

Table S7: Detected substances in passive air samplers (PAS) and filter mats (FM)

Substance - Analysed substances according to Additional File 5 and 6

Substances detected in PAS - Substances detected in passive air samplers

Substances detected in FM - Substances detected in filter mats

Active substance class – classification and state of approval according BVL Online Datenbank and BVL (2018)

BVL Online Datenbank Pflanzenschutzmittel: last accessed 19.04.2020

https://www.bvl.bund.de/DE/Arbeitsbereiche/04_Pflanzenschutzmittel/01_Aufgaben/02_ZulassungPSM/01_ZugelPSM/01_OnlineDatenbank/psm_onlineDB_node.html

EC / List no - CAS no.: last accessed 19.04.2020

<https://echa.europa.eu/de/information-on-chemicals/registered-substances>

Pesticides that could still be used in the year of detection but were no longer approved are listed here as approved

Substance	Detected in PAS	Detected in FM	BVL Code	Active substance class	EC / List no.	CAS no.	Approval in Germany
3,4-Dichloroaniline		X	-	Met	202-448-4	95-76-1	
3-Chloroaniline		X	-	Met	203-581-0	108-42-9	
Aclonifen	X		656	H	277-704-1	74070-46-5	approved
Ametoctradin	X	X	1152	F	688-188-6	865318-97-4	approved
AMPA	X	X	-	Met	623-325-5	1066-51-9	
Anthraquinone		X	123	P	201-549-0	84-65-1	not approved
Azoxystrobin	X	X	902	F	603-524-3	131860-33-8	approved
Boscalid	X	X	1023	F	606-143-0	188425-85-6	approved
Bromoxynil	X		264	H	216-882-7	1689-84-5	approved
Bromoxynil-octanoate	X		264	H	216-885-3	1689-99-2	not approved
Captan	X	X	12	F	205-087-0	133-06-2	approved
Carbendazim	X		378	F	234-232-0	10605-21-7	not approved
Chlorantraniliprole		X	1095	I, A	610-489-8	500008-45-7	approved
Chlorflurenol	X		275	H,W	219-800-8	2536-31-4	not approved
Chlorothalonil	X	X	276	F	217-588-1	1897-45-6	approved
			approval expired 31.10.2019				
			to be used by 20.05.2020				
Chlorpropham	X		21	K	202-925-7	101-21-3	approved
			approval expired 31.07.2019				
			to be used by 8.10.2020				
Chlorpyrifos-ethyl	X		0363	I	220-864-4	2921-88-2	not approved
Chlorpyrifos-methyl	X		0545	I	227-011-5	5598-13-0	not approved
Clomazone	X		0864	H	617-258-0	81777-89-1	approved
Cyflufenamide	X		1045	F	605-896-2	180409-60-3	approved
Cyhalothrin lambda	X	X	1051	I	618-753-4	91465-08-6	approved
Cypermethrin		X	0498	I	257-842-9	52315-07-8	approved
Cyprodinil	X		0907	F	601-785-8	121552-61-2	approved
DCBP-pp	X		-	Met	205-094-9	133-14-2	
DDD-op	X		-	Met	200-166-6	53-19-0	
DDD-pp	X		-	I, Met	200-783-0	72-54-8	not approved
DDE-pp	X		-	Met	200-784-6	72-55-9	
DDT op	X		-	I	212-332-5	789-02-6	not approved
DDT-pp	X	X	-	I	200-024-3	50-29-3	not approved
Deet		X	-	P	205-149-7	134-62-3	approved

Substance	Detected in PAS	Detected in FM	BVL Code	Active substance class	EC / List no.	CAS no.	Approval in Germany
Desmedipham		X	0415	H	237-198-5	13684-56-5	approved
Dichlofluanid	X	X	0203	F	214-118-7	1085-98-9	not approved
Diclorane		X	0284	F	202-746-4	99-30-9	not approved
Dieldrin	X		0039	I, Met	200-484-5	60-57-1	not approved
Difenoconazole	X	X	0865	F	601-613-1	119446-68-3	approved
Diflufenican	X	X	0698	H	617-446-2	83164-33-4	approved
Dimethenamid-P	X		0988	H	618-045-5	87674-68-8	approved
Dimethomorph	X	X	0841	F	404-200-2	110488-70-5	approved
Diuron		X	0046	H	206-354-4	330-54-1	not approved
Dodin		X	0048	F	219-459-5	03.10.2439	approved
Endosulfan sulfate	X		-	Met	623-765-8	1031-07-8	
Epoxiconazole	X	X	0875	F	406-850-2	133855-98-8	approved
Famphur	X		-	I, A	200-154-0	52-85-7	not approved
Fenhexamid	X		0956	F	603-167-3	126833-17-8	approved
Fenpropidin		X	0881	F	614-049-6	67306-00-7	approved
Fenpropimorph		X	608	F	266-719-9	67564-91-4	approved
approval expired 30.04.2019							
to be used by 30.10.2020							
Fluazifop-P-butyl	X		0833	H	616-669-2	79241-46-6	approved
Fluazinam		X	0849	F	616-712-5	79622-59-6	approved
Fludioxonil	X	X	0887	F	603-476-3	131341-86-1	approved
Flufenacet	X	X	0922	H	604-290-5	142459-58-3	approved
Fluopicolide	X	X	1058	F	607-285-6	239110-15-7	approved
Fluopyram	X	X	1134	F	619-797-7	658066-35-4	approved
Fluxapyroxad	X		1164	F	620-041-3	907204-31-3	approved
Folpet	X	X	0091	F	205-088-6	133-07-3	approved
Glyphosate	X	X	0405	H	213-997-4	1071-83-6	approved
HCB	X		0137	F		26601-64-9	not approved
HCH-gamma	X		0070	I	200-401-2	58-89-9	not approved
Icaridin	X		-	P	423-210-8	119515-38-7	approved
Iprovalicarb		X	0968	F	604-209-3	140923-17-7	approved
Isoproturon		X	0411	H	251-835-4	34123-59-6	not approved
Isopyrazam		X	1156	F	632-619-2	881685-58-1	approved
Kresoxim-methyl	X		0904	F	417-880-0	143390-89-0	approved
Linuron		X	0071	H	206-356-5	330-55-2	not approved
Mandipropamid	X	X	1085	F	609-434-0	374726-62-2	approved
MCPA	X	X	0074	H	202-360-6	94-74-6	approved
Metamitron		X	0456	H	255-349-3	41394-05-2	approved
Metazachlor	X	X	0617	H	266-583-0	67129-08-2	approved
Methoxyfenocide		X	1020	I	605-245-2	161050-58-4	not approved
Metobromuron	X		0217	H	221-301-5	3060-89-7	approved
Metolachlor	X		0963	H	257-060-8	51218-45-2	approved
Metrafenone	X	X	1040	F	606-928-8	220899-03-6	approved
Metribuzin	X		337	H	244-209-7	21087-64-9	approved
Myclobutanil	X	X	0776	F	618-198-8	88671-89-0	approved
Nitraline	X		0368	H	225-219-0	4726-14-1	not approved

Substance	Detected in PAS	Detected in FM	BVL Code	Active substance class	EC / List no.	CAS no.	Approval in Germany
Nitrapyrin	X		0580	F	217-682-2	1929-82-4	not approved
Paraoxon-methyl	X		-	Met	625-061-6	950-35-6	
PCB028	X		-	Hilf	230-293-2	7012-37-5	
PCB052	X		-	Hilf	621-615-6	35693-99-3	
PCB101	X		-	Hilf	621-393-0	37680-73-2	
PCB138	X		-	Hilf	621-377-3	35065-28-2	
PCB153	X		-	Hilf	215-648-1	1336-36-3	
Penconazole	X	X	0655	F	266-275-6	66246-88-6	approved
Pendimethalin	X	X	0404	H	254-938-2	40487-42-1	approved
Phenmedipham	X	X	0233	H	237-199-0	13684-63-4	approved
Phosmet	X		0334	I, A	211-987-4	732-11-6	not approved
Piperonylbutoxid (PBO)	X	X	0163	Hilf	200-076-7	51-03-6	approved
Pirimicarb-desmethyl-formamido		X	-	Met	634-777-8	27218-04-8	
Propamocarb		X	0516	F	607-406-2	24579-73-5	approved
Propiconazole	X	X	0624	F	262-104-4	60207-90-1	approved
approval expired 19.06.2019 to be used by 19.03.2020							
Propyzamide	X		0350	H	245-951-4	23950-58-5	approved
Prosulfocarb	X		0763	H	634-871-9	52888-80-9	approved
Prothioconazole desthio	X	X	-	Met	691-449-7	120983-64-4	
Pyraclostrobin		X	1013	F, W	605-747-1	175013-18-0	approved
Pyrimethanil	X		0900	F	414-220-3	53112-28-0	approved
Spirodiclofen		X	1031	I, A	604-636-5	148477-71-8	approved
Spiroxamine	X	X	0914	F	601-505-4	118134-30-8	approved
Tebuconazole	X	X	0784	F	403-640-2	107534-96-3	approved
Tefluthrin	X		0778	I	616-699-6	79538-32-2	approved
Terbuthylazine	X	X	0316	H	227-637-9	5915-41-3	approved
Terbutryn	X	X	0246	H	212-950-5	886-50-0	not approved
Thiacloprid		X	0982	I	601-147-9	111988-49-9	approved
Thiocyclam		X	0497	I	250-859-2	31895-22-4	not approved
Thiophanate-methyl		X	0370	F	245-740-7	23564-05-8	approved
THPI		X	-	Met	201-602-8	85-40-5	
Tolclophos-methyl	X		0621	F	260-515-3	57018-04-9	approved
Tolyfluanid	X	X	0371	F, A	211-986-9	731-27-1	not approved
Triadimenol		X	605	F	259-537-6	55219-65-3	approved
approval expired 31.08.2019 to be used by 28.02.2021							
Trifloxystrobin	X	X	972	F	604-237-6	141517-21-7	approved
Trinexapac-ethyl		X	893	W	680-302-2	95266-40-3	approved

References

Bundesamt für Verbraucherschutz und Lebensmittelsicherheit (BVL).

Online-Datenbank Pflanzenschutzmittel. BVL, Bundesamt für Verbraucherschutz und Lebensmittelsicherheit,

Available from: https://www.bvl.bund.de/DE/Arbeitsbereiche/04_Pflanzenschutzmittel/01_Aufgaben/02_ZulassungPSM/01_ZugelPSM/01_OnlineDatenbank/psm_onlineDB_node.html.

Accessed: 20.04.20.

Substance	Detected in PAS	Detected in FM	BVL Code	Active substance class	<u>EC / List no.</u>	<u>CAS no.</u>	Approval in Germany
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European Chemicals Agency (ECHA).

Informationen über Chemikalien: Registrierte Stoffe.

Available from: <https://echa.europa.eu/de/information-on-chemicals/registered-substances>

Accessed: 22.04.2020.

Bundesamt für Verbraucherschutz und Lebensmittelsicherheit (BVL) (2018)

Untersuchung von Lebensmitteln - Multiverfahren zur Bestimmung von Pestizidrückständen mit GC und LC

nach Acetonitril-Extraktion/Verteilung und Reinigung mit dispersiver SPE in pflanzlichen Lebensmitteln - Modulares QuEChERS-Verfahren.

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