

Contaminant	Product	Rejection limit	Severity	Likely occurrence	CCP	Control measure	Sampling Plan	Planned frequency (number of samples pr. year)	Number of samples analyzed	Lowest value	Average value	Highest value	Evaluation
Aldrin and dieldrin (sum)	Fishmeal	0.01 mg/kg	high	very low		Periodic testing	Yearly	2	9	n.d.	n.d.	<0,005	Ok
	Fish Oil	0.1 mg/kg	high	low		Periodic testing	Yearly	7	12	n.d.	0,011	0,012	Ok
Camphechlor (toxaphene) Sum of CHB 26, 50, 62	Fishmeal	0.02 mg/kg	high	very low		Periodic testing	Yearly	2	9	n.d.	n.d.	<0,005	Ok
	Fish Oil	0.2 mg/kg	high	low		Periodic testing	Yearly	7	16	n.d.	n.d.	<0,006	Ok
Chlordane (Sum)	Fishmeal	0.02 mg/kg	high	very low		Periodic testing	Yearly	2	9	n.d.	n.d.	<0,01	Ok
	Fish Oil	0.05 mg/kg	high	low		Periodic testing	Yearly	7	15	n.d.	n.d.	<0,01	Ok
DDT (sum of DDT-, DDD- (or TDE-) and DDE-isomers, expressed as DDT)	Fishmeal	0.05 mg/kg	high	very low		Periodic testing	Yearly	2	9	n.d.	n.d.	<0,025	Ok
	Fish Oil	0.5 mg/kg	high	low		Periodic testing	Yearly	7	15	n.d.	0,038	0,120	Ok
Endosulfan (sum of alfa, beta-somers and sulphate)	Fishmeal	0.1 mg/kg	high	very low		Periodic testing	Yearly	2	9	n.d.	n.d.	<0,005	Ok
	Fish Oil	0.1 mg/kg	high	low		Periodic testing	Yearly	7	15	n.d.	n.d.	<0,005	Ok
Endrin	Fishmeal	0.01 mg/kg	high	very low		Periodic testing	Yearly	2	9	n.d.	n.d.	<0,005	Ok
	Fish Oil	0.05 mg/kg	high	low		Periodic testing	Yearly	7	15	n.d.	n.d.	<0,005	Ok
Heptachlor	Fishmeal	0.01 mg/kg	high	very low		Periodic testing	Yearly	2	9	n.d.	n.d.	<0,005	Ok
	Fish Oil	0.2 mg/kg	high	low		Periodic testing	Yearly	7	15	n.d.	n.d.	<0,005	Ok
HCB: Hexachlorbenzene	Fishmeal	0.01 mg/kg	high	very low		Periodic testing	Yearly	2	9	n.d.	n.d.	<0,005	Ok
	Fish Oil	0.2 mg/kg	high	low		Periodic testing	Yearly	7	15	n.d.	0,009	0,010	Ok
HCH: Alfa-isomer	Fishmeal	0.02 mg/kg	high	very low		Periodic testing	Yearly	2	9	n.d.	n.d.	<0,005	Ok
	Fish Oil	0.2 mg/kg	high	low		Periodic testing	Yearly	7	15	n.d.	n.d.	<0,005	Ok
HCH: Beta-isomer	Fishmeal	0.01 mg/kg	high	very low		Periodic testing	Yearly	2	9	n.d.	n.d.	<0,005	Ok
	Fish Oil	0.1 mg/kg	high	low		Periodic testing	Yearly	7	15	n.d.	n.d.	0,008	Ok

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HCH: Gamma-isomer	Fishmeal	0.2 mg/kg	high	very low		Periodic testing	Yearly	2	9	n.d.	n.d.	<0,005	OK
	Fish Oil	2.0 mg/kg	high	low		Periodic testing	Yearly	7	15	n.d.	n.d.	<0,005	OK
Inorganic Arsenic (As)	Fishmeal	2.0 mg/kg	high	very low		Periodic testing	Yearly	2	3	n.d.	n.d.	<0,099	OK
	Fish Oil	2.0 mg/kg	n.a.	n.a.		Periodic testing	Yearly	0	1	n.d.	n.d.	<0,099	OK
Arsenic (As)	Fishmeal	25 mg/kg	high	low		Periodic testing	Yearly	15	88	2,2	5,8	12,0	OK
	Fish Oil	25 mg/kg	high	very low		Periodic testing	Yearly	1	5	4,2	5,4	6,6	OK
Cadmium (Cd)	Fishmeal	2.0 mg/kg	high	low		Periodic testing	Yearly	15	28	0,120	0,730	1,46	OK
	Fish Oil	2.0 mg/kg	high	very low		Periodic testing	Yearly	1	5	n.d.	n.d.	<0,005	OK
Mercury (Hg)	Fishmeal	0.5 mg/kg	high	low		Periodic testing	Yearly	15	18	0,039	0,097	0,157	OK
	Fish Oil	0.5 mg/kg	high	very low		Periodic testing	Yearly	1	5	n.d.	n.d.	<0,005	OK
Lead (Pb)	Fishmeal	10 mg/kg	high	low		Periodic testing	Yearly	15	18	<0,02	0,073	0,422	OK
	Fish Oil	10 mg/kg	high	very low		Periodic testing	Yearly	1	5	n.d.	n.d.	0,07	OK
Chromium (Cr)	Fishmeal	n.a. mg/kg	medium	very low		Periodic testing	Yearly	1	52	<0,20	1,55	6,20	OK
	Fish Oil	n.a. mg/kg	medium	very low		Periodic testing	Yearly	0	3	n.d.	n.d.	0,093	OK
Fluor/Fluorine/Fluoride	Fishmeal	500 mg/kg	low	very low		Periodic testing	Yearly	0	0	n.a.	n.a.	n.a.	OK
	Fish Oil	500 mg/kg	low	very low		Periodic testing	Yearly	0	0	n.a.	n.a.	n.a.	OK
Nitrite	Fishmeal	30 mg/kg	low	very low		Periodic testing	Yearly	0	0	n.a.	n.a.	n.a.	OK
	Fish Oil	15 mg/kg	low	very low		Periodic testing	Yearly	0	0	n.a.	n.a.	n.a.	OK
Melamine	Fishmeal	2.5 mg/kg	medium	very low		Periodic testing	Yearly	1	52	n.d.	n.d.	<0,5	OK
	Fish Oil	2.5 mg/kg	n.a.	n.a.		Periodic testing	Yearly	0	n.a.	n.a.	n.a.	n.a.	OK

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Aflatoxin B1	Fishmeal	0.02 mg/kg	high	n.a.		Periodic testing	Yearly	0	0	n.a.	n.a.	n.a.	Ok
	Fish Oil	n.a.	n.a.	n.a.		Periodic testing	Yearly	0	0	n.a.	n.a.	n.a.	Ok
Dioxin	Fishmeal	1.25 ng/kg	high	high	CCP	Continuous monitoring	Positive release	Every batch	Every batch	0,115	0,443	0,773	Ok
	Fish Oil	5,0 ng/kg	high	high	CCP	Continuous monitoring	Positive release	Every batch	Every batch	0,238	0,73	1,46	Ok
Dioxinlike PCBs	Fishmeal	2.75 ng/kg	high	low		Periodic testing	Yearly	15	22	0,036	1,12	2,01	Ok
	Fish Oil	15 ng/kg	high	medium		Periodic testing	Yearly	22	Every batch	0,284	1,98	5,23	Ok
Non-dioxinlike PCBs	Fishmeal	30 ug/kg	high	low		Periodic testing	Yearly	15	22	0,354	4,99	8,2	Ok
	Fish Oil	175 ug/kg	high	medium		Periodic testing	Yearly	22	Every batch	11,6	37,0	71,7	Ok
DNA, animal/ruminat components	Fishmeal	Present	high	low		Periodic testing	Yearly	19	99	n.d.	n.d.	n.d.	Ok
	Fish Oil	n.a.	n.a.	n.a.		Periodic testing	Yearly	0	n.a.	n.a.	n.a.	n.a.	Ok
Enterobacteriaceae	Fishmeal	300 kve/g	high	high	CCP	Continuous monitoring	Positive release	Every batch	Every batch	n.d.	n.d.	<10	Ok
	Fish Oil	n.a.	n.a.	n.a.				0	n.a.	n.a.	n.a.	n.a.	Ok
Salmonella	Fishmeal	Present	high	high	CCP	Continuous monitoring	Positive release	Every batch	Every batch	n.d.	n.d.	n.d.	Ok
	Fish Oil	Present	high	very low		Periodic testing	Yearly	1	1	n.d.	n.d.	n.d.	Ok
Biogenic amine, Histamine	Fishmeal	n.a.	low	high		Periodic testing	Yearly	15	137	3,0	172	1310	Ok
Biogenic amine, Cadaverine	Fishmeal	n.a.	low	high				15	110	15	756	2040	Ok
Synthetic antioxidant BHA, BHT and Ethoxyquin (individual DL max. 1 mg/kg)	Naturox Fishmeal	5,0 mg/kg	low	low		Periodic testing	Yearly	3	0	n.d.	n.d.	<5,0	Ok
	Naturox Fish Oil	5,0 mg/kg	low	low				1	2	n.d.	n.d.	2,16	Ok

n.a. = not applicable

n.d. = not detected

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Sampling frequency: Calculation of the required number of samples pr. year: $\frac{\sqrt{\text{Produced volume}}}{100}$ (Fishmeal=94.806 ton, Fish Oil=21.773 ton)
 • Severity (Low=1, Medium=3, High=5) • Likely occurrence (Very low=0,1, Low=1, Medium=3, High=5/Every batch)

Source: GMP+BA4, Fact sheets and risk assessments

Fishmeal factor 3,08

Fish Oil factor 1,48

Fishmeal sampling frequency (Fishmeal factor x Severity x Likely occurrence)

High	2	15	46	Every batch
Medium	1	9	28	46
Low	0	3	9	15
	Very low	Low	Medium	High

Fish oil sampling frequency (Fish Oil factor x Severity x Likely occurrence)

High	1	7	22	Every batch
Medium	0	4	13	22
Low	0	1	4	7
	Very low	Low	Medium	High