH-C 3605	4/21/95	10/13/95	
N/A	N/A	**44597735**				Aqueous Photolysis of Spinosyn A and D in Natural Water	Yoder	ENV96119 (GH-C 4201)	9/25/96	7/1/98	
N/A	N/A	**44597736**				Calculation of Henry's Law Constant for Spinosad	Saunders	GH-C 4206	10/10/96	7/1/98	
N/A	N/A	**44597737**				Photostability of [14C] XDE-105 on Cabbage Leaves and Glass Surfaces	Berard	MET92077 (GH-C 4211)	10/31/96	7/1/98	

Guideline Number	Guideline Title	MRID	EPA Review Status	DER Date	EPA Notes	Study Title	Author	Study ID	Study Completion Date	Submission Date	Dow AgroSciences Notes
Residue Chemistry 1 of 11 (Spinosad Technical) 62719-266											
165-1	Confined Rotational Crop	43727402	Accepted	4/24/96	PP 6F4735	A Confined Rotational Crop Study with 14C 232105 (XDE-105; Factor A) Using Wheat, Radish and Lettuce	Rainey	GH-C 3358 (MET92047)	9/22/94	7/21/95	
171-4(a)	Nature of Residue in Plants	43727403	Accepted	4/24/96	PP 6F4735	14C XDE-105 Cotton Nature of Residue Study	Magnussen	GH-C 3346 (MET91063)	8/8/94	7/21/95	
171-4(a)	Nature of Residue in Plants	43727404	Accepted	4/24/96	PP 6F4735	Characterization of the Residues in Seed from a 30-Day PHI 14C XDE-105 (Factor A) Cotton Nature of Residue Study	Magnussen	GH-C 3561 (MET94033)	4/27/95	7/21/95	
171-4(a)	Nature of Residue in Plants	44058811	Accepted	1/23/97	PP 6F04761 FAP 6H05754	Nature of Residue Study in Apple Leaves Using [14C]XDE-105 (Factor A and Factor D)	Berard	GH-C 3675 (MET93041)	12/21/95	7/1/96	
171-4 (a) (1) and (2)	Nature of Residue in Plants	44058813	Accepted	1/23/97	PP 6F04761 FAP 6H05754	Nature of Residue Study in Apples Using (14C) XDE-105 (Factor A and Factor D)	Graper	GH-C 3676 (MET93040)	1/11/96	7/1/96	
171-4(a)	Nature of Residues in Plants	44058812	Accepted	1/23/97	PP 6F04761 FAP 6H05754	Nature of [14C] XDE-105 Residues Resulting from a Single Application of Compound to Cabbage	Berard	GH-C 3875 (MET92019)	12/21/95	7/1/96	
171-4 (a) (1) and (2)	Nature of Residue in Plants	44058814	Accepted	1/23/97	PP 6F04761 FAP 6H05754	Nature of Residue Study in Turnips Using [14C]XDE-105 (Factor A and Factor D)	Satonin	GH-C 3796 (MET92069)	12/21/95	7/1/96	
171-4(a) (1) and (2)	Nature of Residue in Plants	44058815	Adequate	1/23/97	PP 6F04761 FAP 6H05754	Characterization of Residues in Cabbage and Tomatoes Receiving Repeat Applications of 14C XDE-105	Satonin	GH-C 3886 (MET94032)	1/25/96	7/1/96	
171-4(b)	Nature of Residue in Livestock	43727405	Accepted	4/24/96	PP 6F4735	14C XDE-105 (Factors A and D) Poultry Nature of Residue Study	Magnussen	GH-C 3384 (MET93018/MET93107)	10/10/94	7/21/95	

Guideline Number	Guideline Title	MRID	EPA Review Status	DER Date	EPA Notes	Study Title	Author	Study ID	Study Completion Date	Submission Date	Dow AgroSciences Notes
Residue Chemistry 2 of 11 (Spinosad Technical) 62719-266											
171-4(b)	Nature of Residue in Livestock	43727406	Accepted	4/24/96	PP 6F4735	14C XDE-105 (Factor A and D) Goat Metabolism Study: Tissues, Milk, Excreta	Rainey	GH-C 3396 (MET93083)	10/17/94	7/21/95	
171-4(c)	Residue Analytical Method (Plants)	43727407	Accepted including EPA lab tryout	9/23/96	PP 6F4735	Determination of XDE-105 Insecticide in Cottonseed and Processed Commodities by High Performance Liquid Chromatography with Ultraviolet Detection	West	GH-C 3327 (RES94025)	8/31/94	7/21/95	
171-4(c) & (d)	Residue Analytical Method (Plants) and Residue Analytical Method (Animals)	43727408	Accepted including EPA lab tryout	9/23/96	PP 6F4735	Determination of XDE-105 Insecticide in Cottonseed and Processed Commodities by High Performance Liquid Chromatography with Ultraviolet Detection (Independent laboratory validation of DowElanco analytical method GRM 94.02)	West	GH-C 3597 (RES95036)	3/27/95	7/21/95	
171-4(c)	Residue Analytical Method (Plants)	44058816	Adequate	1/23/97	PP 6F04761 FAP 6H05754	Residue Method Validation Report for the Determination of Spinosyns A, D, K, and B, and N-Demethyl Spinosyn D in Cabbage, Mustard Greens, and Broccoli	Yeh	GH-C 3712 (RES94110)	1/22/96	7/1/96	
171-4 (c)	Residue Analytical Method (Plants)	44058818	Adequate	1/23/97	PP 6F04761 FAP 6H05754	Independent Laboratory Validation of Method GRM 94.22 - Determination of Spinosyns A, D, K, and B, and N-Demethyl Spinosyn D in Cabbage, Mustard Greens, and Broccoli	Yeh	GH-C 4014 (RES95158)	5/6/96	7/1/96	
171-4(c)	Residue Analytical Methods - Plants	44058817	Adequate	1/23/97	PP 6F04761 FAP 6H05754	Residue Method Validation Report for the Determination of Spinosyns A, D, K, B, and N-Demethyl Spinosyn D in Apple and Apple Processed Fractions	Yeh	GH-C 3943 (RES95061)	4/10/96	7/1/96	
171-4(c)	Residue Analytical Methods - Plants	44058819	Adequate	1/23/97	PP 6F04761 FAP 6H05754	Independent Laboratory Validation of Method GRM 95.05 - Determination of Spinosyns A, D, K, and B and N-Demethyl Spinosyn D in Apple and Apple Processed Fractions	Yeh	GH-C 4027 (RES95160)	5/15/96	7/1/96	
171-4(c)	Residue Analytical Methods - Plants	44159306	Adequate	3/2/98	PP 7F4797	Residue Method Validation Report for the Determination of Spinosyns A, D, K, B, and N-Demethyl Spinosyn D in Pepper, Tomato, and Tomato Processed Fractions	Yeh	GH-C 3830 (RES95021)	3/1/96	10/3/96	

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Residue Chemistry 3 of 11 (Spinosad Technical) 62719-266											
171-4(c)	Residue Analytical Methods - Plants	44159305	Adequate	3/2/98	PP 7F4797	Independent Laboratory Validation of Method GRM 94.22 - Determination of Spinosyns A, D, K, and B, and N-Demethyl Spinosyn D in Pepper, Tomato, and Tomato Processed	Yeh	GH-C 4015 (RES95159)	5/14/96	10/3/96	
171-4(c)	Residue Analytical Method (Plants)	44214902				Residue Method Validation Report for the Determination of Spinosad and Metabolites in Green and Cured Tobacco by High Performance Liquid Chromatography with Ultraviolet Detection	Yeh	GH-C 4178 (RES96041)	9/27/96	2/7/97	
N/A	Residue Analytical Method (Plants)	Admin				Determination of Residues of Spinosad in Green and Cured Tobacco Using a Magnetic Particle-Based Immunoassay Test Kit	Hanselman/ Young	GRM: 96.16 (Not in 86-5 format-complimentary copy only)	N/A	2/7/97	
171-4(c)	Residue Analytical Methods - Plants	44323505	Adequate	3/2/98	PP 7F4871	Residue Method Validation Report for the Determination of Spinosyns A, D, K, B and N-Demethyl Spinosyn D in Leafy Vegetables	Yeh	GH-C 4115 (RES95171)	7/18/96	7/2/97	
PR Notice 96-1 (860-1340) 171-4(c)	Residue Analytical Methods -Plants (ILV)	44323502	Adequate	3/2/98	PP 7F4871	Independent Laboratory Validation of Method GRM 95.17 - Determination of Spinosyns A, D, K, B, and N-Demethyl Spinosyn D in Leafy Vegetables	Schwedler	GH-C 4349 (RES96075)	4/1/97	7/2/97	
171-4(c)	Residue Analytical Methods - Plants	44323506	Adequate	3/2/98	PP 7F4871	Residue Method Validation Report for the Determination of Spinosad and Metabolites in Citrus Fruits and Orange Process Commodities by High Performance Liquid Chromatography with Ultraviolet Detection	West	GH-C 4326 (RES96069)	2/28/97	7/2/97	
860.1340(c)(6) PR Notice 96-1	Residue Analytical Method	44323504	Adequate	3/2/98	PP 7F4871	Independent Laboratory Validation of Method GRM 96.09 - Determination of Spinosad and Metabolites in Citrus Fruits and Orange Processed Commodities by High Performance Liquid Chromatography with Ultraviolet Detection	West	GH-C 4402 (RES96129)	6/16/97	7/2/97	
171-4(c)	Residue Analytical Methods - Plants	44323508	Adequate	3/2/98	PP 7F4871	Residue Method Validation Report for the Determination of Residues of Spinosad in Crops by Immunoassay	Hanselman	GH-C 4333 (RES95154)	3/5/97	7/2/97	

Guideline Number	Guideline Title	MRID	EPA Review Status	DER Date	EPA Notes	Study Title	Author	Study ID	Study Completion Date	Submission Date	Dow AgroSciences Notes
Residue Chemistry 4 of 11 (Spinosad Technical) 62719-266											
PR Notice 96-1 (860-1340(c)(6)) 171-4(c)	Tolerance Enforcement Methods - Independent Laboratory Validation by Petitioner (Residue Analytical Methods - Plants (ILV))	44323503	Adequate	3/2/98	PP 7F4871	Independent Laboratory Validation of Method GRM 96.10 - Determination of Residues of Spinosad in Leafy Vegetables Using a Magnetic Particle-Based Immunoassay Test Kit	Hanselman	GH-C 4393 (RES96152)	5/20/97	7/2/97	
171-4(c); 860-1340(c)(2)	Residue Analytical Methods - Plants	44323507	Adequate	3/2/98	PP 7F4871	Method Validation Report for the Determination of Residues of Spinosyns A and D and Metabolites in Tree Nuts (Almond and Pecan Nutmeats and Almond Hulls) by High Performance Liquid Chromatogaphy with Ultraviolet Detection	Duebelbeis	GH-C 4407 (RES96101)	6/23/97	7/2/97	
860.1340(c)(2) (171-4(c))	Residue Analytical Methods - Plants	44444402	Adequate	3/3/98	PP 8F4942	Residue Method Validation Report for the Determination of Spinosad in Cotton Gin Trash by High Performance Liquid Chromatogaphy with Ultraviolet Detection	West	GH-C 4413 (RES96034.02)	6/19/97	12/11/97	
860.1340(c)(2) (171-4(c))	Residue Analytical Methods - Plants	**44597709**				Method Validation Report for the Determination of Residues of Spinosad in Sorghum Fodder Using a Magnetic Particle-Based Immunoassay Test Kit	Collins	RES97096 (GH-C4701)	6/25/98	7/1/98	
860.1340(c)(2) (171-4(c))	Residue Analytical Methods - Plants	**44597710**				Residue Method Validation Report for the Determination of Spinosad and Metabolites in Alfalfa Hay, Wheat Hay, Wheat Straw, Corn Stover, and Sorghum Fodder by Liquid Chromatography with Mass Selective Detection	Schwedler	RES97093 (GH-C 4716)	6/25/98	7/1/98	

Guideline Number	Guideline Title	MRID	EPA Review Status	DER Date	EPA Notes	Study Title	Author	Study ID	Study Completion Date	Submission Date	Dow AgroSciences Notes
Residue Chemistry 5 of 11 (Spinosad Technical) 62719-266											
860.1340(c)(6) PR Notice 96-1	Residue Analytical Methods - Plants	**44597708**				Independent Laboratory Validation of Methods GRM 96.11.S1 - Supplemental Method for the Determination of Spinosad in Pears and Stone Fruit Using a Magnetic Particle-Based Immunoassay Test Kit and GRM 97.05 - Determination of Residues of Spinosad in Sorghum Fodder Using a Magnetic Particle-Based Immunoassay Test Kit	Dillon	7591-98-0084-CR-001 (GH-C 4732)	6/29/98	7/1/98	
171-4(d)	Residue Analytical Methods - Animals	44058820	Adequate	1/23/97 (4/20/98)	PP 6F04761 FAP 6H05754	Independent Laboratory Validation of Method GRM 95.03-Determination of Spinosad and Metabolites in Beef Tissues, Milk, and Cream by High Performance Liquid Chromatography with Ultraviolet Detection	West	GH-C 4122 (RES95155)	6/25/96	7/1/96	
171-4(d)	Residue Analytical Methods - Animals	44058821	Adequate	1/23/97 (4/20/98)	PP 6F04761 FAP 6H05754	Independent Laboratory Validation of Method GRM 95.03-Determination of Spinosad and Metabolites in Beef Tissues, Milk, and Cream by High Performance Liquid Chromatography with Ultraviolet Detection	West	GH-C 4133 (RES95155B)	6/25/96	7/1/96	
171-4(d)	Residue Analytical Methods - Animals	44058822	Adequate	1/23/97 (4/20/98)	PP 6F04761 FAP 6H05754	Residue Method Validation Report for the Determination of Spinosad and Metabolites in Beef Tissues, Milk, and Cream by High Performance Liquid Chromatography with Ultraviolet Detection	West	GH-C 3775 (RES95094)	12/1/95	7/1/96	DAS sent in response on 5/29/98 to EPA Review dtd 4/20/98 (ACLB dtd 4/3/98) and included a Comp. Copy of revised GRM (GRM 95.03.R1).
860-1340	**Residue Analytical Methods - Animals**	**44693601**				**Determination of Spinosad and Metabolites in Beef Tissues, Milk, and Cream by High Performance Liquid Chromatography with Ultraviolet Detection**	**West**	**GH-C 4833**	**10/29/98**	**10/30/98**	**Beth Edwards (EPA) requested that this method (GRM 95.03.R1), prev. sent as comp. copy, be put in 86-5 format so it could received a MRID. (10/30/98...jla)**

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Residue Chemistry 6 of 11 (Spinosad Technical) 62719-266											
171-4(d)	Residue Analytical Methods - Animals	44058823	Adequate	1/23/97 (4/20/98)	PP 6F04761 FAP 6H05754	Residue Method Validation Report for the Determination of Residues of Spinosad in Bovine Tissues and Milk by Immunoassay	Young	GH-C 4045 (RES95144)	6/10/96	7/1/96	
171-4(d)	Residue Analytical Methods - Animals	**44597713**				Residue Method Validation Report for the Determination of Spinosad and Metabolites in Poultry Tissue and Eggs by High Performance Liquid Chromatography with Ultraviolet Detection	Turner	RES95141 (GH-C 3985)	5/1/96	7/1/98	
171-4(d)	Residue Analytical Methods - Animals	**44597714**				Independent Laboratory Validation of Method GRM 95.15 - Determination of Spinosad and Metabolites inh Poultry Tissues and Eggs by High Performance Liquid Chromatography with Ultraviolet Detection.	Turner	RES96019 (GH-C 4314)	11/7/96	7/1/98	
171-4(e)	Storage Stability	44058824	Adequate	1/23/97	PP 6F04761 FAP 6H05754	Frozen Storage Stability of Spinosyns A, D, B, K and N-Demethyl Spinosyn D in Cabbage	Phillips	GH-C 4011 (RES94098)	5/13/96	7/1/96	
171-4(e)	Storage Stability	44058825	Adequate	1/23/97	PP 6F04761 FAP 6H05754	Frozen Storage Stability of Spinosyns, A, D, B, K, and N-Demethyl Spinosyn D in Apples and Apple Juice	Robb	GH-C 4092 (RES95100)	6/20/96	7/1/96	
171-4(e)	Storage Stability	44159307	Adequate	3/2/98	PP 7F4797	Frozen Storage Stability of Spinosad in Tomatoes	Rutherford	GH-C 4164 (RES95060)	8/26/96	10/3/96	
171-4(e); 860.1380	Storage Stability	44323509	Adequate	3/2/98	PP 7F4871	Frozen Storage Stability of Spinosad in Celery and Spinach	Phillips	GH-C 4391 (RES96094)	6/6/97	7/2/97	
171-4(e); 860.1380	Storage Stability	44323510	Adequate	3/2/98	PP 7F4871	Frozen Storage Stability of Spinosyns A, D, B, K and *N*- Demethyl Spinosyn D in Almond Nutmeat and Hulls	Phillips	GH-C 4421 (RES96150)	6/19/97	7/2/97	
860.1380 (171-4e)	Storage stability data	**44597711**				Frozen Storage Stability of Spinosad in Potatoes, a Representative Crop of the Root and Tuber Vegetables Group	Phillips, A.M.	RES97042 (GH-C 4646)	4/7/98	7/1/98	

Guideline Number	Guideline Title	MRID	EPA Review Status	DER Date	EPA Notes	Study Title	Author	Study ID	Study Completion Date	Submission Date	Dow AgroSciences Notes
Residue Chemistry 7 of 11 (Spinosad Technical) 62719-266											
860.1380 (171-4e)	Storage stability data	**44597712**				Frozen Storage Stability of Spinosad in Field Corn Grain, Sweet Corn Forage, and Sweet Corn Stover, Representative Crops of the Cereal Grains Group	Robb, C.K.	RES97043 (GH-C 4637R)	3/20/98 (Amended 6/24/98)	7/1/98	
171-4(j)	Magnitude of Residue in Meat/Milk/ Poultry/Eggs	44058826	Adequate	1/23/97	PP 6F04761 FAP 6H05754	Magnitude of the Residue of Spinosad in Meat and Milk from a 28-Day Dairy Feeding Study	Rutherford	GH-C 4039 (RES95126)	5/31/96	7/1/96	
860.1480 (171-4(j))	Magnitude of Residue in Meat/Milk/ Poultry/Eggs	**44597715**				Magnitude of Residues of Spinosad in Meat and Eggs from a Poultry Feeding Study	Gardner	RES95050 (GH-C 4714)	6/25/98	7/1/98	
171-4(k)	Crop Field Trials	43727410	Accepted except for missing gin trash residue	4/24/96	PP 6F4735	Magnitude of Residues of XDE-105 in Cottonseed After the Application of NAF-85 Insecticide	Gardner	GH-C 3359R (RES93026R/RES92 024R)	8/31/94	7/21/95	
860.1500 (171-4(k))	Crop Field Trials	44444403	Adequate	3/3/98	PP 8F4942	Magnitude of Residue of Spinosad in Cotton Gin Byproducts After Use of Tracer Naturalyte Insect Control Product	Gardner	RES96034.01/RES9 7085 (GH-C 4535)	11/21/97	12/11/97	
171-4(k)	Crop Field Trials	44058827	Adequate	1/23/97	PP 6F04761 FAP 6H05754	Magnitude of Residue of Spinosad (DE105) in Apples	Bargar	GH-C 4017 (RES95014)	5/30/96	7/1/96	
171-4(k)	Crop Field Trials	44058828	Adequate	1/23/97	PP 6F04761 FAP 6H05754	Magnitude of Residues of Spinosad in Brassica Vegetables	Rutherford	GH-C 4036 (RES95001)	6/3/96	7/1/96	

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Residue Chemistry 8 of 11 (Spinosad Technical) 62719-266											
171-4(k)	Crop Field Trials	44159308	Adequate	3/2/98	PP 7F4797	Magnitude of Residues of Spinosad in Tomatoes and Peppers	Rutherford	GH-C 4169 (RES95016)	9/3/96	10/3/96	
171-4(k)	Crop Field Trials	44159309	Adequate	3/2/98	PP 7F4797	Magnitude of Residue of Spinosad in Head Lettuce, Spinach, and Tomatoes - Bridging Study for NAF-85 and NAF-127 Formulations	Rutherford	GH-C 4179 (RES96009/ RES96008)	9/3/96	10/3/96	
171-4(k)	Crop Field Trials	44214903				Magnitude of Residues of Spinosad in Tobacco	Bargar	GH-C4306 (RES96016)	1/10/97	2/7/97	
171-4(k) (860.1500)	Crop Field Trials	44323512	Adequate	3/2/98	PP 7F4871	Magnitude of Residue of Spinosad in Leafy Vegetables	Rutherford	GH-C 4374 (RES96008)	4/29/97	7/2/97	
171-4(k) (860-1550)	Crop Field Trials	44323511	Adequate	3/2/98	PP 7F4871	Magnitude of Residue of Spinosad (DE-105) in Almonds	Bolles	GH-C 4397 (RES96004)	5/29/97	7/2/97	
860.1500 (171-4k)	Crop Field Trials	**44597717**				Magnitude of Residue of Spinosad in Cucurbit Vegetables	Phillips, A. M., et. al.	RES97002 (GH-C 4675)	6/22/98	7/1/98	
860.1500 (171-4k)	Crop Field Trials	**44597716**				Magnitude of Residue of Spinosad in Stone Fruit	Houtman, B. A., et. al.	RES97004 (GH-C 4705)	6/22/98	7/1/98	
860.1500 (171-4k)	Crop Field Trials	**44597719**				Magnitude of Residues of Spinosad in Legumes	Roberts	RES97034 (GH-C 4707)	6/26/98	7/1/98	
860.1500 (171-4k)	Crop Field Trials	**44597718**				Magnitude of Residue of Spinosad in the Cereal Grain Crop Group (Sweet Corn, Field Corn, Sorghum, and Wheat)	Rutherford	RES97037 (GH-C 4691)	6/26/98	7/1/98	
171-4(l)	Magnitude of Residue in Processed Food/Feed	44058829	Adequate	1/23/97	PP 6F04761 FAP 6H05754	Magnitude of Residue of Spinosad in Processed Products of Apples	Bolles	GH-C 4012 (RES95044)	5/6/96	7/1/96	
171-4(l)	Magnitude of Residue in Processed Food/Feed	44159310	Adequate	3/2/98	PP 7F4797	Magnitude of the Residue of Spinosad in Processed Products of Tomatoes	Rutherford	GH-C 3982 (RES95000)	4/17/96	10/3/96	

Guideline Number	Guideline Title	MRID	EPA Review Status	DER Date	EPA Notes	Study Title	Author	Study ID	Study Completion Date	Submission Date	Dow AgroSciences Notes
Residue Chemistry 9 of 11 (Spinosad Technical) 62719-266											
171-4	Residue of Analytical Method	43727409	Accepted	4/24/96	PP 6F4735	Multi-Residue Methods Testing for Spinosyns A and D	Atkin	GH-C 3566 (RES95040)	3/27/95	7/21/95	Multi-Residue Method Testing
171-4	Residue of Analytical Method	44058810	Adequate	1/23/97	PP 6F04761 FAP 6H05754	Multi-Residue Methods Teseting for Spinosyns B, K, and N-Demethyl Spinosyn D	Satonin	GH-C 4051 (RES96068)	5/20/96	7/1/96	Multi-Residue Method Testing
171-5	Reduction of Residues	Admin	Temporary Tolerance established on 6/5/96		PP 6G4692	Pratical Methods for Removing Residues of Spinosad from Cotton Seed (Section E of Pesticide Petition for Temporary Tolerance)	Day	GH-C 3968	3/7/96	3/8/96	
171-5	Reduction of Residues	Admin	Tolerance established in FR on 2/26/97		PP 6F4735	Practical Methods for Removing Residues of Spinosad from Cottonseed (Section E of Pesticide Petition)	Day	GH-C 4028	5/13/96	5/16/96	
171-5	Reduction of Residues	Admin	Tolerance established in FR on 4/15/98	1/23/97	PP 6F04761 FAP 6H05754	Practical Methods for Removing Residues of Spinosad from Apples and Brassica (Cole) Leafy Vegetables (Section E of Pesticide Petition)	Day	GH-C 4136	6/28/96	7/1/96	
171-6	Proposed Tolerance	Admin	Temporary Tolerance established on 6/5/96		PP 6G4692	Proposed Temporary Tolerance for Spinosad in or on Cotton Seed (Section F of Pesticide Petition)	Day	GH-C 3969	3/7/96	3/8/96	
171-6	Proposed Tolerance	Admin	Tolerance established in FR on 2/26/97		PP 6F4735	Proposed Tolerance for Spinosad in or on Cottonseed (Section F of Pesticide Petition)	Day	GH-C 4029	5/13/96	5/16/96	
171-6	Proposed Tolerance	Admin	Revisions to proposed tolerances needed	1/23/97	PP 6F04761 FAP 6H05754	Proposed Tolerance for Spinosad in or on Apples, Brassica (Cole) Leafy Vegetables, Meat and Milk (Section F of Pesticide Petition)	Day	GH-C 4137	6/28/96	7/1/96	
171-6	Proposed Tolerance	Admin	Tolerance established in FR on4/15/98		PP 6F04761 FAP 6H05754	Proposed Tolerance for Spinosad in or on Apples, Brassica (Cole) Leafy Vegetables, Meat and Milk (Revised Section F of Pesticide Petition 6F04761)	Day	GH-C 4372	4/2/97	4/18/97	

Guideline Number	Guideline Title	MRID	EPA Review Status	DER Date	EPA Notes	Study Title	Author	Study ID	Study Completion Date	Submission Date	Dow AgroSciences Notes
Residue Chemistry 10 of 11 (Spinosad Technical) 62719-266											
171-7	Reasonable Grounds in Support of Petitition	Admin	Temporary Tolerance established on 6/5/96		PP 6G4692	Reasonable Grounds in Support of the Petition for the Establishment of a Temporary Tolerance for Spinosad in or on Cotton Seed	Day	GH-C 3970	3/7/96	3/8/96	
171-7	Reasonable Grounds in Support of Petitition	Admin	Tolerance established in FR on 2/26/97		PP 6F4735	Reasonable Grounds in Support of the Petition for the Establishment of a Tolerance for Spinosad in or on Cottonseed (Section G of Pesticide Petition)	Day	GH-C 4030	5/13/96	5/16/96	
171-7	Reasonable Grounds in Support of Petitition	44058830	Tolerance established in FR on 4/15/98	1/23/97	PP 6F04761 FAP 6H05754	Reasonable Grounds in Support of the Petition for the Establishment of Tolerances for Spinosad in or on Apples, Brassica Leafy Vegetables, Meat and Milk (Section G of Pesticide Petition)	Day	GH-C 4135	6/28/96	7/1/96	
171-5, 6, & 7	Reductions of Residue, Proposed Tolerance, Reasonable Grounds in Support of Petitition	Admin	Tolerance established in FR on 4/15/98	3/2/98	PP 7F4797	Spinosad in or on the Fruiting Vegetables (Except Cucurbits) Group: Section E, F, and G of Pesticide Petition	Day	GH-C 4210	9/30/96	10/3/96	
171-5, 6, 7; (860.1550-1560)	Reductions of Residue, Proposed Tolerance, Reasonable Grounds in Support of Petitition	Admin	Section F needs revised	3/2/98	PP 7F4871	Spinosad in or on Almonds, Citrus, Leafy Vegetables, and Livestock: Sections E, F, and G of the Petition for Permanent Tolerances	Bolles	GH-C 4430	6/20/97	7/2/97	
171-6	Proposed Tolerance	Admin	Tolerance established in FR on 4/15/98		PP 7F4871	Proposed Permanent Tolerances for Spinosad in or on Almonds, Citrus, Leafy Vegetables (except *Brassica* Vegetables), Animal Tissues, and Milk (Revised Section F of Pesticide Petition No. 7F04871)	Bormet	GH-C 4641	3/16/98	3/17/98	EPA memo dated 3/26/98 w/3/3/98 memo attached has general comments only. Nothing specific. (4/30/98…jla)
171-5, 6, 7; (860.1550-1560)	Reductions of Residue, Proposed Tolerance, Reasonable Grounds in Support of Petitition	44444404	Tolerance established in FR on 4/15/98	3/3/98	PP 8F4942	Spinosad in or on Cotton Gin Byproducts, Animal Fat, Milk, and Milk Fat: Sections E, F and G of the Petition for Permanent Tolerances	Bolles	GH-C 4548	12/8/97	12/11/97	
171-5, 6, 7; (860.1550-1560)	Reductions of Residue, Proposed Tolerance, Reasonable Grounds in Support of Petitition	**Admin**				Spinosad in or on Cereal Grains, Cucurbits, Legume Vegetables, and Stone Fruits: Sections E, F, and G of the Petition for Permanent Tolerances	Rutherford	GH-C 4733	6/29/98	7/1/98	

Guideline Number	Guideline Title	MRID	EPA Review Status	DER Date	EPA Notes	Study Title	Author	Study ID	Study Completion Date	Submission Date	Dow AgroSciences Notes
Residue Chemistry 11 of 11 (Spinosad Technical) 62719-266											
NA	NA	43727401				Interpretive Summary of XDE-105 Residue Chemistry	Rainey	GH-C 3648	5/3/95	7/21/95	
N/A	N/A	44058831				Interpretive Summary of Spinosad Residue Chemistry for Apple, Brassica and the Ruminant	Rainey	GH-C 4134	6/27/96	7/1/96	
N/A	N/A	Admin				Waiver Request for Pyrolysis Study of Tobacco Treated with Spinosad	Bargar	GH-C 4325	1/27/97	2/7/97	
N/A	N/A	44323501	NOF in Fed. Register 10/8/97		PP 7F4871	Supplemental Information for Establishment of Spinosad Residue Tolerances on Almonds, Citrus, and Leafy Vegetables under the Requirements of the Food Quality Protection Act of 1996	Bischoff	RFB062097	6/20/97	7/2/97	
N/A	N/A	44444401	NOF in Fed. Register 3/4/98		PP 8F4942	Supplemental Information for Establishment of Spinosad Residue Tolerances on Cotton Gin Byproducts under the Requirements of the Food Quality Protection Act of 1996	Bischoff	RFB120497	12/4/97	12/11/97	
N/A	N/A	**44597701**				Supplemental Information for Establishment of Spinosad Residue Tolerances on Stone Fruit, Cucurbits, Corn (Field, Sweet, and Pop), Legume Vegetables (Succulent Including Soybeans), Sorghum, and Wheat under the Requirements of the Food Quality protection Act of 1996	Bischoff	RFB062698	6/26/98	7/1/98	
N/A	N/A	**44597703**				Comparision of Immunochemical and HPLC Analytical Methods for Determination of Spinosad Residues in Crops	Mihaliak	GH-C 4116	10/21/96	7/1/98	
N/A	None	**44597704**				A Guide to Residue Methodologies for the Determination of Spinosad in Crops, Crop Processed Products, Animal Tissues, and Environmental Samples	West	GH-C 4669	6/1/1998	7/1/98	

Guideline Number	Guideline Title	MRID	EPA Review Status	DER Date	EPA Notes	Study Title	Author	Study ID	Study Completion Date	Submission Date	Dow AgroSciences Notes
Petition Information: PP 6F4735 (Cotton---under same petition as Spinosad Technical), PP 8F4942 (Cotton Gin Trash), PP 8F5002 (field corn, sorghum, soybeans, wheat) NOPR dated 4/15/98 (Unconditional)											
Administrative (End Use) Tracer* 62719-267 (Cotton) (Previously NAF-85, 62719-EAT) Page 1 of 2											
None	Not Applicable	N/A	Classified as Reduced Risk.		Decision memo 2/13/97	Reduced-Risk Rationale for Spinosad, a Fermentation-Based Product for Control of Insects on Cotton	Bischoff	RFB 112294	9/28/94	11/30/94	
None	Not Applicable	NA	Classified as Reduced Risk.		Decision memo 2/13/97	Additional Information to Support Reduced-Risk Rationale for Spinosad, a Fermentation-Based Product for Control of Insects on Cotton				2/15/95	
N/A	None	**44597702**				Reduced Risk Rationale for Spinosad Products in the Control of Insects on Various Crops Including: Cucurbits, Stone Fruits, Legume Vegetables (Succulent, Including Soybeans), Corn (Field, Sweet, and Pop), Sorghum, and Wheat	Bischoff	RFB060898	6/8/98	7/1/98	
Product Chemistry (End Use) Tracer* 62719-267 (Cotton)											
61	Product Identity and Composition	43450301	Accepted	4/24/96		Series 61: Product Identity and Composition of NAF-85 An Aqueous Suspension Concentrate Formulation of XDE-105 Insecticide	Cobb	GH-C 3321	8/16/94	10/31/94	
62	Analytical Methods to Verify Certified Limits	43450302	Accepted	4/24/96		Series 62: Analysis and Certification of Product Ingredients of the End Use Product NAF-85, an Aqueous Suspension Concentrate of XDE-105	Jones-Jefferson	GH-C 3438	10/21/94	10/31/94	
63	Physical and Chemical Characteristics	43450303	Accepted	4/24/96		Series 63: Determination of Physical and Chemical Properties of NAF-85, A Suspension Concentrate of XDE-105	Jones-Jefferson	GH-C 3429	10/13/94	10/31/94	
830.6317, 830.6320	Storage Stability, Corrosion Characteristics	**44597705**	**Satisfies data requirement/ Acceptable**	**12/2/98 (12/10/98)**		Storage Stability and Package Corrosion Characteristics of Tracer (Formulation: NAF-85); A One Year Study	Ghaoui	FOR97051 (GH-C 4662)	4/28/98	7/1/98	

Guideline Number	Guideline Title	MRID	EPA Review Status	DER Date	EPA Notes	Study Title	Author	Study ID	Study Completion Date	Submission Date	Dow AgroSciences Notes

Petition Information: PP 6F4735 (Cotton---under same petition as Spinosad Technical), PP 8F4942 (Cotton Gin Trash), PP 8F5002 (field corn, sorghum, soybeans, wheat)

NOPR dated 4/15/98 (Unconditional)

Toxicology (End Use) Tracer 62719-267 (Cotton) Page 2 of 2*

81-1	Acute Oral Toxicity in the Rat	43414509	Acceptable	7/6/95	Tox IV (1/9/97)	NAF-85: Acute Oral Toxicity Study in Fischer 344 Rats	Gilbert	DR-0341-0784-001A	7/22/94	09/30/94	
81-2	Acute Dermal Toxicity in the Rabbit	43414510	Core	7/6/95	Tox III (1/9/97)	NAF-85: Acute Dermal Toxicity Study in New Zealand White Rabbits	Gilbert	DR-0341-0784-001D	7/22/94	09/30/94	
81-2	Acute Dermal Toxicity in the Rabbit	44159304	Core	6/24/98 **(7/8/98)**	Tox IV PP 7F4797	NAF-85: Acute Dermal Toxicity Study in New Zealand White Rabbits	Stebbins	DR-0341-0784-006D	10/1/96	10/3/96	**Submitted with Success* Application of 10/3/96**
81-3	Acute Inhalation Toxicity in the Rat	43414511	Core	7/6/95	Tox IV (1/9/97)	NAF-85: Acute Aerosol Inhalation Toxicity Study with Fischer 344 Rats	Beekman	DR-0341-0784-003	7/15/94	09/30/94	
81-4	Primary Eye Irritation in the Rabbit	43414512	Core	7/6/95	Tox IV (1/9/97)	NAF-85: Primary Eye Irritation Study in new Zealand White Rabbits	Gilbert	DR-0341-0784-001C	7/22/94	09/30/94	
81-5	Primary Dermal Irritation in the Rabbit	43414513	Core	7/6/95	Tox IV (1/9/97)	NAF-85: Primary Dermal Irritation Study in new Zealand White Rabbit	Gilbert	DR-0341-0784-001B	7/22/94	09/30/94	
81-6	Dermal Sensitization in the Guinea Pig	43414514	Core	7/6/95		NAF-85: Dermal Sensitization Potential in the Hartley Albino Guinea Pig	Gilbert	DR-0341-0784-001E	7/22/94	9/30/94	
82-2	21-Day Dermal	43701502	Acceptable	5/30/97		NAF-85: Probe and 21-DAY Repeated Dose Toxicity Study in New Zealand White Rabbits	Vedula	DR-0341-0784-002	8/30/94	6/28/95	

Efficacy (End Use) Tracer 62719-267 (Cotton)*

N/A	N/A	43478103				Public Interest Document for Products Containing Spinosad	Bischoff	RFB-92294	9/22/94	11/30/94	
N/A	N/A	43985201				Additional Efficacy to Public Interest Document for Products Containing Spinosad	Thompson	GDT41096	4/10/96	4/18/96	

Guideline Number	Guideline Title	MRID	EPA Review Status	DER Date	EPA Notes	Study Title	Author	Study ID	Study Completion Date	Submission Date	Dow AgroSciences Notes

Petition Information: PP 6F4761

NOPR dated 4/15/98 (Unconditional)

*Product Chemistry (End Use) NAF-127 62719-282 (Apples and Brassica/Cole Crops) ***Bridged with Success (Previously NAF-315/295)*

61	61-1 Product Identity and Disclosure of Ingredients 61-2 Description of Beginning Materials and Formulation Process 61-3 Discussion of the Formation of Impurities	44058801	Adequate	1/23/97		Series 61: Product Identity and Composition of NAF-127 A Water Dispersible Granule Formulation of DE-105 Insect Control Agent	Cobb	GH-C 3942	2/29/96	7/1/96	Submitted amended label on 10/4/96 to combine NAF-127 and Success (apples, cole crops, and fruiting vegetables ---tomatoes and peppers).
62	62-1 Preliminary Analysis 62-2 Certification of Limits 62-3 Analytical Methods to Verify Certified Limits	44058802	Adequate	1/23/97		Series 62: Analysis and Certification of Product Ingredients of NAF-127, a Water Dispersible Granule Formulation of DE-105 Insect Control Agent	Jones-Jefferson	GH-C 3959	3/1/96	7/1/96	
63	Physical and Chemical Characteristics (63-2, 63-3, 63-4, 63-7, 63-12, 63-14 of Series 63)	44058803	Adequate	1/23/97		Series 63: Determination of Physical and Chemical Properties of NAF-127, A Water Dispersible Granule Formulation of DE-105 Insect Control Agent	Jones-Jefferson	GH-C 3960 (FOR96025)	2/29/96	7/1/96	

Toxicology (End Use) NAF-127 62719-282 (Apples and Brassica/Cole Crops)

81-1	Acute Oral Toxicity in the Rat	44058804				NAF-127: Acute Oral Toxicity Study in Fischer 344 Rats	Gilbert	DR-0344-5758-001A	1/15/96	7/1/96	
81-2	Acute Dermal Toxicity in the Rabbit	44058805				NAF-127: Acute Dermal Toxicity Study in New Zealand White Rabbits	Gilbert	DR-0344-5758-001D	1/15/96	7/1/96	
81-3	Acute Inhalation Toxicity in the Rat	44058806				NAF-127 Insecticide: Acute Aerosol Inhalation Toxicity Study with Fischer 344 Rats	McGuirk	DR-0344-5758-002	1/18/96	7/1/96	
81-4	Primary Eye Irritation in the Rabbit	44058807				NAF-127: Primary Eye Irritation Study in New Zealand White Rabbits	Gilbert	DR-0344-5758-001C	1/15/96	7/1/96	
81-5	Primary Dermal Irritation in the Rabbit	44058808				NAF-127: Primary Dermal Irritation Study in New Zealand White Rabbits	Gilbert	DR-0344-5758-001B	1/15/96	7/1/96	
81-6	Dermal Sensitization in the Guinea Pig	44058809				NAF-127: Dermal Sensitization Potential in the Hartley Albino Guinea Pig	Gilbert	DR-0344-5758-001E	1/15/96	7/1/96	

Guideline Number	Guideline Title	MRID	EPA Review Status	DER Date	EPA Notes	Study Title	Author	Study ID	Study Completion Date	Submission Date	Dow AgroSciences Notes

Petition Information: No Petition Required. (No tolerances, non-crop use)

NOPR dated 4/15/98 (Unconditional)

Product Chemistry (End Use) Conserve SC Turf and Ornamental 62719-291 (Prev. NAF-313) Page 1 of 2*

61	61-1 Product Identity and Disclosure of Ingredients 61-2 Description of Beginning Materials and Formulation Process 61-3 Discussion of the Formation of Impurities	44130001				Series 61: Product Identity and Composition of CONSERVE SC Turf and Ornamental, a 120g/L Suspension Concentrate of Spinosad	Winkle	GH-C 4204	9/19/96	10/2/96	
62	62-1 Preliminary Analysis, 62-2 Certification of Limits, 62-3 Analytical Methods to Verify Certified Limits	44130002				Series 62: Analysis and Certification of Product Ingredients of CONSERVE SC Turf and Ornamental, a 120g/L Suspension Concentrate of Spinosad	Jones-Jefferson (Dinnage)	GH-C 4205	9/19/96	10/2/96	
63	Physical and Chemical Characteristics	44130003				Series 63: Determination of Physical and Chemical Propeties of CONSERVE SC Turf and Ornamental, a 120g/L Suspension of Spinosad	Jones-Jefferson (Dinnage)	GH-C 4194 (FOR96121)	9/17/96	10/2/96	
830.6317, 830.6320	Storage Stability, Corrosion Characteristics	**44597707**	**Satisfies data requirement/ Acceptable**	**12/2/98 (12/10/98)**		Storage Stability and Package Corrosion Characteristics of Conserve (Formulation: NAF-313); A One Year Study	Ghaoui	FOR97053 (GH-C 4664)	4/28/98	7/1/98	

Toxicology (End Use) Conserve SC Turf and Ornamental 62719-291 (Previously NAF-313)*

81-1	Acute Oral Toxicity in the Rat	43414509	Tracer Acute Tox can be used in support of Conserve SC Turf and Ornamental. See Notice of Pesticide Registration (NOPR) dated 6/2/97.			Relying on Tracer* Acute Toxicology data.				10/2/96	
81-2	Acute Dermal Toxicity in the Rabbit	43414510	See NOPR dated 6/2/97			Relying on Tracer* Acute Toxicology data.				10/2/96	
81-2	Acute Dermal Toxicity in the Rabbit	44159304	See NOPR dated 6/2/97			Relying on Tracer* Acute Toxicology data.				10/2/96	
81-3	Acute Inhalation Toxicity in the Rat	43414511	See NOPR dated 6/2/97			Relying on Tracer* Acute Toxicology data.				10/2/96	

Guideline Number	Guideline Title	MRID	EPA Review Status	DER Date	EPA Notes	Study Title	Author	Study ID	Study Completion Date	Submission Date	Dow AgroSciences Notes

Petition Information: No Petition Required. (No tolerances, non-crop use)

NOPR dated 4/15/98 (Unconditional)

Toxicology (End Use) Conserve SC Turf and Ornamental 62719-291 (Previously NAF-313) Page 2 of 2*

81-4	Primary Eye Irritation in the Rabbit	43414512	See NOPR dated 6/2/97			Relying on Tracer* Acute Toxicology data.				10/2/96	
81-5	Primary Dermal Irritation in the Rabbit	43414513	See NOPR dated 6/2/97			Relying on Tracer* Acute Toxicology data.				10/2/96	
81-6	Dermal Sensitization in the Guinea Pig	43414514	See NOPR dated 6/2/97			Relying on Tracer* Acute Toxicology data.				10/2/96	
081-1	Acute Oral Toxicity in the Rat	**44597720**	**Acceptable**	**11/16/98 (12/10/98)**	**Tox. Cat. IV**	NAF-313: Acute Oral Toxicity Study in Fischer 344 Rats	Brooks	971087 (DR-0354-9368-001)	9/8/97	7/1/98	
081-2	Acute Dermal Toxicity	**44597721**	**Acceptable**	**11/16/98 (12/10/98)**	**Tox. Cat. IV**	NAF-313: Acute Dermal Toxicity Study in New Zealand White Rabbits	Brooks	971090 (DR-0354-9368-004)	9/8/97	7/1/98	
081-3	Acute Inhalation Toxicity in the Rat	**44597722**	**Acceptable**	**11/16/98 (12/10/98)**	**Tox. Cat. IV**	NAF-313: Acute Aerosol Inhalation Toxicity Study in Fischer 344 Rats	McGuirk	971097 (DR-0354-9368-005)	11/4/97	7/1/98	
081-4	Primary Eye Irritation in the Rabbit	**44597723**	**Acceptable**	**11/16/98 (12/10/98)**	**Tox. Cat. IV**	NAF-313: Acute Primary Eye Irritation Study in New Zealand White Rabbits	Brooks	971089 (DR-0354-9368-003)	9/8/97	7/1/98	
081-5	Primary Dermal Irritation	**44597724**	**Acceptable**	**11/16/98 (12/10/98)**	**Tox. Cat. IV**	NAF-313: Primary Dermal Irritation Study in New Zealand White Rabbits	Brooks	971088 (DR-0354-9368-002)	9/8/97	7/1/98	
081-6	Dermal Sensitization	**44597725**	**Acceptable**	**11/16/98 (12/10/98)**	**N/A**	Dermal Sensitization Study of NAF-313 in Guinea Pigs-Closed Patch Technique (EPA Guidelines)	Glaza	70600741 (DR-0354-9368-006)	12/16/97	7/1/98	

(Revisions since last copy to EPA are in **Bold.**)

Spinosad Matrix (USEPA Subm.)

"Spinosyn A" EPA Chem. Code: 110003
"Spinosyn D" EPA Chem. Code: 110004

Guideline Number	Guideline Title	MRID	EPA Review Status	DER Date	EPA Notes	Study Title	Author	Study ID	Study Completion Date	Submission Date	Dow AgroSciences Notes

Petition Information: PP 7F4797 (Fruiting Veg.), PP 6F4761 (Apples & Brassica/Cole Crops), PP 7F4871 (Leafy Veg., Citrus, Almonds), PP 8F5002 (cucurbit crops, stonefruit, succulent beans and peas, sweet corn) NOPR dated 4/15/98 (Unconditional)

Product Chemistry (End Use) Success* 62719-292 (Prev. NAF-315/295) (Fruiting Vegetables) ***Page 1 of 2***

***Prev. NAF-127 (Apples & Brassica/Cole Crops) bridged 10/4/96 with Success*. Amended 7/2/97 to include Leafy Veg., Citrus, and Almonds (NAF-315).

61	61-1 Product Identity and Disclosure of Ingredients 61-2 Description of Beginning Materials and Formulation Process 61-3 Discussion of the Formation of Impurities	44159301				Series 61: Product Identity and Composition of SUCCESS Naturalyte Insect Control, A 240g/L Suspension Concentrate of Spinosad	Winkle	GH-C 4209	9/24/96	10/3/96	B. Bischoff obtained the petition no. from EPA per conversation w/A. Heyward EPA on 5/8. No written communications from the EPA have been received. (jla…5/19/97)
62	62-1 Preliminary Analysis, 62-2 Certification of Limits, 62-3 Analytical Methods to Verify Certified Limits	44159302				Series 62: Analysis and Certification of Product Ingredients of SUCCESS* Naturalyte Insect Control, a 240g/L Suspension Concentrate of Spinosad	Jones-Jefferson (Dinnage)	GH-C 4208	9/24/96	10/3/96	
63	Physical and Chemical Characteristics	44159303				Series 63: Determination of Physical and Chemical Properties of NAF-315, a 240g/L Suspension Concentrate of Spinosad	Jones-Jefferson (Dinnage)	GH-C 4212 (FOR96122.01)	9/25/96	10/3/96	
830.6317, 830.6320	Storage Stability, Corrosion Characteristics	**44597706**	**Satisfies data requirement/ Acceptable**	**12/1/98 (12/10/98)**		Storage Stability and Package Corrosion Characteristics of Success (Formulation: NAF-315); A One Year Study	Ghaoui	FOR97052 (GH-C 4663)	4/28/98	7/1/98	

Toxicology (End Use) Success* 62719-292 (Previously NAF-315/295)

81-1	Acute Oral Toxicity in the Rat	43414509				Relying on Tracer* Acute Toxicology data.				10/3/96	Submitted amended label on 10/4/96 to combine NAF-127 and Success (apples, cole crops, and fruiting vegetables ---tomatoes and peppers).
81-2	Acute Dermal Toxicity in the Rabbit	43414510				Relying on Tracer* Acute Toxicology data.				10/3/96	
81-2	Acute Dermal Toxicity in the Rabbit	44159304				Relying on Tracer* Acute Toxicology data.				10/3/96	
81-3	Acute Inhalation Toxicity in the Rat	43414511				Relying on Tracer* Acute Toxicology data.				10/3/96	

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Dow AgroSciences LLC
R. F. Bischoff
Rev. 1/18/99
(To EPA 1/18/99)

Guideline Number	Guideline Title	MRID	EPA Review Status	DER Date	EPA Notes	Study Title	Author	Study ID	Study Completion Date	Submission Date	Dow AgroSciences Notes

Petition Information: PP 7F4797 (Fruiting Veg.), PP 6F4761 (Apples & Brassica/Cole Crops), PP 7F4871 (Leafy Veg., Citrus, Almonds), PP 8F5002 (cucurbit crops, stonefruit, succulent beans and peas, sweet corn) NOPR dated 4/15/98 (Unconditional)

Toxicology (End Use) Success 62719-292 (Prev. NAF-315/295) (Fruiting Vegetables) Page 2 of 2*

81-4	Primary Eye Irritation in the Rabbit	43414512				Relying on Tracer* Acute Toxicology data.				10/3/96	
81-5	Primary Dermal Irritation in the Rabbit	43414513				Relying on Tracer* Acute Toxicology data.				10/3/96	
81-6	Dermal Sensitization in the Guinea Pig	43414514				Relying on Tracer* Acute Toxicology data.				10/3/96	
081-1	Acute Oral Toxicity in the Rat	**44597726**	**Acceptable**	**11/13/98 (12/10/98)**	**Tox. Cat. IV**	NAF-315: Acute Oral Toxicity Study in Fischer 344 Rats	Haut	971139 (DR-0354-9379-003)	10/27/97	7/1/98	
081-2	Acute Dermal Toxicity	**44597727**	**Acceptable**	**11/13/98 (12/10/98)**	**Tox. Cat. IV**	NAF-315: Acute Dermal Toxicity Study in New Zealand White Rabbits	Haut	971142 (DR-0354-9379-006)	10/27/97	7/1/98	
081-4	Primary Eye Irritation in the Rabbit	**44597728**	**Acceptable**	**11/13/98 (12/10/98)**	**Tox. Cat. IV**	NAF-315 Acute Primary Eye Irritation Study in New Zealand White Rabbits	Haut	971141 (DR-0354-9379-005)	10/27/97	7/1/98	
081-5	Primary Dermal Irritation	**44597729**	**Acceptable**	**11/13/98 (12/10/98)**	**Tox. Cat. IV**	NAF-315: Primary Dermal Irritation Study in New Zealand White Rabbits	Haut	971140 (DR-0354-9379-004)	10/27/97	7/1/98	
081-6	Dermal Sensitization	**44597730**	**Acceptable**	**11/13/98 (12/10/98)**	**N/A**	Dermal Sensitization Study of NAF-315 in Guinea Pigs - Closed Patch Technique (EPA Guidelines)	Glaza	70600742 (DR-0354-9379-002)	12/16/97	7/1/98	

Guideline Number	Guideline Title	MRID	EPA Review Status	DER Date	EPA Notes	Study Title	Author	Study ID	Study Completion Date	Submission Date	Dow AgroSciences Notes

Petition Information: See petition information under Success

NOPR dated 4/15/98 (Unconditional)

Product Chemistry (End Use) SpinTor* 2SC 62719-294 (Same as Success*, except marketed in eastern U.S. vs. western U.S.)

61	61-1 Product Identity and Disclosure of Ingredients 61-2 Description of Beginning Materials and Formulation Process 61-3 Discussion of the Formation of Impurities	44159301				Relying on Success* Product Chemistry data.				4/17/97	
62	62-1 Preliminary Analysis, 62-2 Certification of Limits, 62-3 Analytical Methods to Verify Certified Limits	44159302				Relying on Success* Product Chemistry data.				4/17/97	
63	Physical and Chemical Characteristics	44159303				Relying on Success* Product Chemistry data.				4/17/97	

Toxicology (End Use) SpinTor* 2SC 62719-294 (Same as Success*, except marketed in eastern U.S. vs. western U.S.)

81-1	Acute Oral Toxicity in the Rat	43414509				Relying on Tracer* Acute Toxicology data.				4/17/97	
81-2	Acute Dermal Toxicity in the Rabbit	43414510				Relying on Tracer* Acute Toxicology data.				4/17/97	
81-2	Acute Dermal Toxicity in the Rabbit	44159304				Relying on Tracer* Acute Toxicology data.				4/17/97	
81-3	Acute Inhalation Toxicity in the Rat	43414511				Relying on Tracer* Acute Toxicology data.				4/17/97	
81-4	Primary Eye Irritation in the Rabbit	43414512				Relying on Tracer* Acute Toxicology data.				4/17/97	
81-5	Primary Dermal Irritation in the Rabbit	43414513				Relying on Tracer* Acute Toxicology data.				4/17/97	
81-6	Dermal Sensitization in the Guinea Pig	43414514				Relying on Tracer* Acute Toxicology data.				4/17/97	

Spinosad Matrix (USEPA Subm.)

"Spinosyn A" EPA Chem. Code: 110003
"Spinosyn D" EPA Chem. Code: 110004

Guideline Number	Guideline Title	MRID	EPA Review Status	DER Date	EPA Notes	Study Title	Author	Study ID	Study Completion Date	Submission Date	Dow AgroSciences Notes
Petition Information: See petition information under Tracer NOPR dated 4/21/98 (Unconditional)											
Product Chemistry (End Use) Spinosad SC (Mfg. Use) 62719-296 (Same as Tracer* 62719-267)											
61	Product Identity and Composition	43450301	Tracer Prod. Chem. may be used to support this MP.	8/1/97 Review (2/25/98 memo)		Relying on Tracer* Product Chemistry data.					
62	Analytical Methods to Verify Certified Limits	43450302	Tracer Prod. Chem. may be used to support this MP.	8/1/97 Review (2/25/98 memo)		Relying on Tracer* Product Chemistry data.					
63	Physical and Chemical Characteristics	43450303	Tracer Prod. Chem. may be used to support this MP.	8/1/97 Review (2/25/98 memo)		Relying on Tracer* Product Chemistry data.					
Toxicology (End Use) Spinosad SC (Mfg. Use) 62719-296 (Same as Tracer* 62719-267)											
81-1	Acute Oral Toxicity in the Rat	43414509	NOPR 4/21/98 (Unconditional)			Relying on Tracer* Acute Toxicology data.					
81-2	Acute Dermal Toxicity in the Rabbit	43414510	NOPR 4/21/98 (Unconditional)			Relying on Tracer* Acute Toxicology data.					
81-2	Acute Dermal Toxicity in the Rabbit	44159304	NOPR 4/21/98 (Unconditional)			Relying on Tracer* Acute Toxicology data.					
81-3	Acute Inhalation Toxicity in the Rat	43414511	NOPR 4/21/98 (Unconditional)			Relying on Tracer* Acute Toxicology data.					
81-4	Primary Eye Irritation in the Rabbit	43414512	NOPR 4/21/98 (Unconditional)			Relying on Tracer* Acute Toxicology data.					
81-5	Primary Dermal Irritation in the Rabbit	43414513	NOPR 4/21/98 (Unconditional)			Relying on Tracer* Acute Toxicology data.					
81-6	Dermal Sensitization in the Guinea Pig	43414514	NOPR 4/21/98 (Unconditional)			Relying on Tracer* Acute Toxicology data.					

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Spinosad Matrix (USEPA Subm.)

"Spinosyn A" EPA Chem. Code: 110003
"Spinosyn D" EPA Chem. Code: 110004

Guideline Number	Guideline Title	MRID	EPA Review Status	DER Date	EPA Notes	Study Title	Author	Study ID	Study Completion Date	Submission Date	Dow AgroSciences Notes

Petition Information: No Petition Required. (No tolerances, non-crop use.) NOPR dated 4/21/98 (Unconditional)

Product Chemistry (End Use) Precise (prev. Curfew, NAF-371) (Wood-destroying Insects) 62719-297*

830-1550, 1600, 1650, 1670, 1750, 1800, 6303, 7300, 7000, 6314, 7100	Product Identity, Composition, and Analysis and Physical/Chemical Properties	44304601	Accepted 4/21/98 (1/23/98 memo and 8/1/97 review attached to NOPR)			Group A-Product Identity, Composition, and Analysis and Group B-Physical/Chemical Properties for NAF-371, a Ready to Use Aqueous Suspension Formulation of 0.5% Spinosad	Hill	GH-C 4426	6/17/97	6/20/97	

Toxicology (End Use) Precise (prev. Curfew, NAF-371) (Wood-destroying Insects) 62719-297*

81-1	Acute Oral Toxicity in the Rat	43414509	NOPR 4/21/98 (Unconditional)			Relying on Tracer* Acute Toxicology data.					
81-2	Acute Dermal Toxicity in the Rabbit	43414510	NOPR 4/21/98 (Unconditional)			Relying on Tracer* Acute Toxicology data.					
81-2	Acute Dermal Toxicity in the Rabbit	44159304	NOPR 4/21/98 (Unconditional)			Relying on Tracer* Acute Toxicology data.					
81-3	Acute Inhalation Toxicity in the Rat	43414511	NOPR 4/21/98 (Unconditional)			Relying on Tracer* Acute Toxicology data.					
81-4	Primary Eye Irritation in the Rabbit	43414512	NOPR 4/21/98 (Unconditional)			Relying on Tracer* Acute Toxicology data.					
81-5	Primary Dermal Irritation in the Rabbit	43414513	NOPR 4/21/98 (Unconditional)			Relying on Tracer* Acute Toxicology data.					
81-6	Dermal Sensitization in the Guinea Pig	43414514	NOPR 4/21/98 (Unconditional)			Relying on Tracer* Acute Toxicology data.					

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Spinosad Matrix (USEPA Subm.)

"Spinosyn A" EPA Chem. Code: 110003
"Spinosyn D" EPA Chem. Code: 110004

Guideline Number	Guideline Title	MRID	EPA Review Status	DER Date	EPA Notes	Study Title	Author	Study ID	Study Completion Date	Submission Date	Dow AgroSciences Notes
Petition Information: No Petition Required. (No tolerances, non-crop use.) NOPR dated 10/28/98											
Product Chemistry (End Use) Conserve Fire Ant Bait 62719-304											
830-1550, 1600, 1650, 1670, 1750, 1800, 6302, 6303, 6304, 7300, 7000, 6314, 6316	Product Identity, Composition, and Analysis and Physical/Chemical Properties	44596202	Satisfies Requirement	Review (10/15/98) attached to NOPR (10/28/98)		Group A - Product Identity, Composition, and Analysis and Group B - Physical/Chemical Properties for Conserve* Fire Ant Bait, A Ready to Use Granular Fire Ant Bait Containing 0.015% Spinosad Insecticide	Schwake	GH-C 4715	6/29/98	7/2/98	
Toxicology (End Use) Conserve Fire Ant Bait 62719-304											
81-1	Acute Oral Toxicity in the Rat	43414515 (43770701)	Acceptable	10/7/98 (NOPR 10/28/98)	Tox. Cat.III	Relying on Spinosad Technical Acute Toxicology data.					
81-2	Acute Dermal Toxicity in the Rabbit	43414516				Relying on Spinosad Technical Acute Toxicology data.					
81-2	Acute Dermal Toxicity in the Rabbit	44596203	Acceptable	10/7/98 (NOPR 10/28/98)	Tox. Cat. IV	Relying on additional Spinosad Technical Acute Toxicology data submitted 7/2/98 with this submission.				7/2/98	
81-3	Acute Inhalation Toxicity in the Rat	43414517	Acceptable	10/7/98 (NOPR 10/28/98)	Tox. Cat. IV	Relying on Spinosad Technical Acute Toxicology data.					
81-4	Primary Eye Irritation in the Rabbit	43414518	Acceptable	10/7/98 (NOPR 10/28/98)	Tox. Cat. IV	Relying on Spinosad Technical Acute Toxicology data.					
81-5	Primary Dermal Irritation in the Rabbit	43414519	Acceptable	10/7/98 (NOPR 10/28/98)	Tox. Cat. IV	Relying on Spinosad Technical Acute Toxicology data.					
81-6	Dermal Sensitization in the Guinea Pig	43414520	Acceptable	10/7/98 (NOPR 10/28/98)		Relying on Spinosad Technical Acute Toxicology data.					
Efficacy (End Use) Conserve Fire Ant Bait 62719-304											
N/A	N/A	44596201	Adequate	8/20/98 (NOPR 10/28/98)		Evaluation of Spinosad for the Control of Red Imported Fire Ant *(Solenopsis invicta)*	Blewett	SPECTO052698	5/20/98	7/2/98	

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Spinosad Matrix (USEPA Subm.)

"Spinosyn A" EPA Chem. Code: 110003
"Spinosyn D" EPA Chem. Code: 110004

Guideline Number	Guideline Title	MRID	EPA Review Status	DER Date	EPA Notes	Study Title	Author	Study ID	Study Completion Date	Submission Date	Dow AgroSciences Notes
Petition Information: No Petition Required. (No tolerances)											
Product Chemistry (End Use) NAF-371 (Home Gardens) 62719-XXX											
830-1550, 1600, 1650, 1670, 1750, 1800, 6303, 7300, 7000, 6314, 7100	Product Identity, Composition, and Analysis and Physical/Chemical Properties	44304601	Accepted 4/21/98 (1/23/98 memo and 8/1/97 review attached to NOPR)			Relying on Precise* Product Chemistry data.				1/18/99	
Toxicology (End Use) NAF-371 (Home Gardens) 62719-XXX											
81-1	Acute Oral Toxicity in the Rat	43414509	NOPR 4/21/98 (Unconditional)			Relying on Tracer* Acute Toxicology data.				1/18/99	
81-2	Acute Dermal Toxicity in the Rabbit	43414510	NOPR 4/21/98 (Unconditional)			Relying on Tracer* Acute Toxicology data.				1/18/99	
81-2	Acute Dermal Toxicity in the Rabbit	44159304	NOPR 4/21/98 (Unconditional)			Relying on Tracer* Acute Toxicology data.				1/18/99	
81-3	Acute Inhalation Toxicity in the Rat	43414511	NOPR 4/21/98 (Unconditional)			Relying on Tracer* Acute Toxicology data.				1/18/99	
81-4	Primary Eye Irritation in the Rabbit	43414512	NOPR 4/21/98 (Unconditional)			Relying on Tracer* Acute Toxicology data.				1/18/99	
81-5	Primary Dermal Irritation in the Rabbit	43414513	NOPR 4/21/98 (Unconditional)			Relying on Tracer* Acute Toxicology data.				1/18/99	
81-6	Dermal Sensitization in the Guinea Pig	43414514	NOPR 4/21/98 (Unconditional)			Relying on Tracer* Acute Toxicology data.				1/18/99	

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