

PESTICIDE MULTIRESIDUE METHOD

SCOPE OF ACTIVE SUBSTANCES IN BEEPOLEN, BEESWAX AND ROYAL JELLY

Substance name	Limit of quantification (LOQ) [mg/kg]					
		Chloropropylate ²	0.01	Dodine ¹		0.01
		Chlorothalonil ²	0.01			
		Chloroxuron ¹	0.01	E		
2		Chlorpropham ²	0.01	Endosulfan, -alpha ²		0.01
2,4-D ¹	0.01	Chlorpyrifos (-ethyl) ²	0.01	Endosulfan, -beta ²		0.01
		Chlorpyrifos-methyl ²	0.01	Endosulfan-sulfate ²		0.01
A		Chlorthal-dimethyl ²	0.01	Endrin ²		0.01
Acephate ^{1, 2}	0.01	Chlorthion ²	0.01	EPN ^{1, 2}		0.01
Acequinocyl ¹	0.01	Chlorthiophos ²	0.01	Epoxiconazole ¹		0.01
Acetamiprid ¹	0.01	Chlozolinate ²	0.01	Ethiofencarb ¹		0.01
Acibenzolar-S-methyl ¹	0.04	Clofentezine ¹	0.01	Ethiofencarb-sulfone ¹		0.01
Aclonifen ²	0.05	Clomazone ¹	0.01	Ethion ²		0.01
Acrinathrin ²	0.01	Clopyralid ¹	0.01	Ethoprophos ²		0.01
Alachlor ²	0.02	Clothianidin ¹	0.01	Ethoxyquin ¹		0.01
Aldicarb ¹	0.01	Coumaphos ^{1, 2}	0.01	Etofenprox ²		0.01
Aldicarb sulfone (Aldoxycarb) ¹	0.01	Cyanofenphos ²	0.01	Etridiazole ²		0.01
Aldicarb sulfoxide ¹	0.01	Cyanophos ²	0.01	Etrinilos ²		0.01
Aldrin ²	0.01	Cyantraniliprole ¹	0.01			
Allethrin ²	0.01	Cyfluthrin (sum of isomers) ²	0.01	F		
Amitraz (incl. rel. metabolites) ¹	0.01	Cyhalothrin, -lambda ²	0.01	Famoxadone ¹		0.01
Avermectin B1a ³	0.01	Cymiazole ^{1, 2}	0.01	Famphur ²		0.01
Avermectin B1b ¹	0.01	Cymoxanil ¹	0.01	Fenamiphos ¹		0.01
Azinphos-ethyl ¹	0.01	Cypermethrin (sum of isomers) ²	0.01	Fenarimol ¹		0.01
Azinphos-methyl ¹	0.01	Cyproconazole ¹	0.01	Fenazaquin ¹		0.01
Azoxystrobin ¹	0.01	Cyprodinil ¹	0.01	Fenbuconazole ¹		0.01
		Cyromazin ¹	0.01	Fenchlorphos ²		0.01
B				Fenhexamid ¹		0.01
Benalaxyl-M (sum of isomers) ¹	0.01	D		Fenitrothion ²		0.01
Benfluralin ²	0.01	Daminozide ¹	0.01	Fenoxy carb ¹		0.01
Benomyl ¹	0.01	DDD, o,p ^{1,2}	0.01	Fenpropatrin ²		0.01
Bifenazate ²	0.01	DDD, p,p ^{1,2}	0.01	Fenpropimorph ¹		0.01
Bifenthin ²	0.01	DDE, o,p ^{1,2}	0.01	Fenpyroximate ¹		0.01
Binapacryl ²	0.01	DDE, p,p ^{1,2}	0.01	Fenson ²		0.01
Biphenyl ²	0.05	DDT, o,p ^{1,2}	0.01	Fensulfothion ²		0.01
Bitertanol ¹	0.01	DDT, p,p ^{1,2}	0.01	Fenthion ¹		0.02
Boscalid ¹	0.01	DEET (Diethyltoluamid) ¹	0.01	Fenthion-oxon ¹		0.05
Bromacil ¹	0.01	Deltamethrin ²	0.01	Fenthion-oxon-sulfone ¹		0.04
Bromophos (-methyl) ²	0.01	Demeton-S-methyl ¹	0.01	Fenthion-sulfoxide ¹		0.02
Bromophos-ethyl ²	0.01	Demeton-S-methyl-sulfone ¹	0.01	Fenvalerate/Esfenvalerate		0.01
Bromopropylate	0.01	Demeton-S-methyl-sulfoxide ¹	0.01	(sum of isomers) ²		
(incl. 4,4'-Dibromobenzophenone) ²		Diaphenthiuron ¹	0.01	Fipronil ²		0.005
Bromoconazole (sum of isomers) ¹	0.01	Diazinon ²	0.01	Fluazifop-P ¹		0.01
Bupirimate ¹	0.01	Dichlobenil ²	0.01	Fluazifop-P-butyl ¹		0.01
Buprofezin ¹	0.01	Dichlofenthion ²	0.01	Fluazinam ¹		0.01
		Dichlofuanid ²	0.01	Fluchloralin ²		0.01
C		Dichlorvos ^{1, 2}	0.01	Flucythrinate ²		0.01
Cadusafos ¹	0.01	Dicloran ²	0.01	Fludioxonil ¹		0.01
Captan ²	0.05	Dicofol (incl. 4,4'-Dichlorobenzophenone) ²	0.01	Flufenoxuron ¹		0.01
Carbaryl ¹	0.01	Dieldrin ²	0.01	Fluopyram ¹		0.01
Carbendazim (incl. Benomyl) ¹	0.01	Diethofencarb ¹	0.01	Fluquinconazole ¹		0.01
Carbetamide (sum of isomers) ¹	0.01	Difenoconazol ¹	0.01	Flusilazole ¹		0.01
Carbofuran (incl. Carbosulfan) ¹	0.01	Diflubenzuron ¹	0.01	Flutriafol ¹		0.01
Carbofuran-3-hydroxy ¹	0.01	Diflufenican ¹	0.01	Fluvalinate, Tau ⁻²		0.01
Carbophenothion ²	0.01	Dimethoat ¹	0.01	Fluxapyroxad ¹		0.01
Chlordane, cis- (alpha) ⁻²	0.01	Dimethomorph ¹	0.01	Folpet ²		0.01
Chlordane, Oxy ⁻²	0.01	Dimoxystrobin ¹	0.01	Fonofos ¹		0.01
Chlordane, trans- (gamma) ⁻²	0.01	Diniconazol ¹	0.01	Formothion ²		0.02
Chlorfenapyr ²	0.01	Dinotefuran ¹	0.01			
Chlorfenson ²	0.01	Diphenylamin ¹	0.01	H		
Chlorfenvinphos ^{1, 2}	0.01	Disulfuton ¹	0.01	Halfenprox ²		0.01
Chlormephos ²	0.02	Disulfuton sulfone ¹	0.01	Haloxypol ¹		0.01
Chlorobenzilate ²	0.01	Disulfuton sulfoxide ¹	0.01	HCH, alpha- (Hexachlorocyclohexane,		0.01
Chloroneb ²	0.01	Ditalimfos ²	0.01	alpha-BCH) ²		
		Diuron ¹	0.01	HCH, beta- (Hexachlorocyclohexane,		0.01

beta-BCH) ²		Oxadixyl ¹	0.01	Terbufos ²	0.01
HCH, delta- (Hexachlorocyclohexane, delta-BCH) ²	0.01	Oxamyl ¹	0.01	Terbutylazine ¹	0.01
Heptachlor ²	0.01	P		Tetrachlorvinphos ²	0.01
Heptachlor epoxide, cis- ²	0.01	Paraoxon (-ethyl) ²	0.01	Tetraconazole ¹	0.01
Heptachlor epoxide, trans- ²	0.01	Paraoxon-methyl ²	0.01	Tetradifon ²	0.01
Heptenophos ²	0.01	Parathion (-ethyl) ²	0.01	Tetramethrin ²	0.01
Hexachlorobenzene (HCB) ²	0.01	Parathion-methyl ²	0.01	Tetrasul ²	0.01
Hexaconazole ¹	0.01	Penconazole ¹	0.01	Thiabendazole ¹	0.01
Hexaflumuron ²	0.01	Pencycuron ¹	0.01	Thiacloprid ¹	0.01
Hexythiazox ¹	0.01	Pendimethalin ²	0.01	Thiamethoxam ¹	0.01
I		Pentachloroaniline ²	0.01	Thiodicarb ¹	0.01
Imazalil ¹	0.01	Pentachloroanisole ²	0.01	Thionazin ²	0.01
Imidacloprid ¹	0.01	Permethrin (sum of isomers) ²	0.01	Thiophanat-methyl ¹	0.01
Inodoxacarb ¹	0.01	Phenthione ²	0.01	Tolclofos-methyl ²	0.01
Iodofenphos ²	0.01	Phenylphenol, 2- ²	0.01	Tolyfluuanid ²	0.01
Iprobenfos ²	0.01	Phorate ²	0.01	Triadimenol ¹	0.01
Iprodione ²	0.01	Phorate sulfone ²	0.01	Triallate ²	0.01
Iprotovalcarb ¹	0.03	Phosalone ²	0.01	Triazophos ²	0.01
Isazofos ²	0.01	Phosmet ²	0.01	Trichlorfon ¹	0.01
Isocarbofos ²	0.01	Phosphamidon ²	0.02	Trichloronat ²	0.01
Isodrin ²	0.01	Piperonyl butoxide ²	0.01	Trifloxystrobin ¹	0.01
Isofenphos ¹	0.02	Pirimicarb ¹	0.02	Triflumizole ¹	0.01
Isofenphos-methyl ¹	0.01	Pirimicarb, Desmethyl- ¹	0.01	Trifluralin ²	0.01
Isoproturon ¹	0.01	Pirimicarb, Desmethylformamido- ¹	0.01	Triforine ¹	0.01
Isoxonathion ²	0.01	Pirimiphos-ethyl ²	0.01	V	
K		Pirimiphos-methyl ²	0.01	Vinclozolin ²	0.01
Kresoxim-methyl ¹	0.01	Prochloraz ²	0.01		
L		Procymidone ²	0.01		
Leptophos ²	0.01	Profenofos ²	0.01		
Lindane (gamma-HCH, gamma-BCH) ²	0.01	Profluralin ²	0.01		
Linuron ¹	0.01	Propamocarb ¹	0.01		
Lufenuron ¹	0.01	Propargite ¹	0.01		
M		Propatenamphos ²	0.01		
Malaoxon ¹	0.01	Propiconazole ¹	0.01		
Malathion ¹	0.01	Propoxur ¹	0.01		
Mecarbam ¹	0.01	Propyazamide ²	0.01		
Mepanipyrim ¹	0.01	Prothioconazole ¹	0.01		
Mepronil ¹	0.01	Prothiofos ²	0.01		
Mesotriione ¹	0.01	Pymetrozine ¹	0.01		
Metalaxy ¹	0.01	Pyraclostrobin ¹	0.01		
Metamitron ¹	0.01	Pyrazophos ²	0.01		
Metazachlor ¹	0.01	Pyridaben ¹	0.01		
Methacrifos ²	0.01	Pyridaphenthion ¹	0.01		
Methamidophos ^{1,2}	0.01	Pyrifenoxy ¹	0.01		
Methidathion ²	0.01	Pyrimethanil ²	0.01		
Methiocarb ¹	0.01	Pyriproxyfen ¹	0.01		
Methiocarb sulfone ¹	0.01	Q			
Methiocarb sulfoxide ¹	0.01	Quinalphos ²	0.01		
Methomyl ¹	0.01	Quinoxifen ¹	0.01		
Methoxychlor ²	0.01	Quintozene ²	0.01		
Methoxyfenozyde ¹	0.01	R			
Metobromuron ¹	0.01	Rotenone ¹	0.01		
Metolcarb ¹	0.01	S			
Metoxuron ¹	0.01	S 421 (Octachlorodipropyl ether) ²	0.01		
Metribuzin ¹	0.01	Spinosad ¹	0.01		
Mevinphos ²	0.01	Spiroclofen ¹	0.01		
Mirex ²	0.01	Spiromesifen ¹	0.01		
Monocrotophos ²	0.02	Spirotetramat ¹	0.01		
Monolinuron ¹	0.01	Spiroxamine ¹	0.01		
Myclobutanil ¹	0.01	Sulfotep ²	0.01		
N		Sulfoxaflor ¹	0.01		
Nitenpyram ¹	0.01	Sulprofos ²	0.01		
Nitrapyrin ²	0.01	T			
Nitrofen ²	0.01	Tebuconazole ¹	0.01		
Nuarmol ¹	0.01	Tebufenozide ¹	0.01		
O		Tebufenpyrad ¹	0.01		
Omethoat ¹	0.01	Tecnazene ²	0.01		
		Teflubenzuron ¹	0.01		
		Tefluthrin ²	0.01		

Technical equipment

¹: LC-MS/MS

²: GC-MS/MS

Additional residue analyses (included in pesticide multiresidue method)

Bee treatment agents by GC-MS/MS

Neonicotinoide by LC-MS/MS

Additional residue analyses (not included in pesticide multiresidue method)

Chlorate, Perchlorate by LC-MS/MS

Clormequat, Mepiquat by LC-MS/MS

Diquat, Paraquat by LC-MS

Dithiocarbamates by GC-MS/MS

Ethephon by LC-MS/MS

Ethylenedibromide by GC-MS/MS

Fentin by LC-MS/MS

Flumethrin by GC-MS/MS

Fosetyl-Al, Phosphonic acid by LC-MS/MS

Glyphosate (incl. AMPA), Glufosinate by LC-MS/MS

Maleic hydrazide by LC-MS/MS

Nicotine by LC-MS/MS

Organotin-Pesticides by LC-MS/MS

Phenoxyalkanoic acids by LC-MS/MS

Phosphane by GC-MS/MS

Polychlorinated Biphenyls (PCBs) by GC-MS/MS

Quaternary ammonium compounds (QAVs) by LC-MS/MS

Beerpellents, wax moth control agents by GC-MS/MS

Total Inorganic Bromide, Bromate by LC-MS/MS

2

valid from 20.03.2023