

Chronic exposure of honeybees, *Apis mellifera* (Hymenoptera: Apidae), to a pesticide mixture in realistic field exposure rates

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Table S-I. Concentration of substances ($\mu\text{g/kg}$), with their respective limit of detection (LOD, $\mu\text{g/kg}$), limit of quantification (LOQ, $\mu\text{g/kg}$) and recovery (REC, %), of pollen pellets collected in spring 2012 with pollen traps in an agricultural intensively used region in Southern Germany. (Pollen pellet residue analysis at LUFA Speyer)

	Acetamiprid	Azoxystrobin	Boscalid	Dimethenamid-P	Dimoxystrobin	Methiocarb	Prosulfocarb	Pyraclostrobin	Tau-Fluvalinate	Tebuconazole	Thiacloprid	Triadimenol
LOD ($\mu\text{g/kg}$)	2	2	2	2	2	2	2	2	2	2	2	3
LOQ ($\mu\text{g/kg}$)	5	5	5	5	5	5	5	5	5	5	5	10
REC (%)	90	85	90	89	78	106	134	108	67	84	92	84
Conc. ($\mu\text{g/kg}$)	42.74	<LOQ	29.91	5.31	28.96	47.72	<LOQ	<LOQ	<LOQ	50.05	364.34	72.67

Table S-II. Pesticide concentrations ($\mu\text{g/kg}$) in the artificial bee bread used in the feeding experiment. Trade names of substances, their respective pesticide class, and bee toxicity as given by $\text{LD}_{50\text{oral}}$, and $\text{LD}_{50\text{contact}}$ (PPDB 2016). (Analysis at JKI, Berlin)

	Active compound	Class ^a	Trade name (a.i. g/L or kg)	$\text{LD}_{50\text{oral}}$ 48h ($\mu\text{g/bee}$)	$\text{LD}_{50\text{contact}}$ 48h ($\mu\text{g/bee}$)	Concentration of compounds in pollen-honey diet ($\mu\text{g/kg}$)
Control	Azoxystrobin	F	--- ^b	> 25	> 200	1.3
	Carbendazim	F	--- ^b	> 756	> 50	0.4
	Prosulfocarb	H	--- ^b	103.4	> 80	0.7
	Thiacloprid	I	--- ^b	17.32	38.82	16.0
Pesticide Mixture	Acetamiprid	I	Mospilan [®] (200 g/kg)	14.53	8.09	28.7
	Azoxystrobin	F	Ortiva [®] (250 g/L)	> 25	> 200	1.9
	Boscalid	F	Cantus Gold [®] (200 g/L)	100	> 200	21.6
	Carbendazim	F	--- ^b	> 756	> 50	0.4
	Dimethenamid-P	H	Spectrum [®] (720 g/L)	~ 134	> 131	6.0
	Dimoxystrobin	F	Cantus Gold [®] (200 g/L)	> 79.4	> 100	24.3
	Methiocarb	I	Mesuro [®] (500 g/L)	0.47	0.23	46.0
	Prosulfocarb	H	Boxer [®] (800 g/L)	103.4	> 80	2.5
	Pyraclostrobin	F	F500 [®] (250 g/L)	> 73.1	-	0.2
	Tau-Fluvalinate	I	Mavrik [®] (240 g/L)	12.6	12	1.0
	Tebuconazole	F	Matador [®] (225 g/L)	> 83.05	> 200	33.2
	Thiacloprid	I	Biscaya [®] (240 g/L)	17.32	38.82	243.4
	Triadimenol	F	Matador [®] (75 g/L)	> 224.8	> 200	16.5
Toxic Reference	Fenoxycarb	I	Insegar [®] (250 g/kg)	> 204	> 204	2137
	Azoxystrobin	F	--- ^b	> 25	> 200	1.3
	Thiacloprid	I	--- ^b	17.32	38.82	10.8

^a I = insecticide, F = fungicide, H = herbicide

^b Substances derived from the polyfloral honey and are not added purposely for the experiment