

ISSN Online: 1309-2243 http://dergipark.gov.tr/makufebed https://doi.org/10.29048/makufebed.637515

Mehmet Akif Ersoy Üniversitesi Fen Bilimleri Enstitüsü Dergisi 10(2): 198-209 (2019) The Journal of Graduate School of Natural and Applied Sciences of Mehmet Akif Ersoy University 10(2): 198-209 (2019)

Araştırma Makalesi / Research Paper

Good Agricultural Practices (GAPs) in 'Hicaznar' Pomegranate (*Punica granatum* L.) Cultivar

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ABSTRACT

Good Agricultural Practices (GAPs) includes agricultural techniques which environmentally-conscious, is not harmful to human and animal health, target protection of natural resources, provide traceability and food security. With these kinds of production techniques, it is aimed at agricultural production which is socially viable, economically profitable and sustainable. In this experiment Hicaznar pomegranate cultivar grown by Good Agricultural Practices (GAPs) in the Serik District Belkis Locality of Antalya were investigated. In addition to irrigation water, soil analysis, analyzes of pesticide residues in fruits were carried out. According to the results of the analysis irrigation water and soil characteristics were found suitable. A total of 506 pesticide active substances were analyzed in LC-MS / MS and 113 pesticide active substances in GC-MS in fruit extracts. In this research carried out in 2016 and 2017, samples of both years were not found to be detectable to the tolerance values of Turkish Food Codex (TFC).

Keywords: Pomegranate, Good Agricultural Practices, pesticides, residue

Hicaznar Nar (*Punica granatum* L.) Çeşidinde İyi Tarım Uygulamaları (İTU)

ÖΖ

İyi Tarım Uygulamaları (İTU) çevre bilincine sahip, insan ve hayvan sağlığına zararlı olmayan, doğal kaynakların korunmasını hedefleyen, izlenebilirlik ve gıda güvenliği sağlayan tarım tekniklerini kapsamaktadır. Bu tarz üretim teknikleri ile sosyal olarak yaşanabilir, ekonomik açıdan karlı ve sürdürülebilir bir tarımsal üretim amaçlanmaktadır. Bu araştırmada, Antalya'nın Serik ilçesi Belkıs Yöresi'nde İyi Tarım Uygulamaları çerçevesinde yetiştirilen Hicaznar nar çeşidi yer almaktadır. Sulama suyu ve toprak analizlerine ek olarak, nar meyvelerindeki pestisit kalıntı analizleri yapılmıştır. Analiz sonuçlarına göre sulama suyu ve toprak özellikleri uygun bulunmuştur. Meyve ekstraktlarında, toplam 506 pestisit etken maddesi LC-MS / MS ile 113 etken madde ise GC-MS'le analiz edilmiştir. 2016 ve 2017 yıllarında yapılan bu araştırmada, her iki yılın örneklerinin, Türk Gıda Kodeksinin (TFC) tolerans değerlerine göre pestisit içermediği tespit edilmiştir.

Anahtar Kelimeler: Nar, Iyi Tarim Uygulamalari, pestisit, kalıntı

INTRODUCTION

Pomegranate is widely recognised as a super food. Especially, pomegranate is one of the important fruit species in human nutrition and health due to it contains phenolic compounds, organic acids and other antioxidant

compounds (Gündoğdu and Yılmaz, 2012). Nowadays its importance is increasing due to its rich nutritional value and its positive effects on human health (Aviram et al., 2000; Aviram and Dornfeld 2001; Rosenblat, et al., 2006; Basu and Penugonda, 2009; Utture et al., 2012). It is one of the world's most ancient foods, and it is a symbol of fertility. Turkey is one of pomegranates homeland. Mainly in the Mediterranean, Aegean and Southeastern Anatolia Regions are produced as regular plantations. In other regions it is grown as border trees or single trees. Turkey pomegranate production is 537.847 tons in 2018 (TÜİK 2019). With this production value, it ranks 4th in the world after Iran, India and China. As a result, it is an exotic fruit which has an important place in fruit growing in our country.

Nowadays, there have been many problems threatening human health, this has increased the interest in food safety and has led to the development of good agricultural practices. The purposes of the GAPs are to make agricultural production that is not harmful to environment, human and animal health, to provide protection of natural resources, traceability and sustainability in agriculture and food security. GAP which is started by FAO is collected under 11 titles. These are soil, water, herbal and forage crops production, crop protection, animal production, animal welfare, harvest, cultivation in the farm and storage, energy and waste management, human welfare, health and security and wildlife and environment (Ersoy et al., 2017; Ersoy et al., 2018).

In Turkey, the procedures and principles of Good Agricultural Practices (GAPs) are defined by the regulation of GAPs published in the official gazette dated 07.12.2010 and no. 27778. Internationally recognized the criteria of GAPs are practiced within the frame of certification system and conformity criteria of GLOBALGAP, which is a special system implemented on an international scale. Nowadays, it is more important the security of food products than their prices for some consumers in the market of developed countries (Ersoy et al., 2017).

In this research, it is aimed to determine the presence of pesticide residues in fruit samples obtained from Hicaznar pomegranate cultivar in the Serik District Belkis Locality of Antalya with a certificate of good agricultural practices (GAPs).

MATERIAL AND METHODS

The experiment was carried out in a pomegranate garden which is "Hicaznar" cultivar established in the Serik District Belkis Locality of Antalya, Turkey. The experiment was set up to have 3 replications and 15 trees in each replicate, according to the design of randomized block design. Necessary samples were taken at the harvest time from the trees included in the experiment and analyzes were carried out. The plant protection program applied to pomegranate trees was given in Table 1 and the reports of soil and water analysis of the trial site were also given in Tables 2- 4.

Application dates	Trade name and Active substance	Application reason	Application dosage	Standby time	Application method
15.07.2016	HARBOR 150 g/l Pro- piconazole +150 g/l Difenoconazole	Brown spot disease (<i>Alternaria alternate</i> (<i>Fr.</i>) Keissl.)	50 ml/100 lt	7 days	Atomiser
15.07.2017	HARBOR 150 g/l Pro- piconazole +150 g/l Difenoconazole	Brown spot disease (<i>Alternaria alternate</i> (<i>Fr.</i>) Keissl.)	50 ml/100 lt	7 days	Atomiser
17.09.2016	CALYPSO OD, Thia- cloprid	Pomegranate aphid (<i>Aphis punicae</i> Pas- serini)	40 ml/100lt	7 days	Atomiser
17.09.2017	CALYPSO OD, Thia- cloprid	Pomegranate aphid (<i>Aphis punicae</i> Pas- serini)	40 ml/100lt	7 days	Atomiser
17.09.2016	DELPHIN, Bacillus thuringiensis 3200 BTU	Carob moth (<i>Ectomy-elois ceratoniae</i> Zell.)	100 gr/100 lt	0 days	Atomiser
17.09.2017	DELPHIN, Bacillus thuringiensis 3200 BTU	Carob moth (<i>Ectomy-elois ceratoniae</i> Zell.)	100 gr/100 lt	0 days	Atomiser

Table 1. Ch	nemical control	program of	applied in	pomegranate	garden
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Analysis Parameters	Unit	Methods	Results	Assessment
Ph	-	Richards (1954), Tüzüner (1990)	6,88	Neutral
Lime	(%)	Çağlar (1990), Tüzüner (1990)	25,08	Too high limy
Salt (conductivity)	(%)	Richards (1990)	0,046	Salt free
Saturation	(%)	Richards (1990) Tüzüner (1990)	83,00	Clayey
*Organic Substance	(%)	Richards (1954)	5,81	Highy
P (useful for plant)	(kg P ₂ O ₅ /decar)	Tüzüner (1990)	61,83	Too much
K (useful for plant)	(kg P ₂ O ₅ /decar)	Tüzüner (1990)	75,52	Much

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Table 3. Chemical analysis results of irrigation water used for pomegranate garden

Analysis Parameters	Unit	Method/Instrument	Results (2017)	Results (2016)
рН	-	Richards 1954	7,58	
EC	dS/cm	Richards 1954	0,04	Less salty
CO ₃ ²⁻	me/l	Richards 1954	0,20	
HCO₃ ⁻	me/l	Richards 1954	4,80	
Cl	me/l	Richards 1954	0,70	Good
SO4 ²⁻	me/l	Eltan 1998	0,20	
Na⁺	me/l	TS 4530/ICP OES	1,62	
K+	me/l	TS 4530/ICP OES	0,08	
Ca ²⁺	me/l	TS 2879/ICP OES	2,56	
Mg ²⁺	me/l	TS 2879/ICP OES	3,18	
В	ppm	Richards 1954	0,35	Class 1
Sodium Adsorption Ratio (SAR) me/L	me/l	TS 7739/Calculation	0,96	Low sodium
Residual Sodium Carbonate (RSC)	me/l	TS 7739/Calculation	-0,74	Used for irrigation
Water Class			T1A1	T1A1

Table 4. Microbiological analysis results of irrigation water used for mandarin garden

Analysis	Result/Unit	Analysis Method
*Intestinal Enterococci	Not detected kob/100 ml	ISO 7899-2
*Escherichla coli (E.coli)	Not detected kob/100 ml	TS EN ISO 9308-1
*Coliform Bacteria	Not detected kob/100 ml	TS EN ISO 9308-1

In the experiment, pesticides given in Tables 5 and 6 are searched in the examples of pomegranate fruit, which are the materials. All extraction studies and residue analysis of the examples made in Proanaliz Food Control Laboratory.

Table 5. Active substances	examined in	pomegranate fruit	t examples on	GC-MSD	device
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No	Analit	Detect Limit	tion μg/kgNo	Analit	Detection Limit µg/kg
1	1-Naphthyl acetamide(0.010)	0.010	254	Fosthiazate	0.010
2	2,4-D (0.010)	0.010	255	Fuberidazole	0.010
3	3,4,5 Trimethacarb (0.010)	0.010	256	Furalaxyl	0.010
4	Abamectin (0.010)	0.010	257	Furathiocarb	0.010
5	Acephate (0.010)	0.010	258	Halfenprox	0.010
6	Acequinocyl (0.010)	0.010	259	Halosulfuron Methyl	0.010
7	Acetamiprid (0.010)	0.010	260	Haloxyfop-2-Ethoxy-Ethyl	0.010
8	Acetochlor (0.010)	0.010	261	Heptanafos	0.010

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9	Acibenzolar-S-Methyl (0.010)	0.010	262	Hexaconazole	0.010
10	Aclonifen (0.010)	0.010	263	Hexaflumuron	0.010
11	Acrinathrin (0.010)	0.010	264	Hexazinone	0.010
12	Alachlor	0.010	265	Hexythiazox	0.010
13	Aldicarb	0.010	266	Imazalil	0.010
14	Aldicarb-Sulfone	0.010	267	Imazamox	0.010
15	Aldicarb-Sulfoxide	0.010	268	Imazapic	0.010
16	Allethrin	0.010	269	Imazapyr	0.010
17	Ametoctradin	0.010	270	Imazaguin	0.010
18	Ametryn	0.010	271	Imazethapyr	0.010
19	Amidosulfuron	0.010	272	Imazosulfuron	0.010
20	Amisulbrom	0.010	273	Imibenconazole	0.010
21	Amitraz	0.010	274	Imidachloprid	0.010
22	Amitrole	0.010	275	Indoxacarb Sum	0.010
22	Anilazine	0.010	276	lodosulfuron methyl sodium	0.010
24	Anilofos	0.010	270	loxynil	0.010
- - >5	Aramite	0.010	278	Inconazola	0.010
.J 20	Andhine	0.010	270	Incohantas	0.010
20	Asulan	0.010	219	Iprodenios	0.010
-1		0.010	20U 204	Iprovalicarb	0.010
20	Azaconazole	0.010	201		0.010
29		0.010	282	ISAZOTOS	0.010
50	Azimsuluron	0.010	283	Isocarbolos	0.010
31	Azinphos-Ethyl	0.010	284	Isoprocarb	0.010
32	Azinphos-Methyl	0.010	285	Isoproturon	0.010
3	Aziprotryne	0.010	286	Isoxaben	0.010
84	Azocyclotin	0.010	287	Isoxadifen Ethyl	0.010
85	Azoxystrobin	0.010	288	Isoxaflutole	0.010
86	Barban	0.010	289	Isoxathion	0.010
87	Beflubutamid	0.010	290	Kinetin	0.010
8	Benalaxyl	0.010	291	Kresoxim-methyl	0.010
39	Bendiocarb	0.010	292	Lenacil	0.010
0	Benfuracarb	0.010	293	Linuron	0.010
1	Benomyl	0.010	294	Lufenuron	0.010
2	Bensulfuron methyl	0.010	295	Malaoxon	0.010
3	Bentazone	0.010	296	Malathion	0.010
4	Benthiovalicarb Isopropyl	0.010	297	Maleic Hydrazide	0.010
-5	Benzoximate	0.010	298	Mandipropamide	0.010
6	Bifenox	0.010	299	MCPA	0.010
7	Bifentrin	0.010	300	Mecarbam	0.010
8	Binapacryl	0.010	301	Mecoprop (MCPP)	0.010
9	Bioresmethrin	0.010	302	Mecoprop-P (MCPP-P)	0.010
50	Bispyribac	0.010	303	Mepanipyrim	0.010
51	Bitertanol	0.010	304	Mephosfolan	0.010
2	Boscalid	0.010	305	Mepronil	0.010
3	Bromacil	0.010	306	Meptyldinocap	0.010
54	Bromophos methyl	0.010	307	Mesosulfuron Methyl	0.010
5	Bromophos-Ethyl	0.010	308	Mesotrione	0.010
6	Bromoxynl	0.010	300	Metaflumizone	0.010
7	Bromuconazola	0.010	310	Metalavyl	0.010
2	Bunirimate	0.010	211	Motolovyl M	0.010
0	Buprofozioa	0.010	210	Metamitron	0.010
50	Butofonooil	0.010	୦1∠ ୨4୦	Motozooblor	0.010
00	Dutalenacii	0.010	313		0.010
51		0.010	314		0.010
2	Butocarboxim-sultone	0.010	315	Nethabenzthiazuron	0.010
53	Butocarboxim-sulfoxide	0.010	316		0.010
54	Butoxycarboxim	0.010	317	Methamidophos	0.010

65 Butralin 0.010 318 Methicathion 0.010 65 Butron 0.010 319 Methiccarb sulfone 0.010 67 Butylate 0.010 320 Methiccarb sulfone 0.010 68 Cadusafos 0.010 322 Methoryl Nume 0.010 69 Campheclor-woon-sulfone 0.010 323 Methoryl Nume 0.010 71 Campheclor-soun-sulfone 0.010 324 Methoryl Nume 0.010 72 Campheclor-soun-sulfone 0.010 325 Methoryl Nume 0.010 72 Campheclor-soun-sulfoxide 0.010 328 Methoryl Nume 0.010 74 Carbontarian 0.010 329 Metolachor 0.010 75 Campheclor-soun-sulfoxide 0.010 334 Metoryn 0.010 75 Carbontran 0.010 334 Metolachor 0.010 76 Carbostran 0.010 334 Metoryn 0.010						
66 Buturon 0.010 319 Methiccarb 0.010 67 Butylate 0.010 320 Methiccarb sulfoxide 0.010 68 Campheclor 0.010 322 Methiccarb Sulfoxide 0.010 70 Campheclor-normethyl 0.010 323 Methomyl oxime 0.010 71 Campheclor-oxon-sulfoxide 0.010 324 Methomyl oxime 0.010 72 Campheclor-sulfoxide 0.010 325 Methomyl oxime 0.010 74 Campheclor-sulfoxide 0.010 325 Methographicarb 0.010 74 Campheclor-sulfoxide 0.010 329 Metoicarb 0.010 75 Carbosulfan 0.010 330 Metoicarb 0.010 76 Carbosulfan 0.010 334 Metoicarb 0.010 76 Carbosulfan 0.010 334 Metoicarb 0.010 77 Carbosulfan 0.010 335 Metoinonne 0.010	65	Butralin	0.010	318	Methidathion	0.010
67 Butylate 0.010 320 Methiocarb sulfoxice 0.010 68 Cadusafos 0.010 321 Methiocarb Sum 0.010 69 Campheclor-methyl 0.010 322 Methomyl Nationa 0.010 71 Campheclor-oxon-sulfone 0.010 324 Methomyl Nationa 0.010 72 Campheclor-soun-sulfoxide 0.010 324 Methoxylnozide 0.010 72 Campheclor-soun-sulfoxide 0.010 325 Methoxylnozide 0.010 73 Campheclor-sulfoxide 0.010 328 Methoxylnozide 0.010 74 Carbachedor-sulfoxide 0.010 328 Methoxylnozide 0.010 75 Cambheclor-sulfoxide 0.010 334 Metrosulfor 0.010 76 Carbosufan 0.010 333 Metrofenone 0.010 76 Carbosufan 0.010 336 Metrosulfuron 0.010 76 Carbosufan 0.010 336 Metrosufuron	66	Buturon	0.010	319	Methiocarb	0.010
68 Cadusafos 0.010 321 Methiccarb Sum 0.010 70 Campheclor methyl 0.010 322 Methomyl 0.010 71 Campheclor-oxon-sulfoxide 0.010 324 Methomyl Sulfone 0.010 72 Campheclor-oxon-sulfoxide 0.010 325 Methoxyfenozide 0.010 73 Campheclor-sulfoxide 0.010 326 Methoxyfenozide 0.010 74 Campheclor-sulfoxide 0.010 328 Metolachilo 0.010 74 Campheclor-sulfoxide 0.010 329 Metolachilor 0.010 75 Carbodraran 0.010 330 Metosymuron 0.010 76 Carbosulfan 0.010 333 Metoron-Methyl 0.010 76 Carbosulfan 0.010 334 Metosymuron 0.010 77 Carbosulfan 0.010 335 Metosymuron 0.010 77 Carbosulfan 0.010 334 Metosymuron 0.010	67	Butylate	0.010	320	Methiocarb sulfone	0.010
69 Campheclor 0.010 322 Methomyl 0.010 71 Campheclor-oxon 0.010 324 Methomyl oxime 0.010 72 Campheclor-oxon-sulfone 0.010 324 Methomyl oxime 0.010 72 Campheclor-oxon-sulfone 0.010 326 Methoxylenczide 0.010 73 Campheclor-sulfone 0.010 327 Methoxylenczide 0.010 74 Carbendazim 0.010 328 Metolachtor 0.010 75 Cambheclor-sulfone 0.010 328 Metolachtor 0.010 76 Carbordazim 0.010 330 Metosular 0.010 76 Carbortara 0.010 333 Metosular 0.010 77 Carbortara 0.010 334 Metosular 0.010 78 Carbortara 0.010 336 Metionyl oxin 0.010 82 Chloratranaliporo 0.010 336 Molinate 0.010 82	68	Cadusafos	0.010	321	Methiocarb sulfoxide	0.010
70 Campheclor-xxon 0.010 323 Methomyl xime 0.010 72 Campheclor-xxon-sulfoxide 0.010 325 Methoxyfenozide 0.010 73 Campheclor-xxon-sulfoxide 0.010 325 Methoxyfenozide 0.010 74 Campheclor-sulfoxide 0.010 327 Metosyfenozide 0.010 75 Carabpeclor-sulfoxide 0.010 329 Metolachlor 0.010 76 Carbaryl 0.010 329 Metosulan 0.010 76 Carbosulfan 0.010 331 Metosulan 0.010 77 Carbosulfan 0.010 332 Metrolenone 0.010 78 Carbofuran 0.010 333 Metrolenone 0.010 78 Carbofuran 0.010 334 Metrolenone 0.010 81 Carfeortinzaone-Ethyl 0.010 335 Meinophylenotin A 0.010 82 Chlorofnormon 0.010 334 Moloncintron 0.010	69	Campheclor	0.010	322	Methiocarb Sum	0.010
71 Campheclor-xxx 0.010 324 Methomyl oxime 0.010 72 Campheclor-xxx 0.010 325 Methomyl Sulfone 0.010 73 Campheclor-xxx 0.010 325 Methomyl Sulfone 0.010 74 Campheclor-sulfoxide 0.010 327 Metolachlor 0.010 74 Carbaryl 0.010 329 Metolachlor 0.010 75 Campheclor-sulfoxide 0.010 330 Metosulam 0.010 76 Carboduran 0.010 331 Metosucon 0.010 71 Carbosulfan 0.010 333 Metroperion 0.010 71 Carbosulfan 0.010 333 Metroperion 0.010 72 Chiorfantraniliprofe 0.010 335 Metroperion 0.010 73 Carbosulfan 0.010 334 Metosulfanco 0.010 74 Carbosulfan 0.010 335 Moinoactin Addita 0.010 74	70	Campheclor-methyl	0.010	323	Methomyl	0.010
72 Campheclor-oxon-sulfoxide 0.010 325 Methomyl Sulfone 0.010 73 Campheclor-soxon-sulfoxide 0.010 327 Metobartenzolde 0.010 74 Campheclor-sulfoxide 0.010 327 Metobartenzolde 0.010 75 Campheclor-sulfoxide 0.010 329 Metolachlor 0.010 76 Carbaryl 0.010 329 Metolachlor 0.010 76 Carbosuffan 0.010 330 Metosularn 0.010 77 Carbosuffan 0.010 331 Metrolenone 0.010 77 Carbosuffan 0.010 333 Metrolenone 0.010 78 Carbosuffan 0.010 334 Metrolenone 0.010 78 Chlorbomuron 0.010 335 Metrolenone 0.010 78 Chlorbomuron 0.010 336 Molinate 0.010 78 Chlorbouron 0.010 341 MolonatenchA3 0.010 <t< td=""><td>71</td><td>Campheclor-oxon</td><td>0.010</td><td>324</td><td>Methomyl oxime</td><td>0.010</td></t<>	71	Campheclor-oxon	0.010	324	Methomyl oxime	0.010
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10 Campheclor-sulfoxide 0.010 322 Metobromuron 0.010 75 Campheclor-sulfoxide 0.010 328 Metolachior 0.010 76 Carbaryl 0.010 329 Metolachior 0.010 77 Carbaryl 0.010 330 Metosularh 0.010 77 Carbosulfan 0.010 331 Metrofenone 0.010 78 Carbosulfan 0.010 332 Metrofenone 0.010 78 Carboruran 0.010 333 Metrofenone 0.010 80 Chiorotratzaone-Ethyl 0.010 333 Metrofenone 0.010 81 Chiorotratzaone-Ethyl 0.010 333 Molenate 0.010 82 Chiorotrazon 0.010 334 Monocrotophos 0.010 84 Chiorotrazon 0.010 344 Monolinuron 0.010 86 Chiorotrazon 0.010 344 Mapotamide 0.010 90 Chi	73	Campheclor-oxon-sulfoxide	0.010	326	Methoxyfenozide	0.010
No Camphecior-sulfoxide Collo S22 Metolachion Collo 76 Camphecior-sulfoxide 0.010 329 Metolachion 0.010 76 Carbendazim 0.010 330 Metosulam 0.010 77 Carbendazim 0.010 331 Metrofenone 0.010 77 Carboxin 0.010 333 Metrofenone 0.010 80 Carboxin 0.010 334 Metrofenone 0.010 81 Chlorburantraniliprole 0.010 335 Metrofenone 0.010 82 Chlorburantraniliprole 0.010 336 Milbemectin A3 0.010 83 Chlorburantraniliprole 0.010 337 Milbemectin A4 0.010 84 Chlorburantron 0.010 338 Molinate 0.010 85 Chlorburan 0.010 341 Monuron 0.010 86 Chlorburan 0.010 344 Mapthalene Acetamide (NAD) 0.010 <	74	Campheolor-sulfone	0.010	327	Metobromuron	0.010
7.3 CarlpheteriosatioNade 0.010 320 Metodalanti 0.010 7.6 Carbaryl 0.010 330 Metosularn 0.010 7.7 Carbondazim 0.010 330 Metosularn 0.010 7.7 Carbosulfan 0.010 332 Metribuzin 0.010 8 Carbosulfan 0.010 333 Metrofenone 0.010 80 Carborantraniliprole 0.010 334 Metsuffuron-Methyl 0.010 81 Chlorbromuron 0.010 335 Mevinphos 0.010 82 Chlorbromuron 0.010 336 Molinate 0.010 83 Molorate 0.010 337 Molorate 0.010 84 Chlorbromuron 0.010 340 Monolinuron 0.010 85 Chlorbrazino 0.010 344 Myclobutanii 0.010 86 Chlorbiazino 0.010 344 Napthalene Acetamide (NAD) 0.010 90 <td< td=""><td>75</td><td></td><td>0.010</td><td>220</td><td>Metobolination</td><td>0.010</td></td<>	75		0.010	220	Metobolination	0.010
70 Carbony 0.010 329 Metocarb 0.010 77 Carbony 0.010 331 Metosulam 0.010 78 Carbosulfan 0.010 331 Metosulam 0.010 79 Carbosulfan 0.010 332 Metrofenone 0.010 80 Carbortartaniliprole 0.010 334 Metosulfan 0.010 81 Chlorbromuron 0.010 336 Metinphos 0.010 82 Chlorbromuron 0.010 336 Molinate 0.010 84 Chlorbufam 0.010 337 Milemectin A3 0.010 85 Chlordidzon 0.010 340 Monocrotophos 0.010 86 Chloroturon 0.010 341 Monocrotophos 0.010 87 Chloroturon 0.010 344 Mapthalene Acetamide (NAD) 0.010 87 Chloropyrifos (0.04) 0.040 345 Naptopamide 0.010 98 Chloropyrifos	75	Campheciol-Sulloxide	0.010	320	Metoloorh	0.010
77 Carbofuran 0.010 330 Metosularn 0.010 78 Carbosulfan 0.010 332 Metrofenone 0.010 80 Carboxin 0.010 333 Metrofenone 0.010 80 Carboxin 0.010 334 Metrofenone 0.010 81 Carfentrazone-Ethyl 0.010 335 Metrofenone 0.010 82 Chlorbormuron 0.010 336 Milbemectin A4 0.010 82 Chlorbormuron 0.010 338 Molinate 0.010 85 Chloriduzuron 0.010 340 Moncrotophos 0.010 86 Chloriduzuron 0.010 341 Moncrotophos 0.010 80 Chlorosuron 0.010 342 Myclobutanil 0.010 90 Chlorpyrifos-Methyl 0.010 344 Napthlalene Acetamide (NAD) 0.010 91 Chlorpyrifos-Methyl 0.010 344 Napthol-1 0.010 92	70		0.010	329		0.010
78 Carboxulfan 0.010 331 MetoXuron 0.010 90 Carboxin 0.010 332 Metrofenone 0.010 81 Carfentrazone-Ethyl 0.010 333 Metrofenone 0.010 82 Chlorbromuron 0.010 336 Metsulfuron-Methyl 0.010 83 Chlorbromuron 0.010 336 Metsulfuron-Methyl 0.010 84 Chlorbufam 0.010 337 Milbemectin A3 0.010 85 Chlorfenvinphos 0.010 338 Molinate 0.010 86 Chlordezon 0.010 341 Monoron 0.010 87 Chlorotaluron 0.010 344 Molinate 0.010 88 Chlorpyrifos (0.04) 0.004 344 Napropamide 0.010 90 Chlorpyrifos (0.04) 0.010 344 Napthol-1 0.010 91 Chlorpyrifos Methyl 0.010 344 Naptoron 0.010 92 <t< td=""><td>11</td><td>Carbendazim</td><td>0.010</td><td>330</td><td>Metosulam</td><td>0.010</td></t<>	11	Carbendazim	0.010	330	Metosulam	0.010
79 Carbosultan 0.010 332 Metribuzin 0.010 81 Carfentrazone-Ethyl 0.010 334 Metsulfuron-Methyl 0.010 81 Carfentrazone-Ethyl 0.010 334 Metsulfuron-Methyl 0.010 82 Chlorbromuron 0.010 336 Milbemectin A3 0.010 84 Chlorbromuron 0.010 337 Milbemectin A4 0.010 85 Chlordrevinphos 0.010 338 Molinate 0.010 86 Chlordluzzuron 0.010 340 Monocrotophos 0.010 87 Chlordazon 0.010 341 Monoron 0.010 88 Chloroturon 0.010 343 Naled (Dibrom) 0.010 90 Chlorotouron 0.010 343 Napropamide 0.010 91 Chloropyrifos (0.04) 0.004 345 Napropamide 0.010 91 Chloropyrifos (0.04) 0.010 344 Napropamide 0.010	78	Carbofuran	0.010	331	Metoxuron	0.010
80 Carboxin 0.010 333 Metrofenone 0.010 81 Carfentrazone-Ethyl 0.010 334 Metsulfuron-Methyl 0.010 82 Chlorantraniliprole 0.010 335 Mevinphos 0.010 83 Chlorbufam 0.010 336 Milbemectin A3 0.010 84 Chlorbufam 0.010 338 Molinate 0.010 84 Chlorbufam 0.010 339 Monocrotophos 0.010 86 Chloriduzon 0.010 344 Monocrotophos 0.010 87 Chlorotoluron 0.010 344 Monocrotophos 0.010 88 Chlorotoluron 0.010 344 Naptolatini 0.010 98 Chloropyrifos (0.04) 0.004 345 Naptopamide 0.010 91 Chloropyrifos (0.04) 0.010 346 Naptol-1 0.010 93 Chloropyrifos (0.04) 0.010 344 Naptol-1 0.010 94	79	Carbosulfan	0.010	332	Metribuzin	0.010
81 Carfentrazone-Ethyl 0.010 334 Metsuffuron-Methyl 0.010 82 Chlorattraniliprole 0.010 335 Meivinphos 0.010 82 Chlorbufam 0.010 337 Milbemectin A3 0.010 84 Chlorfenvinphos 0.010 339 Monocrotophos 0.010 85 Chlordfuzzuron 0.010 340 Monouron 0.010 86 Chlorotoluron 0.010 342 Myclobutanil 0.010 87 Chlorotoluron 0.010 342 Myclobutanil 0.010 88 Chlorotoruron 0.010 344 Naphthalene Acetamide (NAD) 0.010 90 Chlorpyrifos (0.04) 0.004 345 Napropamide 0.010 91 Chlorpyrifos (0.04) 0.004 345 Naptoplanide 0.010 92 Chlorpyrifos (0.04) 0.010 344 Naptoplanide 0.010 93 Chlorpyrifos (0.04) 0.010 344 Naptoplanide 0.010 <td>80</td> <td>Carboxin</td> <td>0.010</td> <td>333</td> <td>Metrofenone</td> <td>0.010</td>	80	Carboxin	0.010	333	Metrofenone	0.010
82 Chlorantraniliprole 0.010 335 Mevinphos 0.010 83 Chlorburan 0.010 336 Milbemectin A3 0.010 84 Chlorburan 0.010 337 Milbemectin A4 0.010 85 Chlorfluazuron 0.010 339 Monocrotophos 0.010 86 Chlorridazon 0.010 341 Monocrotophos 0.010 87 Chlorotoluron 0.010 341 Monocrotophos 0.010 88 Chlorotoluron 0.010 344 Myclobutanil 0.010 89 Chlorotoluron 0.010 344 Naptropamide 0.010 90 Chloropyrifos-Methyl 0.010 344 Naptropamide 0.010 91 Chlorpyrifos-Methyl 0.010 346 Naptropamide 0.010 92 Chlorsufron 0.010 347 Neburon 0.010 93 Chlorpyrifos-Methyl 0.010 348 Nicosulfuron 0.010 94<	81	Carfentrazone-Ethyl	0.010	334	Metsulfuron-Methyl	0.010
83 Chlorbromuron 0.010 336 Milbemectin A3 0.010 84 Chlorbufam 0.010 337 Milbemectin A4 0.010 85 Chlorfluzzuron 0.010 338 Moinate 0.010 86 Chlorfluzzuron 0.010 349 Monocrotophos 0.010 87 Chlornequat chloride 0.010 344 Myclobutanil 0.010 88 Chlorotoluron 0.010 342 Myclobutanil 0.010 90 Chlorotoluron 0.010 343 Naled (Dibrom) 0.010 91 Chlorpyrifos (0.04) 0.004 345 Napropamide 0.010 92 Chlorpyrifos-Methyl 0.010 347 Neburon 0.010 93 Chlortal-dimethyl 0.010 347 Neburon 0.010 94 Chlorotal-dimethyl 0.010 350 Norfluzzuron 0.010 95 Chlorthal-dimethyl 0.010 351 Novaluron 0.010 <td< td=""><td>82</td><td>Chlorantraniliprole</td><td>0.010</td><td>335</td><td>Mevinphos</td><td>0.010</td></td<>	82	Chlorantraniliprole	0.010	335	Mevinphos	0.010
84 Chlorbufam 0.010 337 Milbemectin A4 0.010 85 Chlorfenvinphos 0.010 338 Moinate 0.010 86 Chlorfluazuron 0.010 340 Monocrotophos 0.010 87 Chloridazon 0.010 341 Monourotophos 0.010 88 Chlorrequat chloride 0.010 344 Myclobutanil 0.010 90 Chlorotoluron 0.010 343 Naled (Dibrom) 0.010 91 Chlorpyrifos (0.04) 0.004 345 Napropamide 0.010 92 Chlorpyrifos-Methyl 0.010 344 Naptol-1 0.010 93 Chlorsulfuron 0.010 347 Neburon 0.010 94 Chlorsulfuron 0.010 344 Naptopamide 0.010 94 Chlorsulfuron 0.010 348 Nicosulfuron 0.010 95 Chlortal-dimethyl 0.010 350 Norfluazuron 0.010 96	83	Chlorbromuron	0.010	336	Milbemectin A3	0.010
85 Chlorfenvinphos 0.010 338 Molinate 0.010 86 Chlorfluazuron 0.010 339 Monocrotophos 0.010 87 Chloridazon 0.010 340 Monolinuron 0.010 88 Chlorrequat chloride 0.010 341 Monuron 0.010 89 Chlorotoluron 0.010 342 Myclobutanil 0.010 90 Chlorotopham 0.010 344 Napthalene Acetamide (NAD) 0.010 91 Chlorpyrifos (0.04) 0.004 345 Naptopamide 0.010 92 Chlorpyrifos (0.04) 0.004 346 Naptopamide 0.010 93 Chlorsuffuron 0.010 347 Neburon 0.010 94 Chlorsuffuron 0.010 347 Neburon 0.010 95 Chlortal-dimethyl 0.010 351 Noraluron 0.010 96 Chloradifuron 0.010 352 Nuarimol 0.010 97	84	Chlorbufam	0.010	337	Milbemectin A4	0.010
86 Chlorfluzzuron 0.010 339 Monocrotophos 0.010 87 Chloridazon 0.010 340 Monolinuron 0.010 88 Chlornequat chloride 0.010 341 Monouron 0.010 89 Chlorotoluron 0.010 342 Myclobutanil 0.010 90 Chloropropham 0.010 344 Mapropamide 0.010 91 Chlorpyrifos (0.04) 0.004 345 Napropamide 0.010 92 Chlorpyrifos (0.04) 0.010 344 Napropamide 0.010 93 Chlorpyrifos (0.04) 0.010 346 Napropamide 0.010 94 Chlorpyrifos (0.04) 0.010 346 Napropamide 0.010 94 Chloral-dimethyl 0.010 347 Neburon 0.010 95 Chlorthiamid 0.010 350 Norfluazuron 0.010 96 Chiotal-dime minsulfone 0.010 351 Novaluron 0.010	85	Chlorfenvinphos	0.010	338	Molinate	0.010
87 Chloridazon 0.010 340 Monolinuron 0.010 88 Chlormequat chloride 0.010 341 Monuron 0.010 99 Chlorotoluron 0.010 342 Myclobutanil 0.010 90 Chloroxuron 0.010 343 Naled (Dibrom) 0.010 91 Chlorpopham 0.010 344 Naphthalene Acetamide (NAD) 0.010 92 Chlorpopham 0.010 344 Napthalene Acetamide (NAD) 0.010 92 Chlorpopham 0.010 346 Napropamide 0.010 94 Chlorsuffuron 0.010 346 Nacosuffuron 0.010 94 Chlortal-dimethyl 0.010 349 Nicosuffuron 0.010 95 Chlorthiamid 0.010 350 Nordiuzuron 0.010 97 Chromafenozide 0.010 352 Nuarimol 0.010 98 Clethodim Iminsulfone 0.010 355 Oftosufazon 0.010	86	Chlorfluazuron	0.010	339	Monocrotophos	0.010
88 Chlormequat chloride 0.010 341 Monuron 0.010 99 Chlorotuluron 0.010 342 Myclobutanil 0.010 90 Chloroxuron 0.010 343 Naled (Dibrom) 0.010 90 Chlorpyrifos (0.04) 0.004 345 Napropamide 0.010 91 Chlorpyrifos-Methyl 0.010 344 Napthol-1 0.010 92 Chlorpyrifos-Methyl 0.010 347 Neburon 0.010 93 Chlorsulfuron 0.010 344 Nicosulfuron 0.010 94 Chlortal-dimethyl 0.010 344 Nicosulfuron 0.010 95 Chilon-ethyl 0.010 350 Norfluazuron 0.010 97 Chromafenozide 0.010 352 Nuarimol 0.010 98 Cinidon-ethyl 0.010 353 Ofurace 0.010 98 Cinidon-ethyl 0.010 354 Omethoate 0.010 101	87	Chloridazon	0.010	340	Monolinuron	0.010
Chlorotoluron 0.010 342 Myclobutanil 0.010 90 Chloroxuron 0.010 343 Naled (Dibrom) 0.010 91 Chloroyuron 0.010 344 Naphthalene Acetamide (NAD) 0.010 92 Chlorpyrifos (0.04) 0.004 344 Napthalene Acetamide (NAD) 0.010 93 Chlorpyrifos-Methyl 0.010 344 Napthalene Acetamide (NAD) 0.010 94 Chlorsuffuron 0.010 344 Napthalene Acetamide (NAD) 0.010 95 Chlortal-dimethyl 0.010 344 Nicosuffuron 0.010 96 Chlorthiamid 0.010 349 Nicosuffuron 0.010 97 Chromafenozide 0.010 351 Novaluron 0.010 98 Cinidon-ethyl 0.010 352 Nuarimol 0.010 90 Clethodim Iminsulfone 0.010 355 Ofturace 0.010 101 Clethodim Sulfoxide 0.010 355 Oxadixyl 0.010	88	Chlormeguat chloride	0.010	341	Monuron	0.010
Sindication Sindication <thsindication< th=""> <thsindication< th=""></thsindication<></thsindication<>	89	Chlorotoluron	0.010	342	Myclobutanil	0.010
Sindicities Sindice	90	Chloroxuron	0.010	343	Naled (Dibrom)	0.010
Shinopprins Color Strate Color	Q1	Chlorpropham	0.010	344	Nanhthalene Acetamide (NAD)	0.010
32 Chlorpyrifos-Methyl 0.010 346 Napripolinic 0.010 94 Chlorpyrifos-Methyl 0.010 347 Neburon 0.010 95 Chlorpyrifos-Methyl 0.010 348 Nicosulfuron 0.010 95 Chlortal-dimethyl 0.010 349 Nitenpyram 0.010 96 Chlorthiamid 0.010 350 Norfluazuron 0.010 97 Chromafenozide 0.010 351 Novaluron 0.010 98 Cinidon-ethyl 0.010 352 Nuarimol 0.010 99 Clethodim 0.010 352 Nuarimol 0.010 100 Clethodim Iminsulfone 0.010 354 Omethoate 0.010 101 Clethodim Iminsulfoxide 0.010 355 Orthosulfamuron 0.010 102 Clethodim Sulfoxide 0.010 357 Oxadiazon 0.010 102 Clethodim Sulfoxide 0.010 350 Oxasulfuron 0.010	92	Chlorpyrifos (0.04)	0.010	345	Napronamide	0.010
Sind pynes interpynes	92	Chlorpyrifos-Methyl	0.004	346	Naptoparilae Napthol-1	0.010
St. Chlortal-dimethyl 0.010 348 Nicosulfuron 0.010 96 Chlortal-dimethyl 0.010 349 Nitenpyram 0.010 97 Chromafenozide 0.010 350 Norfluazuron 0.010 98 Cinidon-ethyl 0.010 351 Novaluron 0.010 98 Cinidon-ethyl 0.010 351 Novaluron 0.010 99 Clethodim lminsulfone 0.010 352 Nuarimol 0.010 100 Clethodim lminsulfoxide 0.010 353 Oftrace 0.010 101 Clethodim lminsulfoxide 0.010 355 Orthosulfamuron 0.010 102 Clethodim Sulfoxide 0.010 356 Oxadizyl 0.010 103 Climbazole 0.010 357 Oxadizyl 0.010 104 Clodinafop-proparpyl ester 0.010 359 Oxasulfuron 0.010 105 Cloquintocet-methylhexyl es-0.010 360 Oxyfluorfen 0.010	0/	Chloreulfuron	0.010	347	Neburon	0.010
S3 Chlortarunitetryi 0.010 349 Nicosumon 0.010 96 Chlorthiamid 0.010 350 Norfluazuron 0.010 97 Chromafenozide 0.010 351 Novaluron 0.010 98 Cinidon-ethyl 0.010 351 Novaluron 0.010 99 Clethodim 0.010 352 Nuarimol 0.010 100 Clethodim Iminsulfone 0.010 353 Ofurace 0.010 101 Clethodim Iminsulfoxide 0.010 354 Omethoate 0.010 101 Clethodim Sulfoxide 0.010 355 Orthosulfamuron 0.010 102 Clethodim Sulfoxide 0.010 356 Oxadiazon 0.010 102 Clodinafop-proparpyl ester 0.010 357 Oxadixyl 0.010 103 Clodinafop-proparpyl ester 0.010 360 Oxasulfuron 0.010 106 Cloduintocet-methylhexyl es-0.010 360 Oxasulfuron 0.010	05	Chlortal-dimethyl	0.010	348	Nicosulfuron	0.010
90 Chiofunanid 0.010 349 Niterprint 0.010 97 Chromafenozide 0.010 350 Norfluazuron 0.010 98 Cinidon-ethyl 0.010 351 Novaluron 0.010 99 Clethodim 0.010 352 Nuarimol 0.010 100 Clethodim Iminsulfoxide 0.010 354 Orretocate 0.010 101 Clethodim Iminsulfoxide 0.010 354 Orretocate 0.010 102 Clethodim Sulfoxide 0.010 355 Orthosulfamuron 0.010 102 Clethodim Sulfoxide 0.010 356 Oxadiazon 0.010 103 Climbazole 0.010 357 Oxadiazon 0.010 104 Clodinafop-proparpyl ester 0.010 359 Oxasulfuron 0.010 105 Clofentezine 0.010 359 Oxasulfuron 0.010 106 Clomazone 0.010 361 Oxycarboxin 0.010 <t< td=""><td>35</td><td>Chlorthiamid</td><td>0.010</td><td>240</td><td>Nitopyram</td><td>0.010</td></t<>	35	Chlorthiamid	0.010	240	Nitopyram	0.010
97 Chronitaetrozide 0.010 350 Norkazuoni 0.010 98 Cinidon-ethyl 0.010 351 Novaluron 0.010 99 Clethodim 0.010 352 Nuarimol 0.010 100 Clethodim Iminsulfone 0.010 353 Ofurace 0.010 101 Clethodim Iminsulfoxide 0.010 354 Omethoate 0.010 102 Clethodim Sulfoxide 0.010 356 Oxadiazon 0.010 103 Climbazole 0.010 356 Oxadiazon 0.010 104 Clodinafop-proparpyl ester 0.010 357 Oxadiayl 0.010 105 Clofentezine 0.010 358 Oxamyl 0.010 105 Clothianidin 0.010 350 Paraboxin 0.010 106 Clothianidin 0.010 361 Oxyfuorfen 0.010 107 Cloquintocet-methylhexyl es-0.010 362 Paraoxon Ethyl 0.010 10	90	Chromofonozido	0.010	250	Narfluozurop	0.010
38 Cinidon-erryi 0.010 351 Novaluon 0.010 99 Clethodim 0.010 352 Nuarimol 0.010 100 Clethodim Iminsulfone 0.010 353 Ofurace 0.010 101 Clethodim Iminsulfoxide 0.010 354 Omethoate 0.010 102 Clethodim Sulfoxide 0.010 355 Orthosulfamuron 0.010 102 Clethodim Sulfoxide 0.010 356 Oxadiazon 0.010 103 Climbazole 0.010 357 Oxadiazon 0.010 104 Clodinafop-proparpyl ester 0.010 357 Oxadixyl 0.010 105 Clofentezine 0.010 359 Oxasulfuron 0.010 105 Cloquintocet-methylhexyl es-0.010 360 varycarboxin 0.010 107 Cloquintocet-methylhexyl es-0.010 361 Oxycarboxin 0.010 108 Clothianidin 0.010 361 Paraoxon Ethyl 0.010	97		0.010	350	Nonuazuron	0.010
99 Clethodim 0.010 352 Nuarmoi 0.010 100 Clethodim Iminsulfone 0.010 353 Ofurace 0.010 101 Clethodim Iminsulfoxide 0.010 354 Omethoate 0.010 102 Clethodim Sulfoxide 0.010 355 Orthosulfamuron 0.010 103 Climbazole 0.010 356 Oxadiazon 0.010 104 Clodinafop-proparpyl ester 0.010 357 Oxadiazon 0.010 105 Clofentezine 0.010 359 Oxasulfuron 0.010 106 Clomazone 0.010 359 Oxasulfuron 0.010 107 Cloquintocet-methylhexyl es-0.010 360 Oxycarboxin 0.010 108 Clothianidin 0.010 361 Oxyfluorfen 0.010 109 Coumaphos 0.010 363 Paraoxon Ethyl 0.010 110 Crimidine 0.010 364 Paraoxon Methyl 0.010	98	Cinidon-etnyi	0.010	351	Novaluron	0.010
100 Clethodim Iminsulfone 0.010 353 Oftrace 0.010 101 Clethodim Iminsulfoxide 0.010 354 Omethoate 0.010 102 Clethodim Sulfoxide 0.010 355 Orthosulfamuron 0.010 103 Climbazole 0.010 356 Oxadiazon 0.010 104 Clodinafop-proparpyl ester 0.010 357 Oxadiazon 0.010 105 Clofentezine 0.010 358 Oxamyl 0.010 106 Cloquintocet-methylhexyl es-0.010 360 0xycarboxin 0.010 107 Cloquintocet-methylhexyl es-0.010 361 Oxyfluorfen 0.010 108 Clothianidin 0.010 362 Paclobutrazol 0.010 109 Coumaphos 0.010 363 Paraoxon Ethyl 0.010 110 Crimidine 0.010 364 Paraoxon Methyl 0.010 111 Cyanofenphos 0.010 365 Parathion-Methyl (0.002) <td< td=""><td>99</td><td></td><td>0.010</td><td>352</td><td>Nuarimoi</td><td>0.010</td></td<>	99		0.010	352	Nuarimoi	0.010
101 Clethodim Iminsulfoxide 0.010 354 Omethoate 0.010 102 Clethodim Sulfoxide 0.010 355 Orthosulfamuron 0.010 103 Climbazole 0.010 356 Oxadiazon 0.010 104 Clodinafop-proparpyl ester 0.010 357 Oxadizyl 0.010 105 Clofentezine 0.010 358 Oxamyl 0.010 106 Clomazone 0.010 359 Oxasulfuron 0.010 106 Cloquintocet-methylhexyl es-0.010 360 0xycarboxin 0.010 107 Clothianidin 0.010 361 Oxyfluorfen 0.010 108 Clothianidin 0.010 362 Paclobutrazol 0.010 109 Coumaphos 0.010 363 Paraoxon Ethyl 0.010 110 Crimidine 0.010 364 Paraoxon Methyl 0.010 111 Cyanazine 0.010 365 Parathion-Methyl (0.002) 0.002 <	100	Clethodim Iminsuifone	0.010	353		0.010
102 Clethodim Sulfoxide 0.010 355 Orthosulfamuron 0.010 103 Climbazole 0.010 356 Oxadiazon 0.010 104 Clodinafop-proparpyl ester 0.010 357 Oxadixyl 0.010 105 Clofentezine 0.010 358 Oxamyl 0.010 106 Clomazone 0.010 359 Oxasulfuron 0.010 107 Cloquintocet-methylhexyl es-0.010 360 Oxycarboxin 0.010 107 Clothianidin 0.010 361 Oxyfluorfen 0.010 108 Clothianidin 0.010 362 Paclobutrazol 0.010 108 Clothianidin 0.010 362 Paraoxon Ethyl 0.010 109 Coumaphos 0.010 364 Paraoxon Methyl 0.010 111 Cyanofenphos 0.010 365 Parathion-Ethyl 0.010 113 Cyazofamid 0.010 367 Pebulate 0.010 114 <	101	Clethodim Iminsulfoxide	0.010	354	Omethoate	0.010
103 Climbazole 0.010 356 Oxadiazon 0.010 104 Clodinafop-proparpyl ester 0.010 357 Oxadixyl 0.010 105 Clofentezine 0.010 358 Oxamyl 0.010 106 Clomazone 0.010 359 Oxasulfuron 0.010 107 Cloquintocet-methylhexyl es-0.010 360 Oxycarboxin 0.010 108 Clothianidin 0.010 361 Oxyfluorfen 0.010 109 Coumaphos 0.010 362 Paclobutrazol 0.010 110 Crimidine 0.010 363 Paraoxon Ethyl 0.010 111 Cyanofenphos 0.010 364 Paraoxon Methyl 0.010 112 Cyanofenphos 0.010 365 Parathion-Ethyl 0.010 113 Cyazofamid 0.010 367 Pebulate 0.010 113 Cycloloxydim 0.010 369 Pencoycuron 0.010 114	102	Clethodim Sulfoxide	0.010	355	Orthosulfamuron	0.010
104 Clodinafop-proparpyl ester 0.010 357 Oxadixyl 0.010 105 Clofentezine 0.010 358 Oxamyl 0.010 106 Clomazone 0.010 359 Oxasulfuron 0.010 107 Cloquintocet-methylhexyl es-0.010 360 0xycarboxin 0.010 108 Clothianidin 0.010 361 Oxyfluorfen 0.010 109 Coumaphos 0.010 362 Paclobutrazol 0.010 110 Crimidine 0.010 363 Paraoxon Ethyl 0.010 111 Cyanazine 0.010 364 Paraoxon Methyl 0.010 111 Cyanofenphos 0.010 365 Parathion-Ethyl 0.010 112 Cyanofenphos 0.010 367 Pebulate 0.010 113 Cyazofamid 0.010 367 Pebulate 0.010 114 Cycloloxydim 0.010 369 Penconazole(0.005) 0.005 116	103	Climbazole	0.010	356	Oxadiazon	0.010
105 Clofentezine 0.010 358 Oxamyl 0.010 106 Clomazone 0.010 359 Oxasulfuron 0.010 107 Cloquintocet-methylhexyl es-0.010 360 0.010 108 Clothianidin 0.010 361 Oxycarboxin 0.010 108 Clothianidin 0.010 362 Paclobutrazol 0.010 109 Coumaphos 0.010 363 Paraoxon Ethyl 0.010 110 Crimidine 0.010 363 Paraoxon Methyl 0.010 111 Cyanofenphos 0.010 365 Parathion-Ethyl 0.010 112 Cyazofamid 0.010 366 Parathion-Methyl (0.002) 0.002 113 Cyazofamid 0.010 367 Pebulate 0.010 0.010 115 Cycloloxydim 0.010 369 Pencycuron 0.010 116 Cyflufenamid 0.010 370 Pendimethalin 0.010 117	104	Clodinafop-proparpyl ester	0.010	357	Oxadixyl	0.010
106 Clomazone 0.010 359 Oxasulfuron 0.010 107 Cloquintocet-methylhexyl es-0.010 360 0.010 108 Clothianidin 0.010 361 Oxycarboxin 0.010 109 Coumaphos 0.010 362 Paclobutrazol 0.010 100 Crimidine 0.010 363 Paraoxon Ethyl 0.010 110 Crimidine 0.010 363 Paraoxon Methyl 0.010 111 Cyanofenphos 0.010 365 Parathion-Ethyl 0.010 112 Cyanofenphos 0.010 366 Parathion-Methyl (0.002) 0.002 113 Cyazofamid 0.010 367 Pebulate 0.010 114 Cycloloxydim 0.010 368 Penconazole(0.005) 0.005 116 Cyflufenamid 0.010 369 Pencycuron 0.010 117 Cyhalofop 0.010 370 Pendimethalin 0.010 118 Cyhalofop	105	Clofentezine	0.010	358	Oxamyl	0.010
107 Cloquintocet-methylhexyl es-0.010 360 0.010 ter Oxycarboxin Oxycarboxin 0.010 108 Clothianidin 0.010 361 Oxyfluorfen 0.010 109 Coumaphos 0.010 362 Paclobutrazol 0.010 110 Crimidine 0.010 363 Paraoxon Ethyl 0.010 111 Cyanazine 0.010 364 Paraoxon Methyl 0.010 112 Cyanofenphos 0.010 365 Parathion-Ethyl 0.010 113 Cyazofamid 0.010 366 Parathion-Methyl (0.002) 0.002 114 Cyclanilide 0.010 367 Pebulate 0.010 115 Cycloloxydim 0.010 369 Penconazole(0.005) 0.005 116 Cyflufenamid 0.010 369 Pencycuron 0.010 117 Cyhalofop 0.010 370 Pendimethalin 0.010 118 Cyhalofop butyl 0.010 <	106	Clomazone	0.010	359	Oxasulfuron	0.010
ter Oxycarboxin 108 Clothianidin 0.010 361 Oxyfluorfen 0.010 109 Coumaphos 0.010 362 Paclobutrazol 0.010 110 Crimidine 0.010 363 Paraoxon Ethyl 0.010 111 Cyanazine 0.010 364 Paraoxon Methyl 0.010 112 Cyanofenphos 0.010 365 Parathion-Ethyl 0.010 113 Cyazofamid 0.010 366 Parathion-Methyl (0.002) 0.002 114 Cyclanilide 0.010 367 Pebulate 0.010 115 Cycloloxydim 0.010 368 Penconazole(0.005) 0.005 116 Cyflufenamid 0.010 369 Pencycuron 0.010 117 Cyhalofop 0.010 370 Pendimethalin 0.010 118 Cyhalofop butyl 0.010 371 Penoxsulam 0.010 119 Cyhalofop diacid 0.010 372 Pethoxamid<	107	Cloquintocet-methylhexyl	es-0.010	360		0.010
108 Clothianidin 0.010 361 Oxyfluorfen 0.010 109 Coumaphos 0.010 362 Paclobutrazol 0.010 110 Crimidine 0.010 363 Paraoxon Ethyl 0.010 111 Cyanazine 0.010 364 Paraoxon Methyl 0.010 112 Cyanofenphos 0.010 365 Parathion-Ethyl 0.010 113 Cyazofamid 0.010 366 Parathion-Methyl (0.002) 0.002 114 Cyclanilide 0.010 367 Pebulate 0.010 115 Cycloloxydim 0.010 368 Penconazole(0.005) 0.005 116 Cyflufenamid 0.010 369 Pencycuron 0.010 117 Cyhalofop 0.010 370 Pendimethalin 0.010 118 Cyhalofop butyl 0.010 371 Penoxsulam 0.010 119 Cyhalofop diacid 0.010 372 Pethoxamid 0.010		ter			Oxycarboxin	
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116 Cyflufenamid 0.010 369 Pencycuron 0.010 117 Cyhalofop 0.010 370 Pendimethalin 0.010 118 Cyhalofop butyl 0.010 371 Penoxsulam 0.010 119 Cyhalofop diacid 0.010 372 Pethoxamid 0.010	115	Cycloloxydim	0.010	368	Penconazole(0.005)	0.005
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118Cyhalofop butyl0.010371Penoxsulam0.010119Cyhalofop diacid0.010372Pethoxamid0.010	117	Cyhalofop	0.010	370	Pendimethalin	0.010
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	119	Cyhalofop diacid	0.010	372	Pethoxamid	0.010

120 Cychexatin 0.010 373 Phenothrin 0.010 121 Cycnoxanil 0.010 375 Phenotate 0.010 123 Cycnodinil 0.010 376 Phenotate 0.010 124 Cyromazine 0.010 376 Phorate Sulfone 0.010 125 Daminozide 0.010 378 Phosmet 0.010 125 Demeton-S-Methyl-Sulfone 0.010 380 Phosmet oxon 0.010 127 Demeton-S-Methyl-Sulfone 0.010 382 Phosimation 0.010 128 Demeton-S-Methyl-Sulfone 0.010 382 Picolinafen 0.010 128 Diateron-S-Methyl-Sulfone 0.010 384 Picoxystrobin 0.010 130 Desmetryn 0.010 384 Picoxystrobin 0.010 131 Diatifors 0.010 391 Priminosho-Methyl 0.010 133 Diatifor 0.010 392 Profenotos 0.010 <						
121 Cymoxani 0.010 374 Phentoate 0.010 122 Cyprocinal 0.010 376 Phorate 0.010 123 Cyproconazole 0.010 377 Phorate Sulfone 0.010 124 Cyromazine 0.010 377 Phorate Sulfone 0.010 126 Demeton-S-Methyl 0.010 380 Phosmet oxon 0.010 128 Demeton-S-Methyl-Sulfoxide 0.010 382 Phosimet oxon 0.010 129 Demeton-S-Methyl-Sulfoxide 0.010 382 Phosimet oxon 0.010 130 Desmethyn 0.010 384 Picoxystrobin 0.010 131 Desmethyn 0.010 384 Picoxystrobin 0.010 131 Dalafenthiuron 0.010 386 Pirmicarb Desmethyl 0.010 133 Dalafos 0.010 389 Pirmingarb Desmethyl 0.010 133 Dalafos 0.010 391 Prochoras 0.010	120	Cyhexatin	0.010	373	Phenmedipham	0.010
122 Cyproconazole 0.010 375 Phorate 0.010 123 Cyprodinil 0.010 376 Phorate Sulfone 0.010 124 Cyromazine 0.010 377 Phorate Sulfone 0.010 125 Daminozide 0.010 379 Phosmet 0.010 125 Demeton-S-Methyl-Sulfone 0.010 380 Phosmet oxon 0.010 127 Demeton-S-Methyl-Sulfoxide 0.010 382 Phostmet oxon 0.010 128 Demeton-S-Methyl-Sulfoxide 0.010 382 Phostmet oxon 0.010 129 Desmethyn 0.010 384 Picolinafen 0.010 130 Desmethyn 0.010 386 Pirimicarb Desmethyl 0.010 131 Dichofrenthion 0.010 389 Pirimicarb Desmethyl Formamido 0.010 133 Dichofropo 0.010 391 Profenofos 0.010 134 Dichiforani 0.010 392 Profeonos 0.010	121	Cymoxanil	0.010	374	Phenothrin	0.010
123 Cyprodini 0.010 376 Phorate Sulfone 0.010 124 Cyonazine 0.010 377 Phorate Sulfone 0.010 125 Daminozide 0.010 378 Phosmet 0.010 126 Demeton-S-Methyl-Sulfone 0.010 380 Phosmet oxon 0.010 128 Demeton-S-Methyl-Sulfoxide 0.010 381 Phosmet oxon 0.010 129 Demeton-S-Methyl-Sulfoxide 0.010 382 Phoxim 0.010 130 Desmetryn 0.010 384 Phoxim 0.010 131 Desmetryn 0.010 385 Pirimicarb Desmethyl 0.010 131 Dialfenthiuron 0.010 389 Pirimicarb Desmethyl 0.010 135 Dichlofrutnid 0.010 389 Pirimiphos-Ethyl 0.010 135 Dichlorprop 0.010 391 Profoxydim 0.010 136 Dichlorprop 0.010 392 Profoxydim 0.010	122	Cyproconazole	0.010	375	Phentoate	0.010
124 Cyromazine 0.010 377 Phorale Sulfone 0.010 125 Daminozide 0.010 378 Phosanet 0.010 126 Demeton-S-Methyl 0.010 380 Phosmet oxon 0.010 127 Demeton-S-Methyl-Sulfoxide 0.010 381 Phosphamidon 0.010 129 Deemeton-S-Methyl-Sulfoxide 0.010 382 Picolinafen 0.010 130 Desmetryn 0.010 384 Picolinafen 0.010 131 Deadenhuron 0.010 386 Pirimicarb Desmethyl 0.010 133 Dialifos 0.010 386 Pirimicarb Desmethyl Formamido 0.010 133 Dialifor 0.010 389 Pirimiphos-Ethyl 0.010 134 Dicholorprop 0.010 391 Profoxofas 0.010 135 Diazinon 0.010 392 Profoxofas 0.010 135 Dicholprop 0.010 392 Profoxolfas 0.010 <tr< td=""><td>123</td><td>Cyprodinil</td><td>0.010</td><td>376</td><td>Phorate</td><td>0.010</td></tr<>	123	Cyprodinil	0.010	376	Phorate	0.010
125 Daminozide 0.010 378 Phosalone 0.010 126 Demeton(0+S) 0.010 380 Phosmet xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx	124	Cyromazine	0.010	377	Phorate Sulfone	0.010
126 Demeton(0+S) 0.010 379 Phosmet oxon 0.010 127 Demeton-S-Methyl-Sulfonce 0.010 381 Phosphamidon 0.010 128 Demeton-S-Methyl-Sulfoxide 0.010 382 Phoxim 0.010 129 Desmetryn 0.010 382 Phoximation 0.010 131 Desmetryn 0.010 384 Picoxystrobin 0.010 132 Diafenthiuron 0.010 386 Pirimicarb Desmethyl 0.010 133 Dialifos 0.010 387 Pirimicarb Desmethyl Formamido 0.010 134 Di-Allate 0.010 398 Pirimiphos-Ethyl 0.010 135 Dicholorphu 0.010 391 Prochoraz 0.010 135 Dicholorphu 0.010 392 Profoxydim 0.010 136 Dicholorphu 0.010 393 Profoxydim lithium 0.010 140 Dicholorphu 0.010 397 Protoxydim lithium 0.010 <td>125</td> <td>Daminozide</td> <td>0.010</td> <td>378</td> <td>Phosalone</td> <td>0.010</td>	125	Daminozide	0.010	378	Phosalone	0.010
127 Demeton-S-Methyl 0.010 380 Phosmet oxon 0.010 128 Demeton-S-Methyl-Sulfoxide 0.010 382 Phoxim 0.010 130 Desmedipham 0.010 383 Picoxystrobin 0.010 131 Desmetryn 0.010 384 Picoxystrobin 0.010 132 Diafenthiuron 0.010 386 Pinoxaden 0.010 132 Diafiors 0.010 386 Pinimicarb Desmethyl 0.010 133 Diafioforn 0.010 388 Pirimicarb Desmethyl 0.010 135 Dichlofenthion 0.010 389 Pirimicarb Desmethyl 0.010 136 Dichlofrubrio 0.010 399 Pirimicarb Desmethyl 0.010 137 Dichlofrubrio 0.010 399 Pirimiphos-Ethyl 0.010 138 Dichloryos (DDVP) 0.010 391 Profoxydim lithium 0.010 140 Dicloburazol 0.010 3939 Profoxydim lithium 0	126	Demeton(O+S)	0.010	379	Phosmet	0.010
128 Demeton-S-Methyl-Sulfoxie 0.010 381 Phosphamidon 0.010 130 Desmedipham 0.010 383 Picolinafen 0.010 131 Dasenetryn 0.010 384 Picoxystrobin 0.010 131 Dafenthiuron 0.010 385 Pinoxaden 0.010 132 Diafenthiuron 0.010 387 Pinimicarb Desmethyl 0.010 133 Dialifos 0.010 387 Pirimicarb Desmethyl Formamido 0.010 134 Di-Allate 0.010 389 Pirimiphos-Hethyl 0.004 135 Dichlorprop 0.010 392 Profenofos 0.010 136 Dichlorprop 0.010 392 Profoxydim Ithium 0.010 140 Dichop-Methyl 0.010 392 Profoxydim Ithium 0.010 141 Diclop-Methyl 0.010 393 Profoxydim Ithium 0.010 142 Dicoran 0.010 399 Propachior 0.010	127	Demeton-S-Methyl	0.010	380	Phosmet oxon	0.010
129 Demeton-S-Methyl-Sulfoxide 0.010 382 Phoxim 0.010 130 Desmedipham 0.010 383 Picolinafen 0.010 131 Desmetryn 0.010 384 Picoxystrobin 0.010 131 Dialifes 0.010 386 Pirmicarb Desmethyl 0.010 135 Diazion 0.010 387 Pirmicarb Desmethyl Formamido 0.010 135 Diazion 0.010 388 Pirmicarb Desmethyl Formamido 0.010 136 Dichlofrunid 0.010 391 Profenofos 0.010 137 Dichloryos (DDVP) 0.010 392 Profexydim 0.010 138 Dichloryos (DDVP) 0.010 393 Profexydim 0.010 138 Dichloryos (DDVP) 0.010 394 Profexydim 0.010 140 Dictofop-Methyl 0.010 394 Profexydim 0.010 141 Dictorophos 0.010 397 Propacaliof 0.010	128	Demeton-S-Methyl-Sulfone	0.010	381	Phosphamidon	0.010
130 Desmedipham 0.010 383 Picolnafen 0.010 131 Desmetryn 0.010 384 Picoxystrobin 0.010 132 Diafenthiuron 0.010 386 Piroxaden 0.010 133 Dialifos 0.010 387 Pirmicarb Desmethyl 0.010 134 Di-Allate 0.010 388 Pirmicarb Desmethyl Formamido 0.010 135 Dichloftuanid 0.010 389 Pirmiphos-Htthyl 0.004 139 Dichlorop 0.010 392 Profenofos 0.010 140 Diclopt-Methyl 0.010 394 Protoxydim lithium 0.010 141 Dictophos 0.010 395 Prohexadione calcium 0.010 142 Dictoran 0.010 395 Profoxydim lithium 0.010 142 Dictoran 0.010 396 Propacatione calcium 0.010 144 Diethofencarb 0.010 397 Promethyn 0.010	129	Demeton-S-Methyl-Sulfoxide	0.010	382	Phoxim	0.010
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134 Di-Allate 0.010 387 Pirimicarb Desmethyl Formamido 0.010 135 Dichlofenthion 0.010 388 Pirimicarb Desmethyl Formamido 0.010 137 Dichlofenthion 0.010 390 Pirimiphos-Khtyl 0.004 138 Dichlorprop 0.010 391 Prochoraz 0.010 139 Dichlorvos (DDVP) 0.010 392 Profoxydim 0.010 141 Diclop-Methyl 0.010 393 Profoxydim 0.010 142 Dicorop. 0.010 394 Profoxydim 0.010 143 Dicrotophos 0.010 395 Prohexacione calcium 0.010 144 Dietofencarb 0.010 398 Propachlor 0.010 144 Diethofencarb 0.010 399 Propaculizatop 0.010 145 Difenconazole 0.010 401 Propacyacizatop 0.010 144 Diethofencarb 0.010 402 Propacatop 0.010 </td <td>133</td> <td>Dialifos</td> <td>0.010</td> <td>386</td> <td>Pirimicarb</td> <td>0.010</td>	133	Dialifos	0.010	386	Pirimicarb	0.010
135 Diazinon 0.010 388 Pirimicarb Desmethyl Formamido 0.010 136 Dichlofenthion 0.010 389 Pirimiphos-Ethyl 0.010 137 Dichloffuanid 0.010 390 Pirimiphos-Methyl 0.010 138 Dichlorycos (DDVP) 0.010 391 Profenofas 0.010 139 Dichlorycos (DDVP) 0.010 392 Profenofas 0.010 141 Diclobutrazol 0.010 394 Profoxydim lithium 0.010 142 Dicloran 0.010 394 Profoxydim lithium 0.010 143 Dicrotophos 0.010 397 Promecarb 0.010 144 Diethoconazole 0.010 398 Propachlor 0.010 144 Difubenzuron 0.010 409 Proparite 0.010 145 Difenconazole 0.010 402 Propazine 0.010 144 Dimetox 0.010 402 Propazine 0.010	134	Di-Allate	0.010	387	Pirimicarb Desmethyl	0.010
136 Dichlofenthion 0.010 389 Pirimiphos-Ethyl 0.010 137 Dichlofuanid 0.010 390 Pirimiphos-Methyl 0.004 138 Dichlorprop 0.010 391 Prochoraz 0.010 139 Dichlorvos (DDVP) 0.010 392 Profenofos 0.010 140 Diclofop-Methyl 0.010 394 Profoxydim lithium 0.010 141 Diclofop-Methyl 0.010 395 Prohexadione calcium 0.010 142 Dictophos 0.010 396 Promecarb 0.010 144 Dictofenosa 0.010 397 Pronecarb 0.010 144 Dicthofencarb 0.010 399 Propachlor 0.010 145 Difuenciana 0.010 409 Propacquizafop 0.010 145 Dimethoate 0.010 403 Propeatinghos 0.010 146 Dimethoate 0.010 404 Prophaim 0.010 150 <td>135</td> <td>Diazinon</td> <td>0.010</td> <td>388</td> <td>Pirimicarb Desmethyl Formamido</td> <td>0.010</td>	135	Diazinon	0.010	388	Pirimicarb Desmethyl Formamido	0.010
137 Dichlofluanid 0.010 390 Pirimiphos-Methyl 0.004 138 Dichloryos (DDVP) 0.010 391 Prochloraz 0.010 139 Dichloryos (DDVP) 0.010 392 Profenofos 0.010 140 Diclobutrazol 0.010 393 Profoxydim 0.010 141 Diclotop-Methyl 0.010 394 Profoxydim lithium 0.010 142 Dicloran 0.010 396 Promecarb 0.010 143 Dicrotophos 0.010 397 Promethryn 0.010 144 Diethoconazole 0.010 398 Propachlor 0.010 144 Direfoconazole 0.010 400 Propachlor 0.010 145 Difenoconazole 0.010 402 Propazine 0.010 144 Dimefox 0.010 403 Propeating 0.010 145 Dimethonarmid 0.010 405 Propiconazole 0.010 155	136	Dichlofenthion	0.010	389	Pirimiphos-Ethyl	0.010
138 Dichlorprop 0.010 391 Prochloraz 0.010 139 Dichlorvos (DDVP) 0.010 392 Profenofos 0.010 141 Diclobutrazol 0.010 393 Profoxydim 0.010 141 Diclop-Methyl 0.010 394 Profoxydim lithium 0.010 142 Dicrotophos 0.010 395 Prohexadione calcium 0.010 144 Dietorophos 0.010 396 Promecarb 0.010 144 Dietorophos 0.010 397 Promethryn 0.010 144 Dietorophos 0.010 398 Propachil 0.010 145 Difenconzole 0.010 400 Propaquizafop 0.010 145 Dimethachlor 0.010 401 Propagatile 0.010 148 Dimethachlor 0.010 403 Propetamphos 0.010 149 Immethachlor 0.010 404 Propham 0.010 150 D	137	Dichlofluanid	0.010	390	Pirimiphos-Methyl	0.004
Dickloryos (DDVP) 0.010 392 Profenotos 0.010 140 Diclobutrazol 0.010 393 Profoxydim 0.010 141 Dicloran 0.010 394 Profoxydim lithium 0.010 142 Dicloran 0.010 395 Prohexadione calcium 0.010 143 Dicrotophos 0.010 396 Promecarb 0.010 144 Dietnoconazole 0.010 397 Prometryn 0.010 144 Dietnoconazole 0.010 398 Propachilor 0.010 145 Difenoconazole 0.010 400 Propaguizafop 0.010 146 Dimetoc 0.010 402 Propargite 0.010 147 Diflutenzuron 0.010 403 Propaguizafop 0.010 148 Dimethoat 0.010 404 Propharm 0.010 150 Dimethoate 0.010 405 Propoxur 0.010 151 Dimethoate 0.	138	Dichlorprop	0.010	391	Prochloraz	0.010
Total Diclobutrazol 0.010 393 Profoxydim 0.010 141 Diclobutrazol 0.010 394 Profoxydim lithium 0.010 142 Diclobutrazol 0.010 395 Prohexadione calcium 0.010 142 Diclobutrazol 0.010 396 Promecarb 0.010 144 Diethofencarb 0.010 397 Promethryn 0.010 144 Diethofencarb 0.010 398 Propachlor 0.010 145 Difenconazole 0.010 409 Propaquizafop 0.010 145 Difulbenzuron 0.010 400 Propargite 0.010 146 Difulbenzuron 0.010 402 Propargite 0.010 147 Difulfenican 0.010 402 Propargite 0.010 148 Dimethachlor 0.010 403 Propetamphos 0.010 150 Dimethoarph 0.010 406 Propoxur 0.010 151	139	Dichloryos (DDVP)	0.010	392	Profenofos	0.010
Interform Dicklop-Methyl Dicklop 141 Diclofop-Methyl 0.010 394 Profoxydim lithium 0.010 142 Diclofop-Methyl 0.010 396 Promecab 0.010 143 Dicrotophos 0.010 397 Promecab 0.010 144 Diethofencarb 0.010 397 Promethyn 0.010 144 Diethofencarb 0.010 398 Propachlor 0.010 145 Difencocnazole 0.010 400 Propaquizafop 0.010 146 Diffufencara 0.010 400 Propaquizafop 0.010 148 Dimethoation 0.010 402 Propazine 0.010 150 Dimethenamid 0.010 403 Propiconazole 0.010 151 Dimethoate 0.010 404 Propoxur 0.010 152 Dimethan 0.010 406 Propoxur 0.010 152 Dimethonoroph 0.010 403 <td< td=""><td>140</td><td>Diclobutrazol</td><td>0.010</td><td>393</td><td>Profoxydim</td><td>0.010</td></td<>	140	Diclobutrazol	0.010	393	Profoxydim	0.010
141 Dickorg methyn 0.010 395 Profexadione calcium 0.010 142 Dicrotophos 0.010 396 Promecarb 0.010 144 Diethofencarb 0.010 397 Promethryn 0.010 144 Diethofencarb 0.010 398 Propachlor 0.010 145 Difenoconazole 0.010 399 Propanil 0.010 146 Diflubenzuron 0.010 400 Propaquizafop 0.010 147 Diffenoconazole 0.010 401 Propargite 0.010 148 Dimethoat 0.010 402 Propargite 0.010 150 Dimethanamid 0.010 403 Propetamphos 0.010 151 Dimethoate 0.010 406 Propisochlor 0.010 152 Dimethian 0.010 406 Propoxycarbazone sodium 0.010 152 Diniconazole 0.010 408 Propoxycarbazone sodium 0.010 15	140	Diclofon-Methyl	0.010	304	Profoxydim lithium	0.010
Table Dicktor Oxford Sass Fromexable Oxford 143 Dicrotophos 0.010 396 Promechy 0.010 144 Diethofencarb 0.010 397 Promethryn 0.010 144 Diethofencarb 0.010 399 Propachlor 0.010 145 Diffubenzuron 0.010 409 Propagizafop 0.010 147 Diffubenzuron 0.010 400 Propagizafop 0.010 148 Dimetho 0.010 402 Propagizafop 0.010 149 Dimethenamid 0.010 402 Propagize 0.010 150 Dimethenamid 0.010 403 Propiconazole 0.010 151 Dimethoate 0.010 406 Propoxycarbazone sodium 0.010 152 Dimotroph 0.010 408 Propoxycarbazone sodium 0.010 153 Dimocap 0.010 408 Propoxycarbazone sodium 0.010 155 Dinico	1/2	Dicloran	0.010	305	Prohevadione calcium	0.010
The Dictor Output Output Output Output 144 Diethofencarb 0.010 397 Promethryn 0.010 145 Difenoconazole 0.010 398 Propachlor 0.010 146 Difubrencarb 0.010 399 Propaguizafop 0.010 147 Difubrencarb 0.010 400 Propaguitafop 0.010 148 Dimethachlor 0.010 402 Propaguitafop 0.010 150 Dimethenamid 0.010 403 Propetamphos 0.010 151 Dimethoate 0.010 404 Propham 0.010 151 Dimethoate 0.010 405 Propiconazole 0.010 152 Dimethomorph 0.010 406 Propoxur 0.010 153 Diniconazole 0.010 408 Propoxycarbazone sodium 0.010 154 Dimoxystrobin 0.010 411 Prosulfocarb 0.010 154 Dinoxph	1/2	Dicrotophos	0.010	306	Promocarb	0.010
The Definition 0.010 397 From the problem of the pro	143	Dictocophos	0.010	207	Promothrun	0.010
Table Difference 0.010 395 Fropaulid 0.010 146 Diffudenzuron 0.010 400 Propaquizafop 0.010 147 Diffufenican 0.010 400 Propagile 0.010 148 Dimetox 0.010 401 Propagine 0.010 149 Dimethachlor 0.010 402 Propagine 0.010 150 Dimethenamid 0.010 403 Propetamphos 0.010 151 Dimethoate 0.010 404 Propisochlor 0.010 152 Dimethomorph 0.010 405 Propisochlor 0.010 153 Dimetilan 0.010 406 Propisochlor 0.010 154 Dimoxystrobin 0.010 408 Propoxur 0.010 155 Diniconazole 0.010 410 Proguinazid 0.010 155 Dinoterb 0.010 411 Prosulfocarb 0.010 158 Dinoseb 0.010	144	Difenecenazele	0.010	200	Propachlor	0.010
147 Diffugerization 0.010 399 Proparitie 0.010 147 Diffugerizan 0.010 401 Propaguizatop 0.010 148 Dimetox 0.010 401 Propaguizatop 0.010 149 Dimethachlor 0.010 402 Propetame 0.010 150 Dimethenamid 0.010 403 Propetamphos 0.010 151 Dimethoate 0.010 405 Propiconazole 0.010 151 Dimetilan 0.010 406 Propoxur 0.010 152 Dimetonazole 0.010 407 Propoxur 0.010 155 Diniconazole 0.010 408 Propoxycarbazone sodium 0.010 155 Dinocap 0.010 410 Proguinazid 0.010 156 Dinotrab 0.010 411 Prosulfuron 0.010 157 Dinocap 0.010 413 Prothioconazole 0.010 159 Dinoterb	140	Diffubonzuron	0.010	200	Propacillo	0.010
147 Dindefication 0.010 400 Propargite 0.010 148 Dimetho 0.010 400 Propargite 0.010 149 Dimethoal 0.010 402 Propazine 0.010 150 Dimethoate 0.010 403 Propetamphos 0.010 151 Dimethoate 0.010 404 Propisochlor 0.010 152 Dimethomorph 0.010 406 Propisochlor 0.010 152 Dimetilan 0.010 407 Propoxur 0.010 153 Dimoxystrobin 0.010 407 Propoxur 0.010 155 Diniconazole 0.010 408 Propuxaride 0.010 156 Dinitramine 0.010 410 Proquinazid 0.010 157 Dinocap 0.010 411 Prosulfuron 0.010 157 Dinocap 0.010 413 Prothioconazole 0.010 160 Dipropetryn 0.010 <td>140</td> <td>Diluberizatori</td> <td>0.010</td> <td>399</td> <td>Propaguizaton</td> <td>0.010</td>	140	Diluberizatori	0.010	399	Propaguizaton	0.010
146 Difference 0.010 401 Propagine 0.010 149 Dimethachlor 0.010 402 Propazine 0.010 150 Dimethanmid 0.010 403 Propetamphos 0.010 151 Dimethoate 0.010 404 Propham 0.010 152 Dimethoate 0.010 405 Propiconazole 0.010 153 Dimetilan 0.010 406 Propisochlor 0.010 154 Dimoxystrobin 0.010 407 Propoxycarbazone sodium 0.010 155 Diniconazole 0.010 408 Propoxycarbazone sodium 0.010 155 Dinocap 0.010 410 Proquinazid 0.010 156 Dinitramine 0.010 411 Prosulfocarb 0.010 159 Dinoterb 0.010 411 Prosulfocarb 0.010 160 Dipopetryn 0.010 413 Prothioconazole 0.010 161 Diphe	147	Dimeter	0.010	400	Propaguizatop	0.010
149 Dimethachor 0.010 402 Propatine 0.010 150 Dimethenamid 0.010 403 Propetamphos 0.010 151 Dimethoate 0.010 404 Propham 0.010 152 Dimethoate 0.010 405 Propiconazole 0.010 153 Dimetilan 0.010 406 Propoxur 0.010 154 Dimoxystrobin 0.010 407 Propoxur 0.010 155 Diniconazole 0.010 408 Propoxycarbazone sodium 0.010 155 Dinocap 0.010 410 Proguinazid 0.010 156 Dinitramine 0.010 411 Prosulfuron 0.010 157 Dinocap 0.010 411 Prosulfuron 0.010 158 Dinoseb 0.010 412 Prosulfuron 0.010 159 Dinoterb 0.010 413 Prothicocnazole 0.010 160 Disulfoton 0.	140	Dimethochlor	0.010	401	Propargite	0.010
150 Dimethematrial 0.010 403 Propleamptos 0.010 151 Dimethoate 0.010 404 Propham 0.010 152 Dimethomorph 0.010 405 Propisochlor 0.010 153 Dimetilan 0.010 406 Propisochlor 0.010 154 Dimoxystrobin 0.010 407 Propoxur 0.010 155 Diniconazole 0.010 408 Propoxycrabazone sodium 0.010 155 Dinocap 0.010 409 Propuyzanide 0.010 156 Dinitramine 0.010 410 Proquinazid 0.010 157 Dinocap 0.010 411 Prosulfocarb 0.010 159 Dinoterb 0.010 413 Prothioconazole 0.010 161 Diphenamid 0.010 414 Prothioconazole 0.010 162 Dipropetryn 0.010 415 Pymetrozine 0.010 163 Disulfoton </td <td>149</td> <td>Dimethachior</td> <td>0.010</td> <td>402</td> <td>Propazine</td> <td>0.010</td>	149	Dimethachior	0.010	402	Propazine	0.010
151 Dimetholate 0.010 404 Propiant 0.010 152 Dimethomorph 0.010 405 Propisochlor 0.010 153 Dimetilan 0.010 406 Propisochlor 0.010 154 Dimoxystrobin 0.010 407 Propoxur 0.010 155 Diniconazole 0.010 408 Propoxycarbazone sodium 0.010 155 Dinicranine 0.010 409 Propaxuride 0.010 156 Dinitramine 0.010 410 Proquinazid 0.010 157 Dinocap 0.010 411 Prosulfocarb 0.010 159 Dinoterb 0.010 412 Prosulforon 0.010 160 Dioxacarb 0.010 413 Prothioconazole 0.010 161 Diphenamid 0.010 414 Prothioconazole 0.010 162 Dipropetryn 0.010 415 Pymetrozine 0.010 163 Disulfoton Su	150	Dimethenamid	0.010	403	Propetampnos	0.010
152 Dimetnomorph 0.010 405 Propisochlor 0.010 153 Dimetilan 0.010 406 Propisochlor 0.010 154 Dimoxystrobin 0.010 407 Propoxur 0.010 155 Diniconazole 0.010 408 Propoxycarbazone sodium 0.010 156 Dinitramine 0.010 409 Propyzamide 0.010 157 Dinocap 0.010 410 Proquinazid 0.010 157 Dinocap 0.010 411 Prosulfocarb 0.010 158 Dinoseb 0.010 412 Prosulfocarb 0.010 160 Dioxacarb 0.010 413 Prothioconazole 0.010 161 Diphenamid 0.010 415 Pymetrozine 0.010 162 Dipropetryn 0.010 416 Pyraclustrobin 0.010 163 Disulfoton Sulfone 0.010 418 Pyraflufen 0.010 164 Disulfoto	151	Dimethoate	0.010	404	Propnam	0.010
153 Dimetian 0.010 406 Propisochior 0.010 154 Dimoxystrobin 0.010 407 Propoxur 0.010 155 Diniconazole 0.010 408 Propoxycarbazone sodium 0.010 155 Diniconazole 0.010 409 Propyzamide 0.010 156 Dinitramine 0.010 410 Proguinazid 0.010 157 Dinocap 0.010 411 Prosulfocarb 0.010 158 Dinoseb 0.010 411 Prosulfocarb 0.010 159 Dinoterb 0.010 413 Prothioconazole 0.010 160 Dioxacarb 0.010 414 Prothioconazole 0.010 161 Diphenamid 0.010 415 Pymetrozine 0.010 162 Disulfoton 0.010 416 Pyraclostrobin 0.010 163 Disulfoton Sulfone 0.010 418 Pyrallufen ethyl 0.010 164 Disulfoton Sulfoxide 0.010 419 Pyrasulfotole 0.010	152	Dimetnomorph	0.010	405	Propiconazoie	0.010
154 Dimoxystropin 0.010 407 Propoxur 0.010 155 Diniconazole 0.010 408 Propoxycarbazone sodium 0.010 156 Dinitramine 0.010 409 Propyzamide 0.010 157 Dinocap 0.010 410 Proquinazid 0.010 158 Dinoseb 0.010 411 Prosulfocarb 0.010 159 Dinoterb 0.010 412 Prosulfuron 0.010 160 Dioxacarb 0.010 413 Prothioconazole 0.010 161 Diphenamid 0.010 414 Prothiophos 0.010 162 Dipropetryn 0.010 415 Pymetrozine 0.010 163 Disulfoton 0.010 416 Pyraclostrobin 0.010 164 Disulfoton Sulfoxide 0.010 418 Pyraflufen ethyl 0.010 165 Disulfoton Sulfoxide 0.010 419 Pyrazophos 0.010 166	153	Dimetiian	0.010	406	Propisochior	0.010
155 Diniconazole 0.010 408 Propoxycarbazone sodium 0.010 156 Dinitramine 0.010 409 Propoxycarbazone sodium 0.010 157 Dinocap 0.010 410 Proquinazid 0.010 158 Dinoseb 0.010 411 Prosulfuron 0.010 159 Dinoterb 0.010 412 Prosulfuron 0.010 160 Dioxacarb 0.010 413 Prothioconazole 0.010 161 Diphenamid 0.010 414 Prothiophos 0.010 162 Dipropetryn 0.010 415 Pymetrozine 0.010 163 Disulfoton 0.010 416 Pyraclostrobin 0.010 164 Disulfoton Sulfone 0.010 418 Pyraflufen ethyl 0.010 165 Disulfoton Sulfoxide 0.010 420 Pyrazophos 0.010 166 Ditaimfos 0.010 421 Pyrethrins 0.010 167	154	Dimoxystrobin	0.010	407	Propoxur	0.010
156 Dinitramine 0.010 409 Propyzamide 0.010 157 Dinocap 0.010 410 Proquinazid 0.010 158 Dinoseb 0.010 411 Prosulfocarb 0.010 159 Dinoterb 0.010 412 Prosulfocarb 0.010 160 Dioxacarb 0.010 413 Prothioconazole 0.010 161 Diphenamid 0.010 414 Prothiophos 0.010 162 Dipropetryn 0.010 415 Pymetrozine 0.010 163 Disulfoton 0.010 416 Pyraclostrobin 0.010 164 Disulfoton Sulfone 0.010 418 Pyratlufen 0.010 165 Disulfoton Sulfoxide 0.010 418 Pyrazophos 0.010 166 Ditaimfos 0.010 420 Pyrazophos 0.010 167 Dithianon 0.010 421 Pyrethrins 0.010 168 Diuron 0.010 422 Pyridaben 0.010 170 Dodine	155	Diniconazole	0.010	408	Propoxycarbazone sodium	0.010
157 Dinocap 0.010 410 Proquinazid 0.010 158 Dinoseb 0.010 411 Prosulfocarb 0.010 159 Dinoterb 0.010 412 Prosulfuron 0.010 160 Dioxacarb 0.010 413 Prothicocnazole 0.010 161 Diphenamid 0.010 414 Prothiophos 0.010 162 Dipropetryn 0.010 415 Pymetrozine 0.010 163 Disulfoton 0.010 416 Pyraclostrobin 0.010 164 Disulfoton 0.010 417 Pyraflufen 0.010 165 Disulfoton Sulfone 0.010 418 Pyraflufen ethyl 0.010 166 Ditalimfos 0.010 419 Pyrasulfotole 0.010 166 Ditalinnfos 0.010 420 Pyrazophos 0.010 167 Dithianon 0.010 422 Pyridaben 0.010 168 Diuron 0.010 422 Pyridaben 0.010 170 Dodine	156	Dinitramine	0.010	409	Propyzamide	0.010
158 Dinoseb 0.010 411 Prosulfocarb 0.010 159 Dinoterb 0.010 412 Prosulfuron 0.010 160 Dioxacarb 0.010 413 Prothioconazole 0.010 161 Diphenamid 0.010 414 Prothiophos 0.010 162 Dipropetryn 0.010 415 Pymetrozine 0.010 163 Disulfoton 0.010 416 Pyraclostrobin 0.010 164 Disulfoton Sulfone 0.010 417 Pyraflufen 0.010 165 Disulfoton Sulfoxide 0.010 418 Pyraflufen ethyl 0.010 166 Ditalimfos 0.010 420 Pyrazophos 0.010 168 Diuron 0.010 421 Pyrethrins 0.010 169 DNOC 0.010 422 Pyridaben 0.010 170 Dodine 0.010 423 Pyridaly 0.010 171 E-Fenpyroxymate 0.010 424 Pyridaphenthion 0.010 172 Emamect	157	Dinocap	0.010	410	Proquinazid	0.010
159 Dinoterb 0.010 412 Prosulfuron 0.010 160 Dioxacarb 0.010 413 Prothioconazole 0.010 161 Diphenamid 0.010 414 Prothiophos 0.010 162 Dipropetryn 0.010 415 Pymetrozine 0.010 163 Disulfoton 0.010 416 Pyraclostrobin 0.010 164 Disulfoton Sulfone 0.010 417 Pyraflufen 0.010 165 Disulfoton Sulfoxide 0.010 418 Pyraflufen ethyl 0.010 166 Ditalimfos 0.010 419 Pyrazophos 0.010 166 Ditalimfos 0.010 420 Pyrazophos 0.010 167 Dithianon 0.010 421 Pyrethrins 0.010 168 Diuron 0.010 422 Pyridaben 0.010 169 DNOC 0.010 423 Pyridaben 0.010 170 Dodine 0.010 424 Pyridaphenthion 0.010 172 Emamectin B	158	Dinoseb	0.010	411	Prosulfocarb	0.010
160 Dioxacarb 0.010 413 Prothioconazole 0.010 161 Diphenamid 0.010 414 Prothiophos 0.010 162 Dipropetryn 0.010 415 Pymetrozine 0.010 163 Disulfoton 0.010 416 Pyraclostrobin 0.010 164 Disulfoton Sulfone 0.010 417 Pyraflufen 0.010 165 Disulfoton Sulfoxide 0.010 418 Pyraflufen ethyl 0.010 166 Ditalimfos 0.010 419 Pyrasulfotole 0.010 166 Ditalimfos 0.010 420 Pyrasulfotole 0.010 167 Dithianon 0.010 421 Pyrethrins 0.010 168 Diuron 0.010 422 Pyridaben 0.010 169 DNOC 0.010 423 Pyridaly 0.010 170 Dodine 0.010 424 Pyridaphenthion 0.010 171 E-Fenpyroxymate 0.010 425 Pyridate 0.010 173 Ep	159	Dinoterb	0.010	412	Prosulfuron	0.010
161 Diphenamid 0.010 414 Prothiophos 0.010 162 Dipropetryn 0.010 415 Pymetrozine 0.010 163 Disulfoton 0.010 416 Pyraclostrobin 0.010 164 Disulfoton Sulfone 0.010 417 Pyraflufen 0.010 165 Disulfoton Sulfoxide 0.010 418 Pyraflufen ethyl 0.010 166 Ditalimfos 0.010 419 Pyrasulfotole 0.010 166 Ditalimfos 0.010 420 Pyrazophos 0.010 167 Dithianon 0.010 421 Pyrethrins 0.010 168 Diuron 0.010 422 Pyridaben 0.010 168 Divon 0.010 423 Pyridaly 0.010 170 Dodine 0.010 423 Pyridaly 0.010 171 E-Fenpyroxymate 0.010 424 Pyridaphenthion 0.010 172 Emamectin Benzoate 0.010 426 Pyrifenox 0.010 173 E	160	Dioxacarb	0.010	413	Prothioconazole	0.010
162 Dipropetryn 0.010 415 Pymetrozine 0.010 163 Disulfoton 0.010 416 Pyraclostrobin 0.010 164 Disulfoton Sulfone 0.010 417 Pyraflufen 0.010 165 Disulfoton Sulfoxide 0.010 418 Pyraflufen ethyl 0.010 166 Ditalimfos 0.010 419 Pyrasulfotole 0.010 167 Dithianon 0.010 420 Pyrazophos 0.010 168 Diuron 0.010 421 Pyrethrins 0.010 169 DNOC 0.010 422 Pyridaben 0.010 170 Dodine 0.010 423 Pyridaly 0.010 171 E-Fenpyroxymate 0.010 424 Pyridaphenthion 0.010 172 Emamectin Benzoate 0.010 425 Pyridate 0.010 173 Epichlorohydrin 0.010 426 Pyrifenox 0.010 174 EPN 0.010 427 Pyrimethanil 0.010 175 Epo	161	Diphenamid	0.010	414	Prothiophos	0.010
163 Disulfoton 0.010 416 Pyraclostrobin 0.010 164 Disulfoton Sulfone 0.010 417 Pyraflufen 0.010 165 Disulfoton Sulfoxide 0.010 418 Pyraflufen ethyl 0.010 166 Ditalimfos 0.010 419 Pyrasulfotole 0.010 167 Dithianon 0.010 420 Pyrazophos 0.010 168 Diuron 0.010 421 Pyrethrins 0.010 169 DNOC 0.010 422 Pyridaben 0.010 170 Dodine 0.010 423 Pyridaly 0.010 171 E-Fenpyroxymate 0.010 425 Pyridaphenthion 0.010 172 Emamectin Benzoate 0.010 426 Pyrifenox 0.010 173 Epichlorohydrin 0.010 427 Pyrimethanil 0.010 174 EPN 0.010 428 Pyriproxyfen 0.010	162	Dipropetryn	0.010	415	Pymetrozine	0.010
164 Disulfoton Sulfone 0.010 417 Pyraflufen 0.010 165 Disulfoton Sulfoxide 0.010 418 Pyraflufen ethyl 0.010 166 Ditalimfos 0.010 419 Pyrasulfotole 0.010 167 Dithianon 0.010 420 Pyrazophos 0.010 168 Diuron 0.010 421 Pyrethrins 0.010 169 DNOC 0.010 422 Pyridaben 0.010 170 Dodine 0.010 423 Pyridaly 0.010 171 E-Fenpyroxymate 0.010 425 Pyridaphenthion 0.010 172 Emamectin Benzoate 0.010 426 Pyrifenox 0.010 173 Epichlorohydrin 0.010 427 Pyrimethanil 0.010 174 EPN 0.010 428 Pyriproxyfen 0.010	163	Disulfoton	0.010	416	Pyraclostrobin	0.010
165 Disulfoton Sulfoxide 0.010 418 Pyraflufen ethyl 0.010 166 Ditalimfos 0.010 419 Pyrasulfotole 0.010 167 Dithianon 0.010 420 Pyrazophos 0.010 168 Diuron 0.010 421 Pyrethrins 0.010 169 DNOC 0.010 422 Pyridaben 0.010 170 Dodine 0.010 423 Pyridaly 0.010 171 E-Fenpyroxymate 0.010 424 Pyridaphenthion 0.010 172 Emamectin Benzoate 0.010 425 Pyridate 0.010 173 Epichlorohydrin 0.010 426 Pyrifenox 0.010 174 EPN 0.010 427 Pyrimethanil 0.010 175 Epoxiconazole 0.010 428 Pyriproxyfen 0.010	164	Disulfoton Sulfone	0.010	417	Pyraflufen	0.010
166 Ditalimfos 0.010 419 Pyrasulfotole 0.010 167 Dithianon 0.010 420 Pyrazophos 0.010 168 Diuron 0.010 421 Pyrethrins 0.010 169 DNOC 0.010 422 Pyridaben 0.010 170 Dodine 0.010 423 Pyridaly 0.010 171 E-Fenpyroxymate 0.010 424 Pyridaphenthion 0.010 172 Emamectin Benzoate 0.010 425 Pyridate 0.010 173 Epichlorohydrin 0.010 426 Pyrifenox 0.010 174 EPN 0.010 427 Pyrimethanil 0.010 175 Epoxiconazole 0.010 428 Pyriproxyfen 0.010	165	Disulfoton Sulfoxide	0.010	418	Pyraflufen ethyl	0.010
167 Dithianon 0.010 420 Pyrazophos 0.010 168 Diuron 0.010 421 Pyrethrins 0.010 169 DNOC 0.010 422 Pyridaben 0.010 170 Dodine 0.010 423 Pyridaly 0.010 171 E-Fenpyroxymate 0.010 424 Pyridaphenthion 0.010 172 Emamectin Benzoate 0.010 425 Pyridate 0.010 173 Epichlorohydrin 0.010 426 Pyrifenox 0.010 174 EPN 0.010 427 Pyrimethanil 0.010 175 Epoxiconazole 0.010 428 Pyriproxyfen 0.010	166	Ditalimfos	0.010	419	Pyrasulfotole	0.010
168 Diuron 0.010 421 Pyrethrins 0.010 169 DNOC 0.010 422 Pyridaben 0.010 170 Dodine 0.010 423 Pyridaly 0.010 171 E-Fenpyroxymate 0.010 424 Pyridaphenthion 0.010 172 Emamectin Benzoate 0.010 425 Pyridate 0.010 173 Epichlorohydrin 0.010 426 Pyrifenox 0.010 174 EPN 0.010 427 Pyrimethanil 0.010 175 Epoxiconazole 0.010 428 Pyriproxyfen 0.010	167	Dithianon	0.010	420	Pyrazophos	0.010
169 DNOC 0.010 422 Pyridaben 0.010 170 Dodine 0.010 423 Pyridaly 0.010 171 E-Fenpyroxymate 0.010 424 Pyridaphenthion 0.010 172 Emamectin Benzoate 0.010 425 Pyridate 0.010 173 Epichlorohydrin 0.010 426 Pyrifenox 0.010 174 EPN 0.010 427 Pyrimethanil 0.010 175 Epoxiconazole 0.010 428 Pyriproxyfen 0.010	168	Diuron	0.010	421	Pyrethrins	0.010
170 Dodine 0.010 423 Pyridaly 0.010 171 E-Fenpyroxymate 0.010 424 Pyridaphenthion 0.010 172 Emamectin Benzoate 0.010 425 Pyridate 0.010 173 Epichlorohydrin 0.010 426 Pyrifenox 0.010 174 EPN 0.010 427 Pyrimethanil 0.010 175 Epoxiconazole 0.010 428 Pyriproxyfen 0.010	169	DNOC	0.010	422	Pyridaben	0.010
171 E-Fenpyroxymate 0.010 424 Pyridaphenthion 0.010 172 Emamectin Benzoate 0.010 425 Pyridate 0.010 173 Epichlorohydrin 0.010 426 Pyrifenox 0.010 174 EPN 0.010 427 Pyrimethanil 0.010 175 Epoxiconazole 0.010 428 Pyriproxyfen 0.010	170	Dodine	0.010	423	Pyridaly	0.010
172 Emamectin Benzoate 0.010 425 Pyridate 0.010 173 Epichlorohydrin 0.010 426 Pyrifenox 0.010 174 EPN 0.010 427 Pyrimethanil 0.010 175 Epoxiconazole 0.010 428 Pyriproxyfen 0.010	171	E-Fenpyroxymate	0.010	424	Pyridaphenthion	0.010
173 Epichlorohydrin 0.010 426 Pyrifenox 0.010 174 EPN 0.010 427 Pyrimethanil 0.010 175 Epoxiconazole 0.010 428 Pyriproxyfen 0.010	172	Emamectin Benzoate	0.010	425	Pyridate	0.010
174 EPN 0.010 427 Pyrimethanil 0.010 175 Epoxiconazole 0.010 428 Pyriproxyfen 0.010	173	Epichlorohydrin	0.010	426	Pyrifenox	0.010
175 Epoxiconazole 0.010 428 Pyriproxyfen 0.010	174	EPN	0.010	427	Pyrimethanil	0.010
	175	Epoxiconazole	0.010	428	Pyriproxyfen	0.010

176	EPTC	0.010	429	Quaizalofop_P_Ethyl	0.010
177	Etaconazole	0.010	430	Quinalphos	0.010
178	Ethametsulfuron Methyl	0.010	431	Quinclorac	0.010
179	Ethiofencarb	0.010	432	Quinmerac	0.010
180	Ethiofencarb-sulfone	0.010	433	Quinoxyfen	0.010
181	Ethiofencarb-sulfoxide	0.010	434	Resmethrin	0.010
182	Ethion	0.010	435	Rimsulfuron	0.010
183	Ethiprole	0.010	436	Rotenone	0.010
184	Ethirimol	0.010	437	Sethoxydim	0.010
185	Ethofenprox	0.010	438	Silthiofam	0.010
186	Ethofumesate	0.010	439	Simazine	0.010
187	Ethoprophos	0.010	440	Spinetoram	0.010
188	Ethoxyquin	0.010	441	Spinosad	0.010
189	Ethoxysulfuron	0.010	442	Spirodiclofen	0.010
190	Ethylene thiourea	0.010	443	Spiromesifen	0.010
191	Etoxazole	0.010	444	Spirotetramat	0.010
192	Etridiazole	0.010	445	Spirotetramat-Enol	0.010
193	Etrimfos	0.010	446	Spirotetramat-Enol-Glucoside	0.010
194	Famoxadone	0.010	447	Spirotetramat-Ketohydroxy	0.010
195	Famphur	0.010	448	Spirotetramat-Monohydroxy	0.010
196	Fenamidone	0.010	449	Spiroxamine	0.010
197	Fenamiphos	0.010	450	Sulcotrione	0.010
198	Fenarimol	0.010	451	Sulfosulfuron	0.010
199	Fenazaquin	0.010	452	Sulfotep	0.010
200	Fenbuconazole	0.010	453	Sulprofos	0.010
201	Fenbutatin oxide	0.010	454	Tebuconazole	0.010
202	Fenhexamid	0.010	455	Tebufenozide	0.010
203	Fenitrothion	0.010	456	Tebufenpyrad	0.010
204	Fenobucarb	0.010	457	Tebupirimfos	0.010
205	Fenoxyaprop-P-ethyl	0.010	458	Teflubenzuron	0.010
206	Fenoxycarb	0.010	459	Tembotrione	0.010
207	Fenpiclonil	0.010	460	Temephos	0.010
208	Fenpropathrin	0.010	461	TEPP(O.O-TEPP)	0.010
209	Fenpropidin	0.010	462	Tepraloxydim	0.010
210	Fenpropimorph	0.010	463	Terbufos	0.010
211	Fensulfothion	0.010	464	Terbumeton	0.010
212	Fenthion	0.010	465	Terbuthylazine	0.010
213	Fenthion Oxon	0.010	466	Terbutryn	0.010
214	Fenthion Oxon Sulfone	0.010	467	Tetramethrin	0.010
215	Fenthion Oxon Sulfoxide	0.010	468	Tetraconazole	0.010
216	Fenthion-Sulfone	0.010	469	Thiabendazole	0.010
217	Fenthion-Sulfoxide	0.010	470	Thiacloprid	0.010
218	Fentin acetate	0.010	471	Thiamethoxam	0.010
219	Fentin Hydroxide	0.010	472	Thidiazuron	0.010
220	Fipronil	0.010	473	Thifensulfuron-methyl	0.010
221	- Flamprop-M-Isopropyl	0.010	474	Thiobencarb	0.010
222	Flazasulfuron	0.010	475	Thiodicarb	0.010
223	Flonicamid	0.010	476	Thiofanox	0.010
224	Florasulam	0.010	477	Thiofanox Sulfone	0.010
225	Fluazifop-p-butyl	0.010	478	Thiofanox Sulfoxide	0.010
226	Fluazinam	0.010	479	Thiophanate-methyl	0.010
227	Flubendiamide	0.010	480	Tolclofos-Methyl	0.010
228	Flubenzimine	0.010	481	Tolfenpyrad	0.010
229	Flucycloxuron	0.010	482	Topramezone	0.010
230	Flucythrinate	0.010	483	Tralkoxydim	0.010
231	Fludioxonil	0.010	484	Triadimefon	0.010

232	Flufenacet	0.010	485	Triadimenol	0.010
233	Flufenoxuron	0.010	486	Tri-allate	0.010
234	Flumioxazine	0.010	487	Triasulfuron	0.010
235	Fluometuron	0.010	488	Triazophos	0.010
236	Fluopicolide	0.010	489	Tribenuron-Methyl	0.010
237	Fluopyram	0.010	490	Trichlorfon	0.010
238	Fluorochloridone	0.010	491	Trichloronat	0.010
239	Fluoroglycofen Ethyl	0.010	492	Triclopyr	0.010
240	Fluoxastrobin	0.010	493	Tricyclazole	0.010
241	Flupyrsulfuron Methyl	0.010	494	Tridemorph	0.010
242	Fluquinconazole	0.010	495	Triethyl Phosphate	0.010
243	Fluroxypyr	0.010	496	Trifloxystrobin	0.010
244	Flurtamone	0.010	497	Triflumizole	0.010
245	Flusilazole	0.010	498	Triflumuron	0.010
246	Flutolanil	0.010	499	Triflusulfuron Methyl	0.010
247	Fluxapyroxad	0.010	500	Triforine	0.010
248	Fomesafen	0.010	501	Trinexapac Ethyl	0.010
249	Fonofos	0.010	502	Triticonazole	0.010
250	Foramsulfuron	0.010	503	Tritosulfuron	0.010
251	Forchlorfenuron	0.010	504	Uniconazole	0.010
252	Formetanate	0.010	505	Vamidothion	0.010
253	Formetanate hydrochloride	0.010	506	Zoxamide	0.010

Table 6. Active substances examined in pomegranate fruit examples on GC-MSD device

Analit		Detection			Detection
No	Analit	Limit µg/l	kg No	Analit	Limit µg/kg
1	2,4-5T	0.020	58	Endosulfan, Beta	0.002
2	2-Chloranilline	0.015	59	Endrin	0.015
3	2-Phenyl phenol	0.015	60	Ethalfluralin	0.015
4	3-Chloranilline	0.015	61	Fenchlorphos	0.015
5	4.4 Dichlorobenzophenone	0.020	62	Fenson	0.015
6	4-Chloranilline	0.015	63	Fenvelarate & Esfenvelarate	0.010
7	Aldrin (HHDN)	0.015	64	Fluchloralin	0.015
8	Alpha cypermethrin	0.005	65	Fluotrimazole	0.015
9	Aminocarp	0.015	66	Flurprimidol	0.015
10	Benfluralin	0.015	67	Flutriafol	0.015
11	BHC	0.015	68	Fluvalnate, tau	0.010
12	Bifenazate	0.015	69	Folpet	0.015
13	Biphenyl	0.015	70	Formothion	0.015
14	Bromocyclen	0.015	71	Haloxyfop R Methyl	0.015
15	Bromopropylate	0.010	72	HCL Alpha	0.020
16	Captafol	0.015	73	HCL Beta	0.020
17	Captan	0.010	74	HCL Delta	0.020
18	Carbofuran-3 hydroxy	0.010	75	HCL Gamma	0.020
19	Carbophenothion	0.015	76	Heptachlor	0.015
20	Chlorbenside	0.015	77	Heptachlor EE Cis Isomer	0.015
21	Chlordane-Cis Alpha	0.015	78	Heptachlor EE Trans Isomer	0.015
22	Chlordane Trans Gamma	0.015	79	Hexachlorobenzene	0.020
23	Chlordecone	0.015	80	lodofenphos	0.015
24	Chlorfenapyr	0.015	81	Isodrin	0.015
25	Chlorfenson	0.020	82	Isofenphos	0.015
26	Chlorobenzilate	0.020	83	Lactofen	0.015
27	Chloroneb	0.015	84	Leptophos	0.015
28	Chlorothalonil	0.020	85	Mefenpyr Diethyl	0.015
29	Chlorthion	0.015	86	Methoprene	0.015

30	Chlozolinate	0.015	87	Methoxychlor	0.020
31	Cyanaphos	0.015	88	Mirex	0.015
32	Cycloate	0.020	89	Nitrothal-isopropyl	0.020
33	Cyfluthrin	0.015	90	Nitrapyrin	0.015
34	Cyflutrin-beta	0.015	91	Nitrofen	0.020
35	Cyhalothrin, Lambda	0.010	92	Oxadargyl	0.015
36	Cypermethrin	0.010	93	Pentachloroaniline	0.015
37	Dazomet	0.020	94	Permethrin	0.010
38	DDD-2.4'	0.020	95	Perhane	0.015
39	DDD-4.4'	0.020	96	Procymidone	0.020
40	DDE-2.4'	0.020	97	Profuralin	0.015
41	DDE-4.4'	0.020	98	Propamocarb	0.015
42	DDT-2.4'	0.020	99	Qunomethionate	0.005
43	DDT-4.4'	0.020	100	Quintozene	0.015
44	Deltamethrin	0.010	101	S-Metolachlor	0.015
45	Dicamba	0.015	102	Tecnazene	0.020
46	Dichlobenil	0.015	103	Tefluthrin	0.015
47	Dicofol	0.010	104	Terbacil	0.015
48	Dieldrin	0.015	105	Tetrachlovinphos	0.015
49	Diethatyl Ethyl	0.015	106	Tetradifon	0.015
50	Dimethypin	0.015	107	Tetrasul	0.020
51	Dinobuton	0.015	108	Thiometon	0.015
52	Dinoseb Asetate	0.015	109	Tolyfuanid	0.020
53	Dioxathion	0.015	110	Transfuthrin	0.015
54	Diphenylamine	0.020	111	Tributtyl Phosphate	0.015
55	Dihenylmercury	0.015	112	Trifuralin	0.010
56	Endosulfan-sulfate	0.002	113	Vinclozolin	0.020
57	Endosulfan, Alpha	0.002			

All the solvents and chemicals (water, acetonitrile, methanol, formic acid, acetic acid and ammonium formate) used as mobile phases in example extractions are chosen in accordance to a profound quality. Pesticide standards are prepared at least a 90% rate of purity. Extractions and clearance of the examples are generalized in accordance with AOAC (International Official Methods of Analysis) methods (Lehotay, 2007).

Examples' Preparation for Analysis

15 g examples were homogenized in a mechanical shredder. Other similars of the same example were put into same processes separately. Example amounts that put into extraction were taken from these homogenised examples after weighing.

Extraction of Examples

Whole examples were homogenised with steel blenders by shredding and 5 g of analyse examples from the main example were weighed and mixed with 10ml's of water and 15ml's of acetonitrile with 1% acetic acid and strongly shaked for 1 minute. Afterwards, 6 g of waterless magnesium sulfate (MgSO₄) and 1.5 g of Sodium Acetate (C₂H₃NaO₂.3H₂O) is added into falcon tubes and after being shaked for 1 minute, centrifugated for 5 minutes at 4000 rpm rate. As the next step, 8 ml of examples from the previous examples' high phases were collected for the cleaning process and transported into 15 ml falcon tubes and mixed with 1.2 g of waterless MgSO₄ and 0.4 g of PSA and centrifuged for 5 minutes at 4000 rpm rate, once again. Later, the high phase was transported into viales and kept in a freezer until the device evaluations. As the last injections into LC-MS/MS and GC-MS/MS devices were conducted and residue rates were determined. Chromatographical conditions of LC-MS/MS and GC-MS/MS devices are explained on Table 7 and Table 8 in detail.

LC-MS/MS	Agilent 6420	Agilent 6420					
Mobile Phase A	5 mM Amonium Formate&Water + Acetonitrile	5 mM Amonium Formate&Water + Acetonitrile Pure methanol					
Mobile Phase A	Pure methanol						
Column	Poroshell 120 SB-C18 (3.0 x 100 mm 2.7 Micro	on)					
Injection Volume	10 µl	10 µl					
Flow Rate	0.6 ml/min						
MS Gas Temperature	300°C	300°C					
Sheat Gas Temperature	350°C	350°C					
The Column Oven	35°C	35°C					
Pump Gradient Program	Time Mobile Mobile Flow	rate					
	phase A % phase B % ml/min						
	0:00 80 20 0.6						
	0:00 80 20 0.6						
	0:20 80 20 0.6						
	1:50 30 70 0.6						
	6:00 5 95 0.6						
	7:50 5 95 0.6						
	7:60 80 20 0.6						
	10:00 80 20 0.6						

Table 8. Chromatographic Working Conditions of GC/MS
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GC-MS Agilent 5975						
Carrier gases		Helium				
Column		HP-5MS 30 m × 250 μm × 250 μm × 0.25 μm				
Injection Volume		5 μΙ				
Flow Rate		2.4 ml/min				
Duration of Injection		18.5 min				
MS Gas Temperature		300°C				
Sheat Gas Temperature		350°C				
The Column Oven		35°C				
Inlet temperature progr	am					
Start	Rate of increase (°C/min)	Temperature (°C)	Retention Time (RT) (min)			
1	0	55	0.21			
2	600	325	18.5			
The Column Oven temperature program						
Start	Rate of increase (°C/min)	Temperature (°C)	Retention Time (RT) (min)			
1	0	50	0			
2	50	150	0			
3	20	230	1			
4	8	290	3			
5	0	290	18.5			

RESULTS AND DISCUSSION

Residue quantities obtained from the research were evaluated according to Turkish Food Codex (TFC) Regulation on Maximum Residue Limits of Pesticides (Turkish Official Gazette No 21.01.2011-27822; Notification No: 2011/2). The TFC residue limits of each pesticide sample are indicated separately in the tables presented. In residue limits determined by using high-precision analytical instruments such as GC-MS and LC-MS/MS, in pomegranate fruit samples analyses of total 506 pesticide active ingredients were made in LC-MS/MS instrument and 113 pesticide active ingredients in GC-MS instrument. In this research carried out between 2016 and 2017, detectable levels of the residues were not found in the samples of these two years. Mohapatra (2014) researched on the residue dynamics of chlorpyrifos and cypermethrin in/on pomegranate and soil was carried out by conducting supervised field trials as per good agricultural practices. The limit of quantification (LOQ) of chlorpyrifos and cypermethrin were 0.01 and 0.05 mg kg-1, respectively. Residues of the insecticides remained on the fruit surface and movement to the edible part (aril) was not observed.

Mohapatra et al. (2019) expressed that neonicotinoid insecticides such as imidacloprid, indoxacarb and thiamethoxam are widely used for control of a large number of insect pests of pomegranate crop. The researchers evaluated the residual levels of these pesticides in pomegranate for 2 years. They found that the maximum residue levels of imidacloprid on pomegranate was less than its MRL of 1 mg/kg, so the pre-harvest interval (PHI) required was 1 day only. For indoxacarb, 31–42 days PHI was needed for the residues to reduce to its MRL of 0.02 mg/kg. The PHI of thiamethoxam was 46–77 days, the time required for its residues to reduce to its MRL of 0.01 mg/kg. Licensed pesticides may be used in good agricultural practices but they should be administered at the right time and dose.

Shafi et al. (2014) conducted research on the identification of residues of some pesticides in fruits collected from various markets in Lahore. They collected apple, banana, guava, melon, orange, papaya, pomegranate and strawberry fruit samples from various markets. Pesticide residues in pomegranate fruit to be mg/kg were 0.129 for Cypermethrin, 0.105 for Bifenthrin, 0.052 for Carbofuran. 0.045 for λ -Cyhalothrin and 0.035 for Chlorpyrifos. Another researcher, Kolekar et al. (2011), collected 179 exportable pomegranate fruit samples during 2007 to 2009 from various districts in Maharashtra and Karnataka States of India too. All samples were monitored for 86 pesticide residues which included pesticides from diversified chemical classes including organochlorine, organophosphates, carbamates, synthetic pyrethroids, neonicotinoids, triazines, triazoles, natural product derivatives and others using established and validated methods. Overall 35.55% of the total analyzed samples contained no detectable residues, 44.44% samples contained detectable residues while 20.0% samples contained residues that exceeded the maximum residue limits (MRLs) set by the European Union. The majority of the samples contained pesticide residues from the organochlorine, organophosphates, neonicotinoids and triazole group of pesticides. The results of the current study showed that no restricted or banned pesticides such as DDT, HCH and their isomers were found in any of the samples analyzed. The violative percentage for the samples analyzed during 2007-2008 was 3.08% which increased to 29.56% in the year 2008-2009 indicating increased use of pesticides to control pests and diseases on pomegranate. The violative percentage increased dramatically due to the presence of fungicide residues in 61.11% samples of the non-conformed samples. Bakırcı et al. (2014) investigated pesticide residues in fruits and vegetables from the Aegean region of Turkey and they found that all pomegranate, cauliflower and cabbage samples were pesticides-free. In a similar study, we conducted previously, no pesticide residues were found in 5 pomegranate fruit samples collected from Konya region (Ersoy et al., 2011).

Utture et al. (2012) expressed that buprofezin, dimethoate and imidacloprid could be used safely. Our research results showed that thiacloprid, propiconazole and difenoconazole could not effect fruits negatively and we did not find any pesticide residues (see Table 1).

As it can be understood from the above mentioned research examples, some negative situations, which may pose a risk to human health, may be encountered. Residue analysis have an important place in Good Agricultural Practices (GAPs). It depends on having made residue analysis in accredited laboratories and not including any residues to get the certificate of GAPs for a product. It can be said that sensitivity to world food security and the importance of good agricultural production techniques is growing gradually. This situation shows rapid progress of especially export oriented agricultural production activities with regard to the GAPs of Turkey in recent years. It is considered useful to improve a national strategy to expand this production technique.

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