

Analytical services for beeswax

status: January 2021

1. Adulteration (chemical-physical parameters)

code	description	technology	LOQ
45808	appearance	optical	---
45000	acid number ^{a)}	titration	1
45807	colour	RAL	---
45801	density ^{a)}	gravimetry	---
45804	dropping point	ubbelohde	---
45810	fat, Japan wax, resins and soaps	optical	pos./neg.
45805	glycerol-/ polyole	optical	pos./ neg.
45803	insoluble impurities	gravimetry	0,1%
45800	melting point	melting apparatus	---
45802	moisture	azeotropic destillation	0,3%
45806	paraffine-/ ceresin	optical	pos./ neg.
45100	peroxide number ^{a)}	titration	0,5
45200	saponification number ^{a)}	titration	10
45809	solubility	---	---
45600	total hydrocarbons ^{a)}	gravimetry	5%
	packages	description	
316	parameters according RAL-GZ 041 (code 300, 45600, 45804)	acid number, saponification number, ester number (calculated), ratio number (calculated), dropping point, total hydrocarbons	
317	parameters according Pharm Eur. (code 300, 45801, 45804, 45806, 45805)	appearance, solubility, density, acid number, saponification number, ester number (calculated), dropping point, glycerol/ polyole, ceresin/ paraffine	
320	parameters according EU VO 231/2015 (Art. 45808, 45809, 45801, 45000, 45200, 45100, 45804, 45806, 45805, 45810)	appearance, solubility, density, acid number, saponification number, peroxide value, dropping point, paraffin /ceresine, glycerol/ polyols, fat/Japan wax/resins and soaps	
300	wax numbers (code 45000, 45200)	acid number, saponification number, ester number (calculated), ratio number calculated)	

2. Adulteration (gaschromatography)

code	description	technology	LOQ
45400	hydrocarbons (paraffin) ^{a)}	GC	1%
45500	fatty acids (cerotic acid, palmitin acid, stearin acid, vegetal and animal fats) ^{a)}	GC	---
	packages	description	
301	Adulteration of beeswax 1 GC ^{a)} (code: 45400, 45500)	hydrocarbons (paraffin), fatty acids, triglycerides	

3. Pesticides/ Varroacides

code	description	technology	LOQ
33004	Amitraz as Dimethylphenylformamid (DMF) ^{a)}	LC-MS/MS	0,5mg/kg

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32001	DEET ^{a)}	LC-MS/MS	0,1mg/kg
60103	Glyphosate ^{a)}	LC-MS/MS	0,01mg/kg
310	Pesticides/ Varroacides (15 substances) ^{a)} beekeeping relevant Acrinathrin, Boscalid, Brompropylat, Chlorfenvinphos, Coumaphos, Cyfluthrin, Cyhalotrin, Cypermethrin, Deltamethrin, Fluvallinate, Iprodion, Myclobutanil, Tetradifon, Tolyfluanid, Vinclozolin	GC-MS/MS LC-MS/MS	0,5 mg/kg
321	Pesticides/ Varroacides incl. Flumethrin (16 substances) ^{a)} beekeeping relevant Acrinathrin, Boscalid, Brompropylat, Chlorfenvinphos, Coumaphos, Cyfluthrin, Cyhalotrin, Cypermethrin, Deltamethrin, Flumethrin, Fluvallinate, Iprodion, Myclobutanil, Tetradifon, Tolyfluanid, Vinclozolin	GC-MS/MS LC-MS/MS	0,5 mg/kg
323	Pesticides/ Varroacides (21 substances) ^{a)} beekeeping relevant Acrinathrin, Boscalid, Brompropylat, Chlorfenvinphos, Chlorpropylat, Chlorpyrifos, Coumaphos, Cyfluthrin, Cyhalotrin, Cypermethrin, DEET, Deltamethrin, Dichlofluamid, Dimoxystrobin, Flumethrin, Fluvallinate, Iprodion, Myclobutanil, Permethrin, Piperonylbutoxid (PBO), Propargit	GC-MS/MS LC-MS/MS	0,1 mg/kg
315	Pesticides/ Varroacides (67 substances) ^{a)} spectrum XL	GC-MS/MS LC-MS/MS	0,5 mg/kg
314	Pesticides/Varroacides ^{a)} Substances according to Pharm. Eur.	GC-MS/MS LC-MS/MS	depending on substance according to Pharm. Eur.
318	Pesticides/Varroacides (157 substances) ^{a)} (substances based on 314 + 315)	GC-MS/MS LC-MS/MS	depending on substance (see substance list)
505	Pesticides XXL (>450 substances) ^{aU)}	GC-MS/MS LC-MS/MS	depending on substance (see substance list)
329	Pyrethroids (6 substances) ^{a)} Cyfluthrin, lamda-Cyhalothrin, Cypermethrin, Deltamethrin, Fenvalarate, Permethrin	GC-MS/MS	0,1 mg/kg
311	Treatment against waxmoth (2 substances) ^{a)} Dichlorbenzene (DCB), Thymol	GC-MS	0,5 mg/kg
	packages	description	
312	Residues of beeswax 1 ^{a)} (code 310, 311)	Pesticides/ Varroacides, (code. 310), Dichlorbenzene (DCB), Thymol	
313	Residues of beeswax 2 ^{a)} (code 310, 32001)	Pesticides/ Varroacides (code. 310), DEET	
324	Residues of beeswax 3 ^{a)} (code 323, 33004, 311)	Pesticides/ Varroacides (code. 323), Amitraz, Dichlorbenzene (DCB), Thymol	
325	Residues of beeswax 4 ^{a)} (code 310, 32001, 33004, 311)	Pesticides/ Varroacides (code. 310), DEET, Amitraz, Dichlorbenzene (DCB), Thymol	
326	Residues of beeswax 5 ^{a)} (code 321, 32001, 33004, 311)	Pesticides/ Varroacides (code. 321), DEET, Amitraz, Dichlorbenzene (DCB), Thymol	
327	Residues of beeswax 6 ^{a)} (code 315, 33004)	Pesticides/ Varroacides (code. 315), Amitraz	
328	Residues of beeswax 7 ^{a)} (code 321, 33004)	Pesticides/ Varroacides (code. 321), Amitraz	
330	Residues of beeswax 8 ^{a)} (code 321,311, 33004)	Pesticides/ Varroacides (code. 321), Amitraz, Dichlorbenzene (DCB), Thymol	

4. Antibiotics/ pharmacologically active substances

