

DFA of California
Detection limits - Screen II (GC/MS Pesticides)

Pesticide	Type	DFA Screen	Detection Limit (ppm)	Pesticide Classification			
		Il Luke		OP	OC	ON	OS
Acephate	insecticide	x	0.03	x		x	x
Alachlor	herbicide	x			x	x	
Aldrin ¹	insecticide	x	0.05		x		
Allethrin	insecticide	x	0.03				
Ametryn	herbicide	x				x	x
Aminocarb ² (Matacil)	insecticide	x	.			x	
Anilazine (Dyrene) ¹ (10/26/1998)	fungicide	x	0.35		x	x	
Atrazine	herbicide	x	0.02		x	x	
Azinphos Ethyl ²	insecticide	x	0.02	x		x	x
Azinphos Methyl	insecticide	x	0.02	x		x	x
Azinphos Methyl OA ²	insecticide	x	0.1	x		x	x
Azoxystrobin	fungicide	x	0.03			x	
Bendiocarb	insecticide	x	0.02			x	
Benfluralin (Beneftn)	Herbicide	X			x	x	-
BHC alpha, beta,delta ¹ (7/16/86)	insecticide	x	0.03		x		
BHC gamma (Lindane)	insecticide	x	0.03		x		
Bifenthrin	insecticide	x			x		
Boscalid		x	0.02		x	x	
Bromacil	herbicide	x	0.06		x	x	
Bromophos ²	insecticide	x		x	x		
Bromophos Ethyl ²	insecticide	x		x	x		
Bromopropylate (Acarol) ²	acaricide	x			x		
Bupirimate (Nimrod) ²	fungicide	x				x	x
Butachlor ²	herbicide	x			x		
Butylate	herbicide	x				x	x
Captafol	fungicide	x	0.075		x	x	x
Captan	fungicide	x	0.025		x		
Carbaryl	insecticide	x	0.02			x	
Carbofuran	insecticide	x	0.02			x	
Carbophenothion ¹ (7/13/94)	insecticide	x	0.04	x	x		
Carboxin	fungicide	x				x	x
Carfentrazone Ethyl	herbicide	x	0.15		x	x	
Chlordane ¹ cis,trans (12/24/86)	insecticide	x			x		

Chlorfenvinphos1 (9/27/95)	insecticide	x		x	x		
Chlorobenzilate ¹ (7/12/99)	insecticide	x	0.035		x		
Chloroneb (Terraneb)	funicide	x			x		
Chlorothalonil	fungicide	x	0.035		x		
Chlorprofam (CIPC)	plant regulator	x	0.035		x		
Chlorpyrifos	insecticide	x	0.05	x	x		
Chlorpyrifos Methyl	insecticide	x	0.05	x	x		
Coumaphos	Insecticide	x	0.03	x	x		
Crufomate ¹ (6/9/93)	insecticide	x		x	x		
Cyanazine	herbicide	x	0.05		x	x	
Cyanophos ²	insecticide	x		x		x	x
Cycloate	herbicide	x				x	x
Cyfluthrin (Baythroid)	insecticide	x			x	x	
Cyhalothrin lambda	insecticide	x	0.02		x	x	
Cypermethrin	insecticide	x			x	x	
Cvprodinil	funnicide	x	0.015			x	
Dacthal (DCPA)	herbicide	x	0.03		X		
DDD ¹ (12/24/86)	insecticide	x	0.025		x		
DOE ¹ (12/24/86)	degredation	x	0.03		x		
DDT ¹ (12/24/86)	insecticide	x	0.035		x		
DEF (Tribufos)	insecticide	x	0.035	x			x
Deltamethrin	insecticide	x			x	x	
Demeton O (Systox) ¹ (8/3/94)	insecticide	x	0.015	x			
Demeton S (Systox) ¹ (8/3/94)	insecticide	x	0.015	x			x
Dialifor (Torak) ¹ (10/26/98)	insecticide	x	0.05	x	x	x	X
Di-Allate ¹ (2/11/94)	herbicide	x			x	x	x
Diazinon	insecticide	x	0.02	x		x	X
Dichlobenil	herbicide	x	0.015		x	x	
Dichlofenthion ²	nematicide	x		x	x		x
Dichlofluanid (Euparen) 2	fungicide	x			x	x	x
Dichlorvos	insecticide	x	0.015	x	x		
Diclobutrazole (Vigil) ²	fungicide	x			x	x	
Dicloran (DCNA)	fungicide	x	0.015		x	x	
Dicofol (Kelthane)	insecticide	x	0.02		X		
Dicrotophos	insecticide	x		x		x	
Dieldrin ¹	insecticide	x	0.1		x		
Dimethoate	insecticide	x	0.015	x		x	x
Dinobuton ²	acaricide	x				x	
Dioxabenzofos	Insecticide	x		x			x

(Salithion) ²							
Diphenamid ¹ (7/17/02)	herbicide	x	0.01			x	
Diphenylamine (Coraza)	plant regulator	x	0.025			x	
Disulfoton	insecticide	x	0.05	x			x
Ditalimfos 2	fungicide	x		x		x	x
Endosulfan I	insecticide	x	0.1		x		x
Endosulfan II	insecticide	x	0.075		x		x
Endosulfan Sulfate	insecticide	x	0.075		x		x
Endrin ¹ (6/9/93)	insecticide	x	0.125		x		
EPN ¹ (6/9/93)	insecticide	x	0.02	x		x	x
EPTC	herbicide	R	0.025			x	x
Esfenvalerate	insecticide	x	0.02		x	x	
Etaconazole ³	fungicide	x			x	x	
Ethalfuralin (Sonalan)	herbicide	x			x	x	
Ethiolate ¹ (5/4/88)	herbicide	x				x	
Ethion	insecticide	x	0.01	x			x
Ethoprop	nematicide	x		x			x
Ethoxyquin	plant regulator	x	0.025			x	
Etridiazole	fungicide	x			x	x	x
Etrimfos (Ekamet)	insecticide	x		x		x	x
Famphur ¹ (9/27/95)	insecticide	x		x		x	x
Fenamiphos (Nemacure)	nematicide	x	0.035	x		x	x
Fenarimol (Rubigan)	fungicide	x	0.045		x	x	
Fenbuconazole	fungicide	x	0.02		x	x	
Fenhexamid	fungicide	x	0.05		x	x	
Fenitrothion ²	insecticide	x	0.01	x		x	x
Fenpropathrin	insecticide	x	0.02			x	
Fensulfotion ¹ (11/17/93)	insecticide ,	, x	0.03	x			x
Fenthion ¹ (7/31/02)	insecticide	x		x			x
Fenvalerate	insecticide	x	0.02		x	x	
Fluazifop Butyl	herbicide	x	0.04		x	x	
Fluchloralin (Basalin) ¹ (7/21/99)	herbicide	x			x	x	
Fludioxonil	fungicide	x	0.02		x	x	
Folpet	fungicide	x	0.025		x	x	x
Fonofos (Dyfonate)	insecticide	x	0.025	x			x
Heptachlor ¹ (8/16/89)	insecticide	x	0.04		x		
Heptachlor Epoxide ¹	degredation	x	0.06		x		
Hexachlorobenzene ²	seed protectant	x	0.125		x		
Hexazinone	herbicide	R				x	
Hydroxycarbofuran , 3	degredation	R	0.03			x	

Imazalil	fungicide	x	0.2		x	x	
Iprodione	fungicide	x	0.04		x	x	
Kresoxim Methyl	fungicide	x	0.04		"-	x	
Landrin	insecticide	x				x	
Leptophos (Phosvel) ²	insecticide	x		x	x		x
Lindane	insecticide	x	0.03		x		
Malathion	insecticide	x	0.015	x			x
Mecarbam ²	insecticide	x		x		x	x
Mefenoxam	fungicide	x	0.025			x	
Metalaxyl	fungicide	x	0.025			x	
Methamidophos ,	insecticide	x	0.025	x		x	x
Methidathion	insecticide	x	0.03	x		x	x
Methiocarb ¹ (10/26/98)	insecticide	x	0.015			x	x
Methoxychlor pp ¹ (7/12/02)	insecticide	x	0.03		x		
Metolachlor	herbicide	x	0.025		x	x	
Metribuzin	herbicide	R				x	x
Mevinphos	insecticide	x	0.01	x			
MGK 264	synergist	x	0.03			x	
Mirex ¹ (12/17/86)	insecticide	x	0.03		x		
Monocrotophos	insecticide	x	0.125	x		x	
Myclobutanil (Systhane)	fungicide	x	0.02		x	x	
Naled	insecticide	x	0.135	x	x		
Naphthol,1	degredation	R	0.02 .				
Napropamide	herbicide	x	0.035			x	
Nitrofen ¹ (9/8/85)	herbicide	x			x	x	
Nonachlor ²	insecticide	x			x		
Norflurazon	herbicide	R	0.02		x	x	
Omethoate	insecticide	x	0.045	x		x	x
Ovex (Chlorfenson) ¹ (5/4/88)	acaricide	x			x		x
Oxadiazon	herbicide	x	0.055		x	x	
Oxycarboxin ²	funaicide	x				x	x
Oxyfluorfen	herbicide	x	0.04		x	x	
Oxythioquinox ¹ (7/17/02)	fungicide	x	0.015			x	x
Parathion	insecticide	x	0.02	x		x	x
Parathion Methyl	insecticide	x	0.02	x		x	x
Parathion OA ⁴	insecticide	x		x		x	
PCNB (Quintozene)	fungicide	x	0.04		x	x	
Pebulate (Tillam)	herbicide	x				x	x
Pendimethalin	herbicide	x	0.04			x	
Permethrin	insecticide	x	0.015		x		
Perthane ¹ (8/31/94)	insecticide	x			x		

Phenothrin (Sumithrin) ²	insecticide	x					
Phenthoate ²	insecticide	x		x			x
Phorate	insecticide	x	0.015	x			x
Phosalone	insecticide	x	0.025	x	x	x	x
Phosalone OA ⁴	insecticide	x	0.05	x	x	x	x
Phosmet	insecticide	x	0.015	x		x	x
Phosphamidon ¹ (7/12/02)	insecticide	x	0.03	x	x	x	
Piperonyl Butoxide	insecticide	x	0.02				
Pirimicarb	aphicide	x				x	
Pirimiphos Et (Primicid)	insecticide	x		x		x	X
Pirimiphos Methyl	insecticide	x	0.02	x		x	x
Procyvidone	fungicide	x	0.035		x	x	
Profenofos	insecticide	x	0.01	x	x		x
Profluralin (Tolban) ¹ (6/9/93)	herbicide	x			x	x	
Promecarb ²	insecticide	x	0.02			x	
Prometrvin	herbicide	x				x	x
Pronamide (Propyzamide)	herbicide	x	0.075		x	x	
Propachlor	herbicide	x			x	x	
Propanil	herbicide	x			x	x	
Propargite	miticide	x	0.025				x
Propazine	herbicide ..	x			x	x	
Propetamohos	insecticide	x		x		x	x
Propiconazole	fungicide	x	0.15		x	x	
Propoxur ²	insecticide	x	0.02			x	
Prothiophos (Tokuthion) ²	insecticide	x		x	x		x
Pyrazophos (Afugan) ²	fungicide	x		x		x	x
Pyrethrins	insecticide	x	0.5				
Pyridaben	fungicide	x	0.04		x	x	x
Quinalphos ²	insecticide	x		x		x	x
Quintozine (PCNB)	fungicide	x	0.04		x	x	
Resmethrin	insecticide	x	0.015				
Ronnel ¹ (3/23/94)	insecticide	x	0.05	x	x		x
Schradan ¹ (1/15/86)	insecticide	x	0.025	x		x	
Simazine	herbicide	x	0.015			x	x
Simetryne ²	herbicide	x				x	x
Sulfallate (Vegadex) ¹ (9/27/95)	herbicide	x			x	x	x
Sulfotep (Bladafum) ²	acaricide ,	x		x			x
Sulprofos (Bolstar) ¹ (12/5/01)	insecticide	x		x			x
Tebuconazole	fungicide	x	0.1		x	x	
Terbacil	herbicide	x	0.02		x	x	

Terbufos	insecticide	x		x			x
Terbutryn ¹ (7/21/99)	herbicide	x				x	x
Tetradifon	insecticide	x	0.03	x		x	
Tetramethrin ²	insecticide	x				x	
Thiabendazole	fungicide	x	0.03			x	x
Thionazin (Zinophos) ¹ (5/4/88)	insecticide	x	0.02	x		x	x
Tolyfluanid (Euparin)	fungicide	x			x	x	x
Triadimefon	fungicide	x	0.035		x	x	
Triadimenol	fungicide	x	0.035		x	x	
Tri-Allate {Far-Go}	herbicide	x			x	x	x
Triazophos (Hostathion) ²	insecticide	x		x		x	x
Tributyl Phosphate	plasticizer	R		x			
Trifloxystrobin	fungicide	x	0.03		x	x	
Triflumazole	fungicide	x	0.07		x	x	
Tiifluralin	herbicide	x	0.05		x	x	
Vernolate ¹ (7/17/02)	herbicide					x	x
Vinclozolin	fungicide	x	0.03		x	x	

OP - Organophosphorus, OC - Organochlorine, ON - Organonitrogen, OS - Organosulfur
DFA Screen II - Luke II/PAM 302 based, DFA Screen I - Mills/PAM 303 based

An "x" in *DFA Screen* boxes indicates that the compound listed is recovered by the indicated method. An "R" indicates that recovery is *only* partial. Unless recovery studies are done, analyses of these compounds are qualitative only. A blank space indicates that recovery of the pesticide in question is unsatisfactory or not fully published in the literature.

As practiced by the DFA, Screen II and Screen I sensitivities are very similar. The indicated detection limits, ppm (mg per 1000 g) apply to both procedures. Detection limits are listed for entries in **bold** type only. These pesticides are searched by the DFA's custom 3E495 library of reference spectra. Entries not in bold type are searched using Varian's CH4ALL reference library. Detection limits for these compounds are not listed, but are estimated to be in the vicinity of 0.5 ppm to 1.0 ppm. This library was produced under instrument conditions that are different from those used by the DFA. Sensitivities are therefore not the same. Compounds are generally recognized, but only at higher concentrations. All detection limits listed have been conservatively estimated. They are matrix dependent, sometimes a bit lower, sometimes a bit higher.

1. Revoked (date)
2. U.S. Not Registered (for use on food commodities)
3. Discontinued (by manufacturer)
4. Registration/Status Unknown