FACTS AND INFORMATION ON ALL ASPECTS OF QS FEED MONITORING

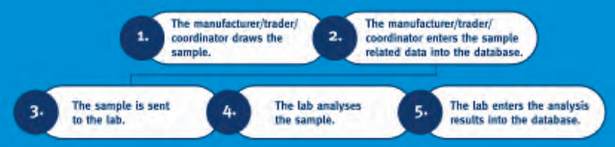
HIGH REQUIREMENTS PROFILE FOR LABORATORIES

Only laboratories with QS recognition may be commissioned with analysis within the scope of QS feed monitoring. For a laboratory to acquire recognition, it must have accreditation in accordance with the standard EN ISO/IEC 17025 and must also be able to prove that participated in ring trials on the parameters prior to recognition. On top of all of this, a laboratory must show that it has mastered the test methods prescribed by QS and provide a list with parameters and their detection limits, as well as analysis range for the area of feeds. To retain QS recognition, all labs are obliged to provide evidence of participation in ring trials for the parameters recognised at QS.

SPECIALISED SKILLS FOR SAMPLING

Every company that produces or deals in feed must participate in Feed Monitoring. The feed companies can draw the samples required here by themselves (exception: farmers). This may appear critical at first glance but it provides security nevertheless through the cross-stage approach in the QS scheme, as every stage draws samples when raw goods are received and finished goods are shipped. In this way, the chain mutually controls itself. Sampling in agriculture is organised by the coordinators. Samples in agricultural companies must always be drawn by third parties and the auditors usually draw feed samples during independent inspections. A fundamental rule is that only qualified persons are allowed to draw samples.

FROM THE SAMPLING TO THE DATABASE



RISK-ORIENTATED CONTROL PLANS

Within QS feed monitoring, there is a large number of different control plans customised specifically to each sector. The control plans are checked regularly and can be adapted as soon as current developments and occurrences in the market require a response. The analysis results also flow into the preparation of control plans, of course. If products are conspicuous in a negative way, the inspection frequency is increased. If numerous examinations show a low risk, however, the inspection frequency is decreased. ■

OBLIGATION TO REPORT INCIDENTS TO QS

- **Maximum level exceeded:** The batch must be rejected as the product is no longer marketable and may not be fed to animals. The scheme participant must also report the circumstances to QS head office with the help of the paper of incident.
- **Action threshold exceeded:** If an action threshold is exceeded, the business must closely examine its processes to establish the causes and introduce corrective measures, but the product may remain on the market. A report on the circumstances to QS is mandatory.
- **Guidance value exceeded:** If the QS guidance value, which is established for selected substances and for use with certain animals (e.g. Aflatoxin B1 with dairy cattle) is exceeded, a restriction is imposed in the QS scheme whereby although the product remains marketable, it may not be traded freely in all instances. The circumstances have to be reported to QS head office (paper of incident) which then coordinates with the scheme participant on how to proceed further.
- **If there are positive findings** of salmonella, antimicrobially effective substances and livestock, the company must report the circumstances to QS (paper of incident). A differentiation with regard to the serovar, the antimicrobially effective substance and the animal species is also necessary.
- **If the EU guidance value has been exceeded** for DON, ZEA or OTA, there is no requirement to report to QS but internal measures must be taken within the business to determine and document how the goods are handled.

Note: In addition to the obligation to report to QS, there are also obligations to report to the feed monitoring authority.

Quality Assurance. **From farm to shop.**

FEED

MONITORING-**REPORT**

Figures & facts on contaminants in feed

2015

QS. Ihr Prüfsystem für Lebensmittel.

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FIGURES & FACTS ON CONTAMINANTS IN FEED

More than 2 million individual analysis were evaluated for this Monitoring-Report 2015 – that is around 330,000 analysis more than in last year's report. All of the analysis results and feeds in which undesired substances were most frequently found have been updated for you. Comparison with the Monitoring-Report 2014 shows that above all with DON (+14) and ZEA (+9), the number of instances where the limit has been exceeded has risen. To classify the results correctly, the related measured value ranges of each analysis result are shown. They help you to set the results in relation to the limit values for each of the various feeds. With the help of this poster, you can compare the analysis results with those of your own feeds.

Data basis: Analysis results of QS feed monitoring from January 2008 to July 2015

Aflatoxin B1

Parameter	Number of analysis	Number of exceedances	... in feed/ raw material
Aflatoxin B1	**24,122** Von 24,122 Of the 24,122 analysis, a value was determined with 2,347 (9.7 %)	**5 in total**	
		4	Maize
		1	Maize gluten meal

Analysis results for Aflatoxin B1 in detail

Feed	Result	Result	Result
Feed Material Of the 1,845 analysis for which a value was determined, results were as follows ...	**0-10 µg/kg** 1,747 between 0 and 10 µg/kg	**› 10-20 µg/kg** 93 between 10 and 20 µg/kg	**› 20 µg/kg** 5 over 20 µg/kg
Compound Feed Of the 502 analysis for which a value was determined, results were as follows ...	**0-5 µg/kg** 495 between 0 and 5 µg/kg	**› 5-10 µg/kg** 7 between 5 and 10 µg/kg	**› 10 µg/kg** No value over 10 µg/kg was detected

Deoxynivalenol (DON)

Parameter	Number of analysis	Number of exceedances	... in feed/ raw material
DON	33,443 Of the 33,443 analysis, a value was determined for 17,338 (51.8 %)	57 in total	
		15	Self-mixed feed for fattening pigs/sows/piglets
		11	Complete feed for sows
		13	Complete feed for fattening pigs
		4	Piglet rearing feed
		5	Supplementary feed for sows/piglets/ fattening pigs
		6	Maize (plants)
		1	Wheat
		1	Oats
		1	Maize gluten

Analysis results for DON in detail

Feed	Result	Result	Result
Feed Material Of the 10,791 analysis for which a value was determined, results were as follows ...	**0-5 mg/kg** 10,637 between 0 and 5 mg/kg	**› 5-8 mg/kg** 84 between 5 and 8 mg/kg	**› 8 mg/kg** 70 over 8 mg/kg
Compound Feed Of the 6,547 analysis for which a value was determined, results were as follows ...	**0-0,9 mg/kg** 6,365 between 0 and 0.9 mg/kg	**› 0,9 mg/kg** 182 over 0.9 mg/kg	

Zearalenone (ZEA)

Parameter	Number of analysis	Number of exceedances (EU guidance value)...	... in feed/ raw material
ZEA	31,258 Of the 31,258 analysis, a value was determined with 11,421 (36.5 %)	16 in total	
		3	Piglet rearing feed
		6	Corn (plants)
		1	Triticale
		1	Self-mixed pig fattening feed
		1	Self-mixed cattle-fattening feed
		1	Supplementary feeds for fattening pigs
		3	Complete feed for Sows/fattening pigs

Analysis Results of ZEA in detail

Feed	Result	Result	Result
Feed Material Of the 6,193 analysis for which a value was determined, results were as follows ...	**0-1 mg/kg** 6,067 between 0 and 1 mg/kg	**› 1-2 mg/kg** 61 between 1 and 2 mg/kg	**› 2 mg/kg** 65 over 2 mg/kg
Compound Feed Of the 5,228 analysis for which a value was determined, results were as follows ...	**0-0,1 mg/kg** 4,989 between 0 and 0.1 mg/kg	**› 0,1 mg/kg** 239 over 0.1 mg/kg	

Dioxins, dioxin-like PCBs (dl PCB) and non-dioxin-like PCBs (ndl PCB)

Parameter	Number of analysis	No. of exceedances (max. level)	No. of exceedances (guidance value/ action threshold)...	... in feed/ raw material
Dioxins and dl PCB	**46,409**	**9 in total**	**5 in total**	
Dioxins	Of the 19,886 analysis, a value was determined for 17,193 (86.5 %)	1	1	(Sugar) beet molasses chips, (sugar) beet small parts
		1	1	Fatty acids from the chemical refining (refinery fatty acids)
		2	–	Fruit marc
		–	1	Fatty acid salts
		–	1	By-products of the milk-processing industry
		1	–	Fish oil
dl PCB	Of the 17,657 analysis, a value was determined for 14,566 (82.5 %)	No maximum levels were exceeded	1	(Sugar) beet molasses chips
Total dioxins and dl PCB	Of the 8,866 analysis, a value was determined for 7,428 (83.8 %)	1	–	Fatty acids from the chemical refining (refinery fatty acids)
		1	–	Shrimps
		1	–	Fish oil
		1	–	Fruit marc
ndl PCB	**13,874** Of the 13,874 analysis, a value was determined for 7,383 (53.2 %)	**1 in total**		
		1	–	Compound fatty acids

Analysis results for dioxins, dioxin-like PCBs and non-dioxin-like PCBs in detail

Parameter	Result	Result	Result
Dioxins Of the 17,193 analysis for which a value was determined, results were as follows ...	**0-0,25 ng/kg** 15,868 between 0 and 0.25 ng/kg	**› 0,25-0,5 ng/kg** 1,021 between 0.25 and 0.5 ng/kg	**› 0,5 ng/kg** 304 over 0.5 ng/kg
dl PCB Of the 14,566 analysis for which a value was determined, results were as follows ...	**0-0,2 ng/kg** 13,864 between 0 and 0.2 ng/kg	**› 0,2-0,35 ng/kg** 327 between 0.2 and 0.35 ng/kg	**› 0,35 ng/kg** 375 over 0.35 ng/kg
Total Dioxins + dl PCB Of the 7,428 analysis for which a value was determined, results were as follows ...	**0-0,5 ng/kg** 6,826 between 0 and 0.5 ng/kg	**› 0,5-1,0 ng/kg** 286 between 0.5 and 1.0 ng/kg	**› 1,0 ng/kg** 316 over 1.0 ng/kg
ndl PCB Of the 7,383 analysis for which a value was determined, results were as follows ...	**0-5 µg/kg** 6,670 between 0 and 5 µg/kg	**› 5-10 µg/kg** 374 between 5 and 10 µg/kg	**› 10 µg/kg** 339 over 10 µg/kg

Salmonella

Parameter	Total number of analysis	No. of positive findings	... in feed/ raw material
Salmonella	**57,178** 57 of 57,178 samples tested positive (0.1 %)	**57 in total**	
		12	Pig feed
		12	Rapeseed meal, cake
		7	Soya (bean) cake, peel, meal
		5	Dairy cattle, cattle feed
		4	Sunflower seed, cake, meal
		5	Poultry feed
		3	Cocoa shells
		9	Various feed materials

Heavy Metals

Parameter	Number of analysis	Number of exceedances (max. level) ...	... in feed/ raw material
Heavy metals	**125,999**	**13 in total**	
Arsenic	Of 30,848 analysis, a value was determined for 10,274 (33.3 %)	1	Supplementary feed for pigs
		1	Supplementary feed for fattening pigs productionr
		1	Shrimps
		1	Yeast
Lead	Of 32,187 analysis, a value was determined for 14,458 (44.9 %)	1	Complete feed for fattening pigs production (up to 50 kg)
		1	Calcium carbonate
		1	Yeast
Cadmium	Of 32,023 analysis, a value was determined for 20,412 (63.7 %)	1	Cocoa shells
		1	Growing crops on permanent grassland (fresh, siliaged or dried)
		1	Shrimps
Mercury	Of 30,941 analysis, a value was determined for 2,893 (9.4 %)	2	Yeast
		1	Supplementary feed for pig production

Analysis results for heavy metals in detail

Parameter	Result	Result
Arsenic Of the 10,274 analysis for which a value was determined, results were as follows ...	**0-1 mg/kg** 8,116 between 0 and 1 mg/kg	**› 1 mg/kg** 2,158 over 1 mg/kg
Lead Of the 14,458 analysis for which a value was determined, results were as follows ...	**0-5 mg/kg** 13,908 between 0 and 5 mg/kg	**› 5 mg/kg** 550 over 5 mg/kg
Cadmium Of the 20,412 analysis for which a value was determined, results were as follows ...	**0-1 mg/kg** 20,034 between 0 and 1 mg/kg	**› 1 mg/kg** 378 over 1 mg/kg
Mercury Of the 2,893 analysis for which a value was determined, results were as follows ...	**0-0,05 mg/kg** 2,638 between 0 and 0.05 mg/kg	**› 0,05 mg/kg** 255 over 0.05 mg/kg

Imprint
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