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Retail Store Survey of Consumer-Use Indoor Pesticide Products, 2014

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Abstract

The Department of Pesticide Regulation's (DPR) Surface Water Protection Program (SWPP) staff conducted a store survey in the Sacramento region to provide a snapshot accounting of pesticides currently available to the general public for indoor use. Unlike pesticide use by professional applicators, pesticide use by residential users is not reported or tracked. During a survey of 10 stores, 62 active ingredients (AIs) were identified in 194 products. These AIs were then grouped into high, intermediate, and low priorities based on number of available products and aquatic toxicity. Thirty-one of the 62 AIs are prioritized for developing and validating analytical methods in a wastewater matrix for future monitoring efforts.

Introduction

Many indoor-use pesticide products are available to consumers through retail channels. Unlike pesticide application by certified pesticide applicators, indoor pesticide use by homeowners is not reported to DPR and not recorded in the pesticide use reporting (PUR) system. Moreover, new products are constantly introduced and changes to formulation and type of AI in existing products are difficult to track. Furthermore, product registration information may not clearly indicate indoor versus outdoor use.

Indoor pesticide uses have the potential to enter the wastewater collection system through routine cleaning and bathing activities (Figure 1). If not removed during the wastewater treatment process, pesticides may be discharged to surface waters. A store survey was conducted to provide a snapshot accounting of pesticides currently available to the general public for indoor pest control including pet products, general pest control products, and products applied to indoor plants. The results of this study will be used to develop a better understanding of indoor pesticide use patterns that have potential to contaminate water discharged into wastewater collection systems.

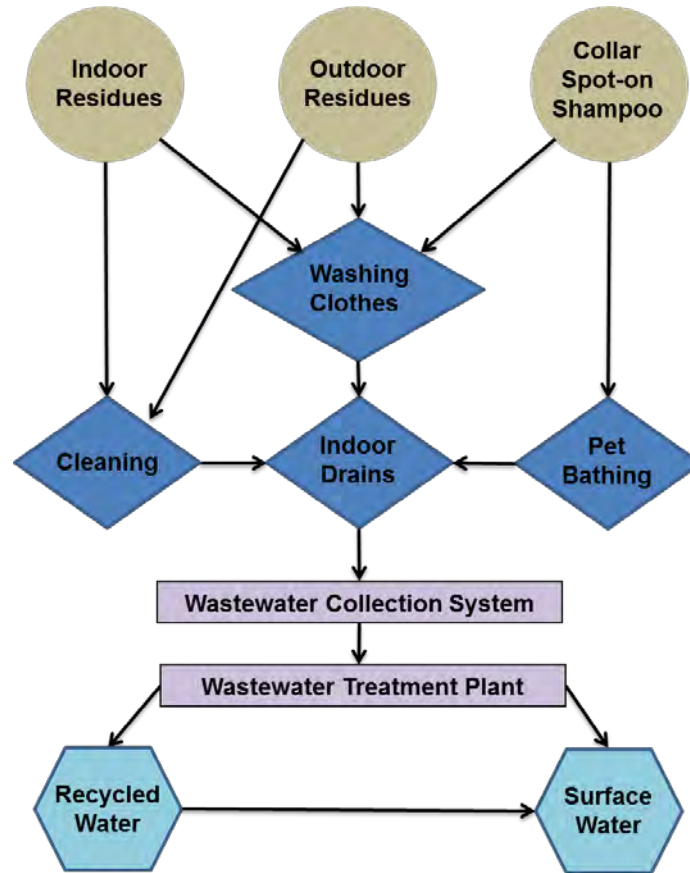


Figure 1 - Conceptual model of potential pathways for pesticide products to wastewater collection system. Indoor residues could include dust from foggers, granules, sprays, and gels. Outdoor residues could be from urban or agricultural pesticide application (adapted from Moran and Tenbrook, 2011).

Objectives

1. Identify AIs currently found in products labelled for indoor use.
2. Categorize number of products by AI, use type, product type, and percent AI.
3. Evaluate primary pesticide groups of identified AIs.
4. Identify priority AIs for development of analytical methods for untreated wastewater.

Methods

Retail store surveys are a means for identifying pesticides currently available to the general public. A shelf survey at 10 retail stores was conducted to evaluate the pesticide products available to the public for indoor pest control (Table 1). The types of retail stores surveyed were home supply, pet supply, garden supply, hardware and big box. The store surveys were completed on two separate

events in the Sacramento region. A complete summary of available products is presented in Appendix A.

Table 1: Stores surveyed in the greater Sacramento region 2014.

October 20, 2014	December 9, 2014
Home Supply Chain 1	Home Supply Chain 2
Pet Supply Chain 2	Hardware Chain
Pet Supply Chain 1	Local Garden Supply Chain
Local Pet Chain (2 locations)	
Big Box Chain	

Results and Discussion

A total of 194 individual indoor-use products, representing 62 distinct AIs, were identified and can be categorized into 16 chemical classes (Figure 2). The three chemical classes with the largest number of products, in order of abundance, are pyrethroids, hormone mimics and synergist (solely represented by piperonyl butoxide). Pyrethroids are a class of synthetic insecticides that have been routinely quantified in surface waters of California at concentrations toxic to aquatic organisms (Ensminger et al., 2013). Hormone mimics include AIs that inhibit or mimic juvenile hormones by disrupting insects' molting processes. Piperonyl butoxide is a synergist used in conjunction with pyrethroids to increase toxicity. A complete list of products, organized by AI, is presented in Appendix A.

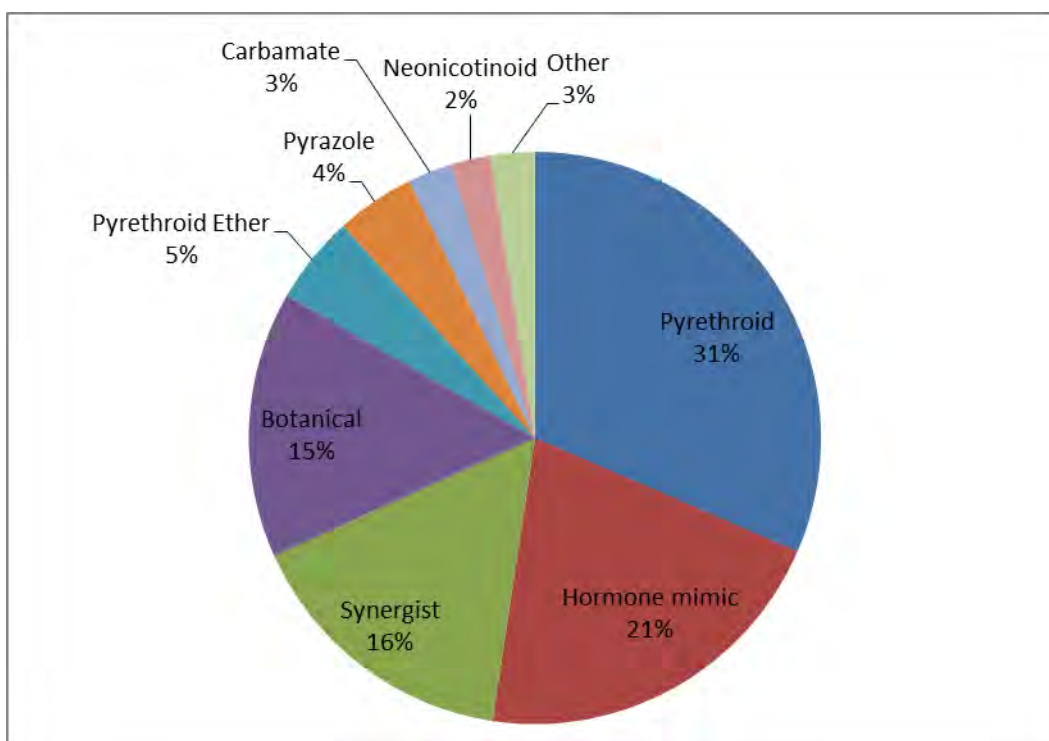


Figure 2 - Distribution of chemical classes among the products surveyed. Many products contain more than one AI. Other includes benzoylurea, organophosphorus, alcohol/ether, inorganic, oxadiazine, substituted benzene, and essential oil.

Products can be grouped into three use categories: home, indoor/outdoor, and pet (Table 2). Products designated for home and indoor/outdoor use may leave residues on interior surface or on clothes. Pesticide residues found on indoor surfaces from the use of foggers and sprays have been reported in the literature (Mahler et al., 2009; Simcox et al., 1995). Routine cleaning activities, such as mopping or laundering, may be responsible for down-the-drain transport of indoor pesticide residues. Over half of the products identified are designated for pet use. Pets are routinely washed in sinks, showers, or tubs, which represent a pathway for pet products to enter wastewater sewershed (Figure 1). The use pattern of a given product will influence the likelihood of an AI reaching the sewershed through down-the-drain transport with potential impact to wastewater treatment plants and the receiving waters to which the plants discharge into. Note that SWPP staff assumes that a survey of Sacramento area stores is generally representative of stores throughout California.

Table 2: Total number of products by product type and usage group.

Product Types	Number of Products
Home	54
Dust	6
Fogger	18
Gel	3
Spray	27
Indoor/Outdoor	41
Dust	1
Gel	1
Granules	1
Spray	38
Pet	99
Collar	14
Grooming	28
Spot on	34
Spray	23
Total	194

For future wastewater monitoring efforts, AIs were organized into three groups based on aquatic toxicity levels including both United States Environmental Protection Agency (USEPA) aquatic benchmarks and the International Union of Pure and Applied Chemistry (IUPAC) minimum aquatic toxicity levels (Table 3). Toxicity values range several orders of magnitude from parts per billion down to parts per trillion concentrations.

High priority chemicals include all pyrethroids (including etofenprox), fipronil, pyriproxyfen, and imidacloprid. The majority of products include a pyrethroid, most commonly permethrin, etofenprox or lambda-cyhalothrin (Figure 3). The occurrence of pyrethroids (a subset of those identified here) and fipronil have been reported in wastewater treatment plant influent and effluent indicating incomplete removal during the wastewater treatment process (Weston et al., 2013; Heidler and Halden, 2009).

Intermediate priority AIs include piperonyl butoxide, propoxur, chlorothalonil, tetrachlorvinphos, (S)-methoprene and novaluron. Although piperonyl butoxide has a relatively low toxicity level alone, it acts as a synergist and increases the toxic effect of pyrethroids. (S)-methoprene is found in many products (n=42), however has a relatively low toxicity to aquatic organisms. Propoxur, chlorothalonil, tetrachlorvinphos, and novaluron are relatively toxic to aquatic organisms; however, they are not found in many products (<10).

The AI's in the low priority category have relatively low toxicity to aquatic organisms or do not have synergistic properties include ethyl alcohol, indoxacarb, pyrethrins, sulfur and d-limonene.

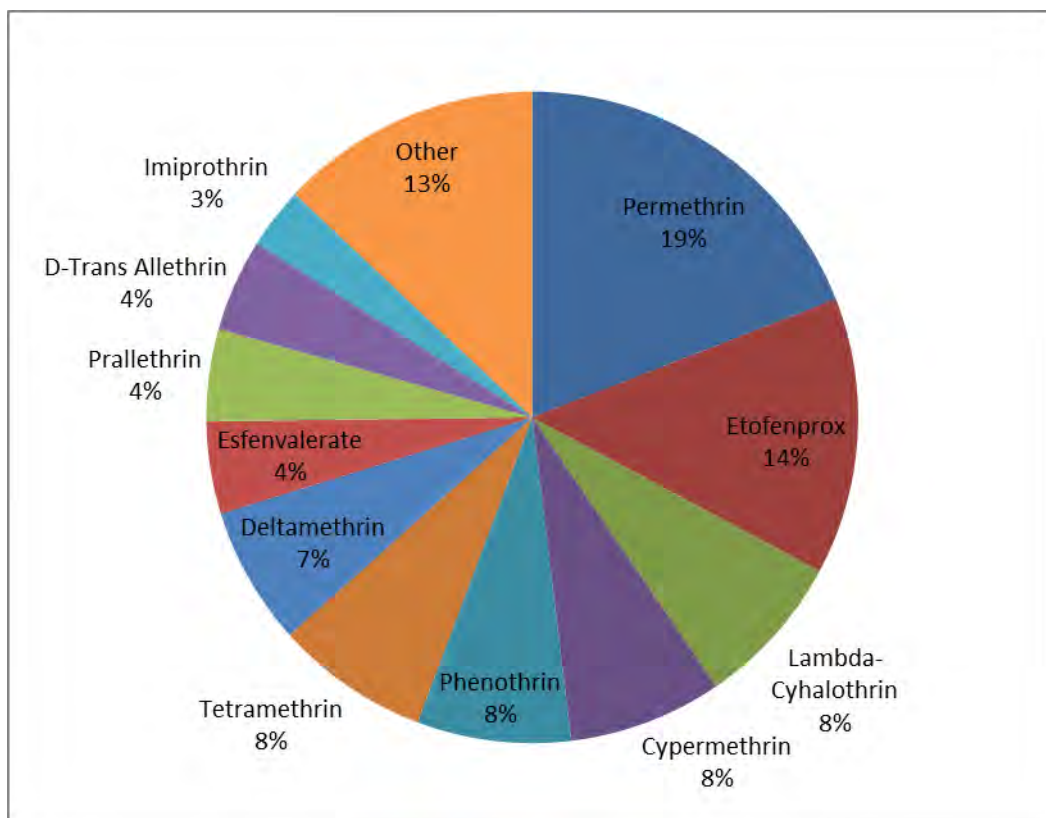


Figure 3 - Distribution of individual pyrethroid chemicals among the pyrethroid products identified in the survey (n=86). Other includes gamma-cyhalothrin, zeta-cypermethrin, bifenthrin, tralomethrin, cyphenothrin, sumithrin, d-phenothrin, s-bioallethrin, and beta-cyfluthrin.

Table 3: Prioritization of active ingredients identified for analytical method development and monitoring based on the total number of products that contains the AI in the survey.

¹ Priority	Active Ingredient	² DPR Number	Use Type	Group	³ OPP Min All BM (µg/L)	⁴ IUPAC Min All Tox (µg/L)	Total Products
I	Piperonyl butoxide	486	Synergist	Synergist	30	120	57
L	Pyrethrins	510	Insecticide	Botanical	-	25	54
I	(S)-methoprene	5026	Insect growth regulator	Hormone mimic	-	51	42
H	Pyriproxyfen	4019	Insecticide	Hormone mimic	0.015	56	33
H	Permethrin	2008	Insecticide	Pyrethroid	0.0014	0.12	25
H	Etofenprox	2292	Insecticide	Pyrethroid Ether	0.17	0.054	18
H	Fipronil	3995	Insecticide	Pyrazole	0.011	15	16
H	Lambda-Cyhalothrin	2297	Insecticide	Pyrethroid	0.002	0.21	10
H	Cypermethrin	2171	Insecticide	Pyrethroid	0.069	0.03	10
H	Phenothrin	2093	Insecticide	Pyrethroid	0.47	2.7	10
H	Tetramethrin	1695	Insecticide	Pyrethroid	1.85	16	10
H	Deltamethrin	3010	Insecticide	Pyrethroid	0.0041	0.26	9
I	Propoxur	62	Insecticide	Carbamate	5.5	150	9
H	Imidacloprid	3849	Insecticide	Neonicotinoid	1.05	1800	8
H	Esfenvalerate	2321	Insecticide	Pyrethroid	0.017	0.052	6
H	Prallethrin	3985	Insecticide	Pyrethroid	0.325	6.2	6
H	D-Trans Allethrin	4038	Insecticide	Pyrethroid	4.7	24	6
H	Imiprothrin	5327	Insecticide	Pyrethroid	-	38	4
H	Gamma-Cyhalothrin	5877	Insecticide	Pyrethroid	0.00024	0.03	3
H	Zeta-cypermethrin	3866	Insecticide	Pyrethroid	0.0006	0.015	2
H	Bifenthrin	2300	Insecticide	Pyrethroid	0.0013	0.0013	2
H	Tralomethrin	2329	Insecticide	Pyrethroid	0.0044	0.038	2
H	Cyphenothrin	3885	Insecticide	Pyrethroid	0.17	0.056	2
H	Sumithrin	2093	Insecticide	Pyrethroid	0.47	2.7	2

¹ Priority	Active Ingredient	² DPR Number	Use Type	Group	³ OPP Min All BM (µg/L)	⁴ IUPAC Min All Tox (µg/L)	Total Products
H	D-Phenothrin	2093	Insecticide	Pyrethroid	0.47	2.7	2
I	Tetrachlorvinphos	305	Insecticide	Organophosphorus	0.95	2	2
I	Novaluron	5754	Insecticide	Benzoylurea	-	0.03	2
I	Chlorothalonil	677	Fungicide	Substituted Benzene	0.6	3	1
H	S-Bioallethrin	4039	Insecticide	Pyrethroid	3.95	21	1
L	d-Limonene	979	Insecticide	Unclassified	19500	35000	1
L	Ethyl Alcohol	8	Antimicrobial	Alcohol/Ether	-	50000	1
L	Sulfur	560	Insecticide, Fungicide	Inorganic	-	63	1
L	Indoxacarb	5331	Insecticide	Oxadiazine	-	42	1
H	Beta-Cyfluthrin	3956	Insecticide	Pyrethroid	-	0.01	1

¹Priority denotes level of importance for analytical method development, H: High, I: Intermediate, L: Low

²DPR Number is a unique identifier assigned by DPR for each AI.

³OPP Min All BM = minimum Environmental Protection Agency Office of Pesticide Programs aquatic benchmark.

⁴IUPAC Min All Tox = minimum International Union of Pure and Applied Chemistry aquatic toxicity standard.

Findings

SWPP staff conducted shelf surveys at 10 retail stores and identified 194 indoor-use pesticide products with 62 AIs representing 16 chemical classes. Nearly half the products identified are designated for use on pets. The AIs have been classified as high, intermediate, or low priority for future wastewater monitoring efforts. There may be additional pathways for pesticides to enter the wastewater collection system; however, the shelf survey does provide a reasonable starting point to understand which AIs should be included in efforts to develop and validate analytical methods for a wastewater matrix for future monitoring.

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Appendix A: Complete list of indoor-use pesticide products. Indoor/Outdoor type denoted with I/O.

AI	Product Name	Product Type	Type	% Of Product
1-Octen-3-ol	Mosquito Magnet® Octenol	I/O	Spray	55.15
Aromatic Solvent	Hot Shot Fogger6 With Odor Neutralizer	Home	Fogger	2
Beta-Cyfluthrin	Bayer Advanced Home Pest Control Indoor And Outdoor Insect Killer Ready-To-Use	I/O	Spray	0.05
Bifenthrin	ORTHO® Home Defense MAX™ Perimeter And Indoor Insect Killer Ready-To-Use	I/O	Spray	0.05
	ORTHO® Home Defense® MAX® Insect Killer For Indoor And Perimeter	I/O	Spray	0.05
Blend of isobutene and propane	Enforcer Insect Fogger	Home	Fogger	<45
Borax	Terro Ant Killer Liquid	Home	Gel	5.4
Butane	Raid Concentrated Deep Reach Fogger	Home	Fogger	30-60
	Raid Flying Insect Killer 7 (Outdoor Fresh Scent)	Home	Spray	5-10
Chlorothalonil	GardenTech Daconil Fungicide Ready To Use	I/O	Spray	0.087
Cocamidopropyl Hydroxysultaine	Four Paws Magic Cat Tearless For Cats And Kittens	Cat	Shampoo	
Cypermethrin	Enforce BugMax Spider And Scorpion Killer	I/O	Spray	0.05
	Enforcer Insect Fogger	Home	Fogger	0.515
	Enforcer BugMax Fogger	Home	Fogger	0.515
	Hot Shot Fogger6 With Odor Neutralizer	Home	Fogger	0.75
	Hot Shot® Pest Control Concentrate	I/O	Spray	26
	Raid Max Concentrated Deep Reach Fogger	Home	Fogger	1.716
	Raid Wasp And Hornet Killer	I/O	Spray	0.05
	Raid Ant And Roach Killer 13- Outdoor Fresh Scent	Home	Spray	.01-1
	Real-Kill Indoor Fogger	Home	Fogger	0.515
	Real-Kill Indoor Fogger5	Home	Fogger	0.515
	Sentry Fiproguard Max Dog And Puppy Topical Flea And Tick Treatment	Dog	Spot On	5.2
Sentry Pro XFT Squeeze-On Dog Flea And Tick Treatment	Dog	Spot On	30	
D-cis trans Allethrin	Raid House And Garden Bug Killer	I/O	Spray	0.239
Deltamethrin	Bayer Advance Ready-To-Use Carpenter Ant And Termite Killer Plus	I/O	Spray	0.02

AI	Product Name	Product Type	Type	% Of Product
Deltamethrin (cont.)	Bonide Termite And Carpenter Ant Killer	I/O	Spray	0.02
	Enforcer Bugmax Home Pest Control	I/O	Spray	0.03
	Harris Home Pest Control Bed Bug Killer	I/O	Spray	0.03
	Harris® Home Pest Control	Dog	Spot On	0.03
	Raid Max Cockroach Killer	I/O	Spray	0.05
	Raid® Max Spider And Scorpion Killer	I/O	Spray	0.03
	Raid Max Bug Barrier	I/O	Spray	0.1
	Terro Spider Killer	I/O	Spray	0.02
Diethylene Glycol Monobutyl	Black Flag Ant And Roach Killer	I/O	Gel	1.5
Di-n-propyl isocinchomeronate	Adams Plus Pyrethrin Dip For Dogs And Cats	Dog, Cat	Tropical Dip	1.97
	Advantage Flea And Tick Treatment Shampoo For Dogs And Puppies	Dog	Shampoo	0.479
	Farnam Flys-Off Fly Repellent Ointment	Dog	Topical Ointment	1
	Farnam Flys-Off Insect Repellent For Dogs And Cats	Dog, Cat	Spray	0.5
	Natural Chemistry De Flea Pet And Bedding Spray For Dogs	Dog	Spray	2.1
	Natural Chemistry De Flea Pet Shampoo	Dog, Cat	Shampoo	2.1
	Natural Chemistry De Flea Pet Shampoo For Cats	Cat	Shampoo	2.1
	Sentry Home Flea And Tick Carpet Powder In Potpourri Scent	Home	Dust	0.5
Distillates	Raid Flying Insect Killer 7 (Outdoor Fresh Scent)	Home	Spray	10-30
d-Limonene	Adams D-Limonene Flea And Tick Pet Shampoo	Dog, Cat	Shampoo	5
D-Phenothrin	Harris Egg Kill Bed Bug Killer	I/O	Spray	0.4
	Raid Flying Insect Killer 7 (Outdoor Fresh Scent)	Home	Spray	0-1
D-trans Allethrin	Ace Ant And Roach Killer	I/O	Spray	0.05
	Ace Foaming Wasp And Hornet Killer	I/O	Spray	0.005
	Ace House And Garden Bug Killer	I/O	Spray	0.25
	Ace Wasp And Hornet Killer	I/O	Spray	0.05
	Hot Shot® Flying Insect Killer	I/O	Spray	0.25
	Real-Kill Ant And Roach Killer	I/O	Spray	0.05
Esfenvalerate	Advantage Household Fogger	Home	Fogger	0.1
	Hartz Ultra Guard Yard And Kennel Spray	Dog	Spray	0.425
	Hot Shot Bedbug And Flea Fogger	Home	Fogger	0.1
	Sentry Homeguard Household Fogger	Home	Fogger	0.1
	Terro Ant Killer Spray	I/O	Spray	0.03

AI	Product Name	Product Type	Type	% Of Product
Ethyl Alcohol	Enforcer® Flea Spray With IGR	Home	Spray	1-5
Etofenprox	Adams Flea And Tick Home Spray	Home	Spray	
	Adams Pentagon Flea And Tick Spot On For Dogs	Dog	Spot On	50
	Adams Plus Flea And Tick Carpet Spray	Home	Spray	
	Adams Plus Flea And Tick Indoor Fogger	Home	Fogger	0.5
	Adams Plus Flea And Tick Spot On Dog Treatment For Dogs	Dog	Spot On	50
	Adams Plus Flea And Tick Spray For Dogs And Cats	Dog, Cat	Spray	0.5
	Bio Spot Active Care Flea And Tick Carpet Spray	Home	Spray	0.5
	Bio Spot Active Care Flea And Tick Dog Spot On Applicator	Dog	Spot On	50
	Bio Spot Active Care Flea And Tick Dog Spray	Dog	Spray	0.5
	Bio Spot Active Care Flea And Tick Spot On Cat Applicator	Cat	Spot On	40
	Bio Spot Active Care Indoor Fogger	Home	Fogger	0.5
	Bio Spot Defense Flea And Tick Spray For Cats And Kittens	Cat	Spray	0.5
	Sentry Fiproguard Max Cat And Kitten Topical Flea & And Tick Treatment	Cat	Spot On	15
	Sentry Pro Squeeze-On Toy And Small Breed Dog Flea And Tick Treatment	Dog	Spot On	55
	Sentry PurrScriptions Plus Cat And Kitten Squeeze-On Flea And Tick Control	Cat	Spot On	55
	Zodiac Spot On Flea Control For Cats	Cat	Spot On	40
	Zodiac Spot On Flea Control For Cats And Kittens	Cat	Spot On	40
	Zodiac Spot On Plus Flea Control For Cats And Kittens	Cat	Spot On	40
Fipronil	CatMD Maximum Defense Fipronil Flea And Tick Tropical For Cats	Cat	Spot On	9.7
	Combat Quick Kill Roach Killing Gel	Home	Gel	0.1
	Dog MD Maximum Defense Fipronil Flea And Tick Dog Treatment	Dog	Spot On	9.7
	Frontline Plus	Dog	Spot On	9.81
	Frontline Plus Flea And Tick Dog Treatment	Dog	Spot On	9.8
	Frontline Plus For Cats	Cat	Spot On	9.8
	Frontline Spray Treatment For Pets	Dog, Cat	Spray	0.29
	Pet Armor	Dog	Spot On	9.71
	Pet Armor Plus	Dog	Spot On	9.81

AI	Product Name	Product Type	Type	% Of Product
Fipronil (cont.)	Sentry Fiproguard Cat And Kitten Topical Flea And Tick Treatment	Cat	Spot On	9.7
	Sentry Fiproguard Cat Flea And Tick Spray	Cat	Spray	0.29
	Sentry Fiproguard Dog And Puppy Topical Flea And Tick Treatment	Dog	Spot On	9.7
	Sentry Fiproguard Flea And Tick Spray For Dogs And Cats	Dog, Cat	Spray	0.29
	Sentry Fiproguard Max Cat And Kitten Topical Flea And Tick Treatment	Cat	Spot On	9.8
	Sentry Fiproguard Max Dog And Puppy Topical Flea And Tick Treatment	Dog	Spot On	9.8
	Sentry Fiproguard Plus IGR For Dogs Flea And Tick	Dog	Spot On	9.8
Flumethrin	Seresto Flea And Tick Collar For Cats	Cat	Collar	4.5
	Seresto Flea And Tick Collar For Dogs	Dog	Collar	4.5
Gamma-Cyhalothrin	Hot Shot® Bedbug And Flea Killer	Home	Spray	0.005
	Spectracide® Bug Stop® Home Barrier	I/O	Spray	0.025
Hydrocarbon Propellant Blend	Black Flag Ant And Roach Killer	I/O	Gel	4.5
	Black Flag® Spider And Scorpion Killer	Home	Spray	9
	Enforcer Flea Spray For Carpets And Furniture	Home	Spray	10-20
	Hot Shot Fogger6 With Odor Neutralizer	Home	Fogger	30
	Hot Shot® Bedbug And Flea Fogger	Home	Fogger	35
	Hot Shot® Bedbug And Flea Killer	Home	Spray	9
	Hot Shot® Flying Insect Killer	I/O	Spray	18
Hydrocarbon Solvent	Raid Ant And Roach Killer 13- Outdoor Fresh Scent	Home	Spray	10-30
Imidacloprid	Advantage Carpet And Upholstery Spot Spray	Home	Spray	0.05
	Advantage Flea And Tick Household Spot And Crevice Spray	Home	Spray	0.05
	Advantage II Once-A-Month Cat And Kitten Topical Flea Treatment	Cat	Spot On	9.1
	Advantage II Once-A-Month Topical Flea Treatment For Dogs And Puppies	Dog	Spot On	9.1
	Bayer Defense Care Flea And Tick Dog Protection	Dog	Spot On	8.8
	K9 Advantix II Dog Flea And Tick Drops	Dog	Spot On	8.8
	Seresto Flea And Tick Collar For Cats	Cat	Collar	10
	Seresto Flea And Tick Collar For Dogs	Dog	Collar	10
Imiprothrin	Black Flag Ant And Roach Killer	I/O	Gel	0.1
	Raid Max Cockroach Killer	I/O	Spray	0.101

AI	Product Name	Product Type	Type	% Of Product
Imiprothrin (cont.)	Raid Ant And Roach Killer 13- Outdoor Fresh Scent	Home	Spray	.01-1
	Raid® Max Spider And Scorpion Killer	I/O	Spray	0.1
Indoxacarb	Raid Roach Gel	Home	Gel	0.3
Isobutane	Raid Ant And Roach Killer 13- Outdoor Fresh Scent	Home	Spray	5-10
Isobutane	Raid Concentrated Deep Reach Fogger	Home	Fogger	10-30
	Raid Flying Insect Killer 7 (Outdoor Fresh Scent)	Home	Spray	5-10
Isopropanol	Raid Ant And Roach Killer 13- Outdoor Fresh Scent	Home	Spray	1-5
Isopropyl myristate	Bayer Resultix Tick Spray For Dogs And Cats	Dog, Cat	Spray	50
Lambda-Cyhalothrin	Ace Ant And Roach Killer	I/O	Spray	0.01
	Ace Foaming Wasp And Hornet Killer	I/O	Spray	0.01
	Ace Wasp And Hornet Killer	I/O	Spray	0.01
	Black Flag Ant And Roach Killer	I/O	Gel	0.025
	Black Flag® Spider And Scorpion Killer	Home	Spray	0.03
	Hot Shot Home Insect Control Clear Formula	I/O	Spray	0.03
	Hot Shot® Bedbug And Flea Home Insect Killer	Home	Spray	0.3
	Real-Kill Ant And Roach Killer	I/O	Spray	0.01
	Spectracide® Ant Shield® Home Barrier Granules	I/O	Granules	0.04
	Spectracide® Terminate And Carpenter Ant Killer	I/O	Spray	0.03
Linalool	Adams Flea And Tick Carpet Powder	Home	Dust	2.5
	Bio Spot Active Care Flea And Tick Carpet And Upholstery Powder	Home	Dust	2.5
	Bio Spot Flea And Tick Inverted Carpet Spray	Home	Spray	1
	Sentry Homeguard Household Carpet Powder	Home	Dust	2.5
	Zodiac Carpet Powder	Home	Dust	2.5
Mineral Oil	Enforcer Flea Spray For Carpets And Furniture	Home	Spray	1-10
Mineral Spirits	Black Flag Ant And Roach Killer	I/O	Gel	4.5
	Black Flag® Spider And Scorpion Killer	Home	Spray	4.5
	Hot Shot Fogger6 With Odor Neutralizer	Home	Fogger	3.75
	Hot Shot® Flying Insect Killer	I/O	Spray	4
	Real-Kill Indoor Fogger5	Home	Fogger	9
Nitenpyram	Pet Armor Fast Caps	Dog	Spot On	11.4
N-octyl Bicycloheptene Dicarboximide	Adams Pentagon Flea And Tick Spot On For Dogs	Dog	Spot On	0.91
	Adams Plus FleaAnd Tick Indoor Fogger	Home	Fogger	0.5
	Adams Plus Flea And Tick Spot On Dog Treatment For Dogs	Dog	Spot On	9.1
	Adams Plus Pyrethrin Dip For Dogs And Cats	Dog, Cat	Tropical Dip	5.7
	Advantage Carpet And Upholstery Spot Spray	Home	Spray	1

AI	Product Name	Product Type	Type	% Of Product
N-octyl Bicycloheptene Dicarboximide (cont.)	Advantage Flea And Tick Household Spot And Crevice Spray	Home	Spray	1
	Advantage Flea And Tick Treatment Cat Spray	Cat	Spray	0.957
	Advantage Flea And Tick Treatment Dog Spray	Dog	Spray	0.957
	Advantage Flea And Tick Treatment Shampoo For Cats And Kittens	Cat	Shampoo	0.479
	Advantage Household Fogger	Home	Fogger	0.16
	Bayer Defense Care Flea And Tick Dog Shampoo	Dog	Shampoo	0.479
	Bayer Defense Care Flea And Tick Dog Spray	Dog	Spray	0.957
	Bio Spot Active Care Flea And Tick Dog Spot On Applicator	Dog	Spot On	9.1
	Bio Spot Active Care Indoor Fogger	Home	Fogger	0.5
	Bio Spot Flea And Tick Inverted Carpet Spray	Home	Spray	1
	Country Vet Metered Insecticide Fly Spray	Dog	Spray	3.05
	Farnam Flies-Off Insect Repellent For Dogs And Cats	Dog, Cat	Spray	0.5
	Four Paws Magic Coat Flea And Tick Shampoo For Cats And Kittens	Cat	Shampoo	0.15
	Harris Egg Kill Bed Bug Killer	I/O	Spray	1.6
	Hot Shot® Bedbug And Flea Fogger	Home	Fogger	0.167
	ORTHO Home Defense Dual-Action Bed Bug Killer	I/O	Spray	>1-5
	Raid Flea Killer Plus Carpet And Room Spray	Home	Spray	1
	Raid Flea Killer Plus Fogger	Home	Fogger	1.67
	Raid® Max Bed Bug And Flea Killer	Home	Spray	1.53
	Sentry Dual Action Flea And Tick Dog Collar	Dog	Collar	3
	Sentry Fly Repellent Spray	Dog	Spray	0.48
	Sentry Homeguard Household Fogger	Home	Fogger	0.16
	Sentry Homeguard Household Spray	Home	Spray	1.6
	Sentry Pro Flea And Tick Spray For Dogs And Cats	Dog, Cat	Spray	0.33
	Sentry Pro Toy And Small Breed Dog Flea And Tick Shampoo	Dog	Shampoo	0.5
	Sentry Pro Toy And Small Breed Dog Flea And Tick Spray	Dog	Spray	0.33
	Sentry PurrScriptions Dual Action Flea And Tick Collar For Cats	Cat	Collar	3
	Sentry PurrScriptions Plus Flea And Tick Cat Spray	Cat	Spray	0.333
	Sentry PurrScriptions Plus Flea And Tick Shampoo For Cats & Kittens	Cat	Shampoo	0.1
	SentryHome Flea And Tick Home And Carpet	Home	Spray	1

AI	Product Name	Product Type	Type	% Of Product	
N-octyl Bicycloheptene Dicarboximide (cont.)	SentryHome Flea-Free Breeze Home And Carpet Spray	Home	Spray	1	
	SentryHome Household Fogger	Home	Fogger	0.16	
	Terro Ant Killer Spray	I/O	Spray	0.29	
	Zodiac Flea And Tick Repellent For Puppies	Dog	Spray	0.62	
	Zodiac Flea And Tick Spray For Dogs, Cats, Puppies And Kittens	Dog, Cat	Spray	0.62	
Novaluron	Sentry Fiproguard Plus IGR For Dogs Flea And Tick	Dog	Spot On	20	
Permethrin	Ace House And Garden Bug Killer	I/O	Spray	0.15	
	Bayer Defense Care Flea And Tick Dog Protection	Dog	Spot On	44	
	Bio Spot Flea And Tick Home Spray	Home	Spray	0.28	
	Bio Spot Flea And Tick Inverted Carpet Spray	Home	Spray	0.2	
	Bio Spot Spot On Flea And Tick Control For Dogs	Dog	Spot On	45	
	Dog MD Maximum Defense Flea And Tick Dog And Puppy Shampoo	Dog	Shampoo	0.1	
	Farnam Bronco Equine Fly Plus Citronella	Dog	Spray	0.1	
	Hot Shot® Flying Insect Killer	I/O	Spray	0.15	
	Hot Shot® No-Mess Fogger2 With Odor Neutralizer	Home	Fogger	0.834	
	K9 Advantix II Dog Flea And Tick Drops	Dog	Spot On	44	
	Raid® Ant Killer	I/O	Spray	0.2	
	Sentry 35 Day Flea Dip For Dogs	Dog	Topical Dips	5.7	
	Sentry Flea And Tick Shampoo For Dogs And Puppies	Dog	Shampoo	0.1	
	Sentry Flea And Tick Shampoo With Oatmeal For Dogs And Puppies	Dog	Shampoo	0.1	
	Sentry Flea And Tick Squeeze-On For Dogs	Dog	Spot On	45	
	Sentry Fly Repellent Spray	Dog	Spray	0.2	
	Sentry Pro Flea And Tick Shampoo For Dogs And Puppies	Dog	Shampoo	0.1	
	Sentry Squeeze-On Flea And Tick Dog Treatment	Dog	Spot On	45	
	SentryHome Flea And Tick Home And Carpet Spray	Home	Spray	0.2	
	SentryHome Flea-Free Breeze Home And Carpet Spray	Home	Spray	0.2	
	Terro Carpenter Ant And Termite Killer	I/O	Spray	0.5	
	Zodiac Carpet And Upholstery Aerosol Spray	Home	Spray	0.5	
Zodiac FleaTrol Carpet And Upholstery Pump	Home	Spray	0.28		

AI	Product Name	Product Type	Type	% Of Product
Permethrin (cont.)	Zodiac FleaTrol Fogger	Home	Fogger	0.58
	Zodiac Spot On Flea And Tick Control For Dogs	Dog	Spot On	45
Petroleum Distillate	Harris Egg Kill Bed Bug Killer	I/O	Spray	<3
	Hot Shot® Bedbug And Flea Killer	Home	Spray	5
Phenothrin	Ace Flying Insect Killer	I/O	Spray	0.15
	Advantage Flea And Tick Household Spot And Crevice Spray	Home	Spray	0.4
	Hartz InControl Dog And Puppy Flea And Tick Drops	Dog	Spot On	85.7
	Hartz Ultra Guard Flea And Tick Shampoo For Dogs	Dog	Shampoo	0.27
	Raid House And Garden Bug Killer	I/O	Spray	0.096
	Raid® Max Bed Bug And Flea Killer	Home	Spray	0.4
	Sentry Dual Action Flea And Tick Dog Collar	Dog	Collar	3
	Sentry Homeguard Household Spray	Home	Spray	40
	Sentry PurrScriptions Dual Action Flea And Tick Collar For Cats	Cat	Collar	3
	SentryHome Household Flea And Tick Spray	Home	Spray	0.3
Piperonyl butoxide	Adams Flea And Tick Carpet Powder	Home	Dust	0.5
	Adams Pentagon Flea And Tick Spot On For Dogs	Dog	Spot On	9.1
	Adams Plus Flea And Tick Shampoo With Precor For Dogs And Cats	Dog, Cat	Shampoo	1.5
	Adams Plus Flea And Tick Spot On Dog Treatment For Dogs	Dog	Spot On	9.1
	Adams Plus Flea And Tick Spray For Dogs And Cats	Dog, Cat	Spray	1.75
	Adams Plus Pyrethrin Dip for Dogs And Cats	Dog, Cat	Tropical Dip	3.74
	Advantage Flea And Tick Treatment Shampoo For Cats And Kittens	Cat	Shampoo	0.3
	Advantage Flea And Tick Treatment Shampoo For Dogs And Puppies	Dog	Shampoo	3
	Advantage Household Fogger	Home	Fogger	0.1
	Bayer Defense Care Flea And Tick Dog Shampoo	Dog	Shampoo	0.3
	Bio Spot Active Care Flea And Tick Carpet & Upholstery Powder	Home	Dust	0.5
	Bio Spot Active Care Flea And Tick Cat Shampoo	Cat	Shampoo	1.88
	Bio Spot Active Care Flea And Tick Dog Shampoo	Dog	Shampoo	1.88
	Bio Spot Active Care Flea And Tick Dog Spot On Applicator	Dog	Spot On	0.91

AI	Product Name	Product Type	Type	% Of Product
Piperonyl butoxide (cont.)	Bio Spot Active Care Flea And Tick Dog Spray	Dog	Spray	1.75
	Bio Spot Defense Flea And Tick Spray For Cats And Kittens	Cat	Spray	1.75
	Bio Spot Flea And Tick Dog Spray For Dogs And Puppies	Dog	Spray	0.37
	Bio Spot Flea And Tick Shampoo For Dogs	Dog	Shampoo	0.5
	Bio Spot Shampoo For Dogs And Puppies Oatmeal Conditioning Shampoo	Dog	Shampoo	1.88
	Country Vet Metered Insecticide Fly Spray	Dog	Spray	1.95
	Doctor Doom Total Release Fogger	Home	Fogger	2.001
	Dog MD Maximum Defense Flea And Tick Dog And Puppy Shampoo	Dog	Shampoo	0.5
	Farnam Bronco Equine Fly Plus Citronella	Dog	Spray	0.5
	Farnam Flies-Off Fly Repellent Ointment	Dog	Topical Ointment	0.5
	Farnam Flies-Off Insect Repellent For Dogs And Cats	Dog, Cat	Spray	1.5
	Four Paws Magic Coat Flea And Tick Shampoo For Cats And Kittens	Cat	Shampoo	0.09
	Garden Safe Brand Houseplant And Garden Insect Killer	I/O	Spray	0.2
	Hot Shot® Bedbug And Flea Fogger	Home	Fogger	0.1
	Hot Shot® No-Mess Fogger2 With Odor Neutralizer	Home	Fogger	1.667
	JT Eaton™ Kills Bedbugs, Fleas, Brown Dog Ticks And Other Insects Listed On This Label	Home	Spray	1.27
	R-7M Ear Care for Dogs And Cats Ear Mite Treatment	Dog, Cat	Spot On	1.5
	Raid Flea Killer Plus Carpet And Room Spray	Home	Spray	1
	Raid Flea Killer Plus Fogger	Home	Fogger	1
	Raid® Ant Killer	I/O	Spray	0.26
	Sentry Earmite Free Ear Miticide For Dogs	Dog	Spot On	0.6
	Sentry Flea And Tick Shampoo For Dogs And Puppies	Dog	Shampoo	0.5
	Sentry Flea And Tick Shampoo With Oatmeal For Dogs And Puppies	Dog	Shampoo	0.5
	Sentry Fly Repellent Cream	Dog, Cat	Topical Cream	0.5
	Sentry Homeguard Household Carpet Powder	Home	Dust	0.5
	Sentry Homeguard Household Fogger	Home	Fogger	0.1
Sentry Pro Flea & Tick Shampoo For Dogs	Dog	Shampoo	0.5	

AI	Product Name	Product Type	Type	% Of Product
Piperonyl butoxide (cont.)	Sentry Pro Flea And Tick Spray For Dogs And Cats	Dog, Cat	Spray	0.2
	Sentry Pro Toy And Small Breed Dog Flea And Tick Shampoo	Dog	Shampoo	1.5
	Sentry Pro Toy And Small Breed Dog Flea And Tick Spray	Dog	Spray	0.2
	Sentry PurrScriptions Original Flea And Tick Shampoo For Cats And Kittens	Cat	Shampoo	0.5
	SentryHome Household Fogger	Home	Fogger	0.1
	Spectra Shield Collar Attached Medallion Dog Flea And Tick Control	Dog	Collar	20
	Terro Carpenter Ant And Termite Killer	I/O	Spray	1
	Zodiac Carpet Powder	Home	Dust	0.5
	Zodiac Flea And Tick Powder For Dogs, Puppies, Cats And Kittens	Dog, Cat	Topical Powder	1
	Zodiac Flea And Tick Puppy Conditioning Shampoo	Dog	Shampoo	1.5
	Zodiac Flea And Tick Repellent For Puppies	Dog	Spray	0.37
	Zodiac Flea And Tick Shampoo For Dogs And Cats	Dog, Cat	Shampoo	0.5
	Zodiac Flea And Tick Sponge-On For Dogs And Cats	Dog, Cat	Topical Sponge-on	3
	Zodiac Flea And Tick Spray For Dogs, Cats, Puppies And Kittens	Dog, Cat	Spray	0.37
	Zodiac Oatmeal Flea And Tick Dog And Puppy Conditioning Shampoo	Dog	Shampoo	1.5
Prallethrin	Black Flag® Spider And Scorpion Killer	Home	Spray	0.025
	Farnam Bronco Equine Fly Plus Citronella	Dog	Spray	0.033
	Hot Shot Bedbug And Flea Killer	Home	Spray	0.025
	Hot Shot® Bedbug And Flea Killer	Home	Spray	0.025
	Raid Wasp And Hornet Killer	I/O	Spray	0.02
	Terro Ant Killer Spray	I/O	Spray	0.05
Propane	Raid Concentrated Deep Reach Fogger	Home	Fogger	10-30
	Raid Flying Insect Killer 7 (Outdoor Fresh Scent)	Home	Spray	5-10
Propoxur	Adams Flea And Tick Collar For Cats	Cat	Collar	10
	Adams Plus Flea And Tick Collar For Large Dogs	Dog	Collar	10
	Adams Plus Flea And Tick Collar For Small Dogs	Dog	Collar	10
	Bio Spot Active Care Breakaway Flea And Tick Cat Collar	Cat	Collar	10
	Bio Spot Active Care Flea And Tick Dog Collar	Dog	Collar	10

AI	Product Name	Product Type	Type	% Of Product
Propoxur (cont.)	Sentry Dual Action Flea And Tick Dog Collar	Dog	Collar	9
	Sentry PurrScriptions Dual Action Flea And Tick Collar For Cats	Cat	Collar	9
	Zodiac 5-Month Flea And Tick Collars For Dogs	Dog	Collar	90
	Zodiac Fleatrol Breakaway Flea And Tick Collar For Cats	Cat	Collar	10
Propylene Glycol Monobutyl	Black Flag® Spider And Scorpion Killer	Home	Spray	1.5
	Hot Shot® Bedbug And Flea Killer	Home	Spray	1
	Real-Kill Ant And Roach Killer	I/O	Spray	6
Pyrethrins	Adams Flea And Tick Carpet Powder	Home	Dust	0.075
	Adams Plus Flea And Tick Shampoo With Precor For Dogs And Cats	Dog, Cat	Shampoo	0.15
	Adams Plus Pyrethrin Dip For Dogs And Cats	Dog, Cat	Tropical Dip	0.97
	Advantage Flea And Tick Treatment Cat Spray	Cat	Spray	0.18
	Advantage Flea And Tick Treatment Dog Spray	Dog	Spray	0.18
	Advantage Flea And Tick Treatment Shampoo For Cats And Kittens	Cat	Shampoo	0.15
	Advantage Flea And Tick Treatment Shampoo For Dogs And Puppies	Dog	Shampoo	0.15
	Advantage Household Fogger	Home	Fogger	0.05
	Bayer Advanced Ready-To-Use Natria Insect Disease And Mite Control	I/O	Spray	0.01
	Bayer Defense Care Flea And Tick Dog Shampoo	Dog	Shampoo	0.15
	Bayer Defense Care Flea And Tick Dog Spray	Dog	Spray	0.18
	Bio Spot Active Care Flea And Tick Carpet And Upholstery Powder	Home	Dust	0.075
	Bio Spot Active Care Flea And Tick Carpet Spray	Home	Spray	0.3
	Bio Spot Active Care Flea And Tick Cat Shampoo	Cat	Shampoo	0.15
	Bio Spot Active Care Flea And Tick Dog Shampoo	Dog	Shampoo	0.15
	Bio Spot Flea And Tick Dog Spray For Dogs And Puppies	Dog	Spray	0.27
	Bio Spot Flea And Tick Shampoo For Dogs	Dog	Shampoo	0.05
	Bio Spot Shampoo For Dogs And Puppies Oatmeal Conditioning Shampoo	Dog	Shampoo	0.15
	Country Vet Metered Insecticide Fly Spray	Dog	Spray	0.975
	Doctor Doom Total Release Fogger	Home	Fogger	0.401
Enforcer Flea Fogger	Home	Fogger	0.08	

AI	Product Name	Product Type	Type	% Of Product
Pyrethrins (cont.)	Farnam Flys-Off Fly Repellent Ointment	Dog	Topical Ointment	0.2
	Farnam Flys-Off Insect Repellent For Dogs And Cats	Dog, Cat	Spray	0.15
	Four Paws Magic Coat Flea And Tick Shampoo For Cats And Kittens	Cat	Shampoo	0.045
	Garden Safe Brand Houseplant And Garden Insect Killer	I/O	Spray	0.02
	Hot Shot® Bedbug And Flea Fogger	Home	Fogger	0.05
	JT Eaton™ Kills Bedbugs, Fleas, Brown Dog Ticks And Other Insects Listed On This Label	Home	Spray	0.13
	R-7M Ear Care For Dogs And Cats Ear Mite Treatment	Dog, Cat	Spot On	0.15
	Raid Flea Killer Plus Carpet And Room Spray	Home	Spray	0.14
	Raid Flea Killer Plus Fogger	Home	Fogger	0.5
	Raid® Ant Killer	I/O	Spray	0.13
	Sentry Earmite Free Ear Miticide For Dogs	Dog	Spot On	0.06
	Sentry Fly Repellent Cream	Dog, Cat	Topical Cream	0.15
	Sentry Fly Repellent Spray	Dog	Spray	0.1
	Sentry Home Flea And Tick Carpet Powder In Potpourri Scent	Home	Dust	0.1
	Sentry Homeguard Household Carpet Powder	Home	Dust	0.075
	Sentry Homeguard Household Fogger	Home	Fogger	0.05
	Sentry Pro Flea And Tick Spray For Dogs And Cats	Dog, Cat	Spray	0.1
	Sentry Pro Toy And Small Breed Dog Flea And Tick Shampoo	Dog	Shampoo	0.15
	Sentry Pro Toy And Small Breed Dog Flea And Tick Spray	Dog	Spray	0.1
	Sentry PurrScriptions Original Flea And Tick Shampoo For Cats And Kittens	Cat	Shampoo	0.05
	Sentry PurrScriptions Plus Flea And Tick Cat Spray	Cat	Spray	0.1
	Sentry PurrScriptions Plus Flea And Tick Shampoo For Cats And Kittens	Cat	Shampoo	0.005
	SentryHome Household Fogger	Home	Fogger	0.05
	Terro Spider Killer	I/O	Spray	0.05
	Zodiac Carpet Powder	Home	Dust	0.075
	Zodiac Flea And Tick Powder For Dogs, Puppies, Cats And Kittens	Dog, Cat	Topical Powder	0.1
Zodiac Flea & Tick Puppy Conditioning Shampoo	Dog	Shampoo	0.15	

AI	Product Name	Product Type	Type	% Of Product
Pyrethrins (cont.)	Zodiac Flea And Tick Repellent For Puppies	Dog	Spray	0.2
	Zodiac Flea And Tick Shampoo For Dogs And Cats	Dog, Cat	Shampoo	0.5
	Zodiac Flea And Tick Sponge-On For Dogs And Cats	Dog, Cat	Topical Sponge-on	0.3
	Zodiac Flea And Tick Spray For Dogs, Cats, Puppies And Kittens	Dog, Cat	Spray	0.2
	Zodiac Oatmeal Flea And Tick Dog And Puppy Conditioning Shampoo	Dog	Shampoo	0.15
Pyriproxyfen	Adams Flea And Tick Carpet Powder	Home	Dust	0.02
	Adams Plus Flea And Tick Spot On Dog Treatment For Dogs	Dog	Spot On	0.45
	Advantage Flea And Tick Treatment Cat Spray	Cat	Spray	1.25
	Advantage Flea And Tick Treatment Dog Spray	Dog	Spray	0.125
	Advantage Household Fogger	Home	Fogger	0.1
	Advantage II Once-A-Month Cat And Kitten Topical Flea Treatment	Cat	Spot On	0.46
	Advantage II Once-A-Month Topical Flea Treatment For Dogs And Puppies	Dog	Spot On	0.46
	Bayer Defense Care Flea And Tick Dog Spray	Dog	Spray	0.125
	Bio Spot Active Care Flea And Tick Carpet And Upholstery Powder	Home	Dust	0.02
	Bio Spot Flea And Tick Inverted Carpet Spray	Home	Spray	0.015
	Enforcer Flea Spray For Carpets And Furniture	Home	Spray	0.015
	Hot Shot® Bedbug And Flea Fogger	Home	Fogger	0.1
	K9 Advantix II Dog Flea And Tick Drops	Dog	Spot On	0.44
	Sentry Flea And Tick Squeeze-On For Dogs	Dog	Spot On	1.9
	Sentry Home Flea And Tick Carpet Powder In Potpourri Scent	Home	Dust	0.02
	Sentry Homeguard Household Carpet Powder	Home	Dust	0.02
	Sentry Homeguard Household Fogger	Home	Fogger	0.1
	Sentry Homeguard Household Spray	Home	Spray	0.1
	Sentry Pro Flea And Tick Shampoo For Dogs And Puppies	Dog	Shampoo	0.01
	Sentry Pro Flea And Tick Spray For Dogs And Cats	Dog, Cat	Spray	0.005
Sentry Pro Squeeze-On Toy ANd Small Breed Dog Flea And Tick Treatment	Dog	Spot On	2.2	
Sentry Pro Toy And Small Breed Dog Flea And Tick Shampoo	Dog	Shampoo	0.01	

AI	Product Name	Product Type	Type	% Of Product
Pyriproxyfen (cont.)	Sentry Pro Toy AND Small Breed Dog Flea And Tick Spray	Dog	Spray	0.005
	Sentry Pro XFT Squeeze-On Dog Flea And Tick Treatment	Dog	Spot On	2
	Sentry PurrScriptions Plus Cat And Kitten Squeeze-On Flea And Tick Control	Cat	Spot On	2.2
	Sentry PurrScriptions Plus Flea And Tick Cat Spray	Cat	Spray	0.005
	Sentry PurrScriptions Plus Flea And Tick Shampoo For Cats And Kittens	Cat	Shampoo	0.01
	Sentry Squeeze-On Flea And Tick Dog Treatment	Dog	Spot On	1.9
	SentryHome Flea And Tick Home & Carpet	Home	Spray	0.02
	SentryHome Flea-Free Breeze Home And Carpet Spray	Home	Spray	0.02
	SentryHome Household Flea And Tick Spray	Home	Spray	0.4
	SentryHome Household Fogger	Home	Fogger	0.16
	Zodiac Carpet Powder	Home	Dust	0.02
S-Bioallethrin	Bonide Termite And Carpenter Ant Killer	I/O	Spray	6.05
Silicon Dioxide	Hot Shot Bedbug and Flea Killer Powder	Home	Dust	0.85
(S)-methoprene	Adams Flea And Tick Collar For Cats	Cat	Collar	2.1
	Adams Flea And Tick Home Spray	Home	Spray	0.01
	Adams Pentagon Flea And Tick Spot On For Dogs	Dog	Spot On	0.23
	Adams Plus Flea And Tick Carpet Spray	Home	Spray	0.045
	Adams Plus Flea And Tick Collar For Large Dogs	Dog	Collar	2.1
	Adams Plus Flea And Tick Collar For Small Dogs	Dog	Collar	2.1
	Adams Plus Flea And Tick Indoor Fogger	Home	Fogger	0.09
	Adams Plus Flea And Tick Shampoo With Precor For Dogs And Cats	Dog, Cat	Shampoo	0.1
	Adams Plus Flea And Tick Spot On Dog Treatment For Dogs	Dog	Spot On	0.2
	Adams Plus Flea And Tick Spray For Dogs And Cats	Dog, Cat	Spray	0.27
	Bio Spot Active Care Breakaway Flea And Tick Cat Collar	Cat	Collar	2.1
	Bio Spot Active Care Flea And Tick Carpet Spray	Home	Spray	0.045
	Bio Spot Active Care Flea And Tick Cat Shampoo	Cat	Shampoo	0.1
	Bio Spot Active Care Flea And Tick Dog Collar	Dog	Collar	2.1
	Bio Spot Active Care Flea And Tick Dog Shampoo	Dog	Shampoo	0.01
	Bio Spot Active Care Flea And Tick Dog Spot On Applicator	Dog	Spot On	0.23
	Bio Spot Active Care Flea And Tick Dog Spray	Dog	Spray	0.27
	Bio Spot Active Care Flea And Tick Spot On Cat Applicator	Cat	Spot On	3.6

AI	Product Name	Product Type	Type	% Of Product
(S)-methoprene (cont.)	Bio Spot Active Care Indoor Fogger	Home	Fogger	0.09
	Bio Spot Defense Flea And Tick Spray For Cats And Kittens	Cat	Spray	0.27
	Bio Spot Flea And Tick Dog Spray For Dogs And Puppies	Dog	Spray	0.27
	Bio Spot Flea And Tick Home Spray	Home	Spray	0.01
	Bio Spot Shampoo For Dogs And Puppies Oatmeal Conditioning Shampoo	Dog	Shampoo	0.1
	Bio Spot Spot On Flea And Tick Control For Dogs	Dog	Spot On	3
	Frontline Plus	Dog	Spot On	8.8
	Frontline Plus Flea And Tick Dog Treatment	Dog	Spot On	8.8
	Frontline Plus For Cats	Cat	Spot On	11.8
	Hartz InControl Dog And Puppy Flea And Tick Drops	Dog	Spot On	2.3
	Hartz® UltraGuard Plus™ Flea And Tick Spray For Dogs	Home	Spray	0.07
	Pet Armor Plus	Dog	Spot On	11.8
	Raid Flea Killer Plus Carpet And Room Spray	Home	Spray	0
	Raid Flea Killer Plus Fogger	Home	Fogger	0.075
	Zodiac Carpet And Upholstery Aerosol Spray	Home	Spray	0.09
	Zodiac Flea And Tick Puppy Conditioning Shampoo	Dog	Shampoo	0.1
	Zodiac Flea And Tick Repellent For Puppies	Dog	Spray	0.1
	Zodiac Flea And Tick Spray For Dogs, Cats, Puppies And Kittens	Dog, Cat	Spray	0.27
	Zodiac FleaTrol Carpet And Upholstery Pump Spray	Home	Spray	0.01
	Zodiac FleaTrol Fogger	Home	Fogger	0.09
	Zodiac Oatmeal Flea And Tick Dog And Puppy Conditioning Shampoo	Dog	Shampoo	0.1
	Zodiac Spot On Flea And Tick Control For Dogs	Dog	Spot On	3
	Zodiac Spot On Flea Control For Cats	Cat	Spot On	3.6
	Zodiac Spot On Flea Control For Cats & Kittens	Cat	Spot On	3.6
Zodiac Spot On Plus Flea Control For Cats And Kittens	Cat	Spot On	3.6	
Sulfur	Bayer Advanced Ready-To-Use Natria Insect Disease And Mite Control	I/O	Spray	0.2
Sumithrin	Enforcer Flea Spray For Carpets And Furniture	Home	Spray	0.3
	Terro Wasp And Hornet Killer	I/O	Spray	0.2
Tetrachlorvinphos	Hartz Ultra Guard Reflecting Flea And Tick Collar For Cats And Kittens	Cat	Collar	14.55
	Hartz® UltraGuard Plus™ Flea & Tick Spray	Dogs	Spray	1.08

AI	Product Name	Product Type	Type	% Of Product
Tetramethrin	Ace Flying Insect Killer	I/O	Spray	0.05
	Adams Plus Flea And Tick Indoor Fogger	Home	Fogger	0.4
	Bio Spot Active Care Indoor Fogger	Home	Fogger	0.4
	Black Flag Ant And Roach Killing Chalk	I/O	Dust	1
	Enforce BugMax Spider And Scorpion Killer	I/O	Spray	0.05
	Hot Shot Fogger6 With Odor Neutralizer	Home	Fogger	0.05
	Hot Shot® No-Mess Fogger2 With Odor Neutralizer	Home	Fogger	0.333
	Raid Flea Killer Plus Carpet and Room Spray	Home	Spray	0.063
	SentryHome Household Flea And Tick Spray	Home	Spray	0.015
	Terro Carpenter Ant And Termite Killer	I/O	Spray	0.2
	Terro Wasp And Hornet Killer	I/O	Spray	0.2
	Dead Fast Insecticide Chalk	I/O	Dust	1
Undecylenic Acid	Natural Chemistry De Flea Pet and Bedding Spray For Dogs	Dog	Spray	0.5
	Natural Chemistry De Flea Pet Shampoo	Dog, Cat	Shampoo	0.5
	Natural Chemistry De Flea Pet Shampoo For Cats	Cat	Shampoo	0.5
Zeta-cypermethrin	ORTHO® Home Defense® MAX® Insect Killer For Indoor And Perimeter	I/O	Spray	0.0125
	Spectra Shield Collar Attached Medallion Dog Flea And Tick Control	Dog	Collar	10