

REPORT: 180993996

VOORBEELD ANALYSE
 Bodemroute 47
 0123 NN BODEMDAM

ANALYTICAL RESULTS FECES DIGESTION MONITOR - TOXINS

Sample name	Sample nr.	Code analysis
Faeces	93996	490.QRDC
	sample analysis	interpretation
ASPERGILLUS		remarks:
Aspergillus fumigatus var. fum.	1204	?
Aspergillus f. var. fum. Azol-resistant	< 1	?
Other aspergillus fumigatus sc.	2496	?
Aspergillus terreus	< 1	?
Aspergillus section nigri	< 1	?
Aspergillus spp.	< 1	?
CLOSTRIDIA		
Clostridium botulinum	< 17	? *)
Clostridium perfringens	< 17	? *)
Clostridia spp.	2400	?
Other sulfite reducing clostr.	< 50	?
VARIOUS FUNGI		
Penicillium roquefortine group	250	?
Penicillium griseofulvum	< 150	
Penicillium spp.	< 150	
Geotrichum candidum	37750	?
Philiaphora spp.	< 250	?
Scopilariopsis spp.	< 250	?
CANDIDA		
Candida albicans	< 50	?
Candida krusei	5000	?
Candida glabrata	< 50	?
Candida tropicalis	< 50	?
UNDIGESTED FEED %	5 20 28 35 40	
Undigested feed	26.6	
PROTEIN %	0 14 16 20 25 30	
Defecated protein (incl. NPN)	20.2	
DRY MATTER %	0 13 17 30	
Dry matter	13.8	
Fatty acid content (mg / kg)		?

*) Not detected

**) Will only be shown if sufficient information about the diet have been received along with sample(s).

Legend

- deficiency / too low
- target value / good / acceptable
- increased / unfavorable
- too high / great chance of issues caused by toxins and digestion problems
- extremely high, often the direct or indirect cause of health issues

Report number: 180993996

4-Jun-2019

Layoutnr.: 11-2017 4QRDC.XLTX

INFORMATION ABOUT THE FECES ANALYSIS DIGESTION MONITOR - TOXINS

In case of an optimal ration and digestion, there is less space for pathogenic bacteria or fungi. This digestion monitor therefore analyzes some species that are important in common digestive disorders. To get a more complete representation, it is important to conduct a "toxin analysis" of the feed.

An up-to-date, well-developed ration overview is required to be able to compose an advice.

If the feed contains little or no toxin formers, but the faeces do, it is rather easy to improve the situation by conducting relatively small adjustments.

Aspergillus fumigatus sc. and terreus (selective microbiological analysis, microscopically confirmed, method Koch) Both fungi damage the immune system by secreting the supertoxin: gliotoxin, but also a cocktail of other mycotoxins. The resistance of the animal to diseases will decrease, this can lead to a number of health problems for the livestock. These mycotoxins are relatively often detected in faeces in large quantities. This is often a result of contaminated feed. However, In about 35% of the contaminated cases, the feed itself is clean, but the faeces are nevertheless contaminated. Causes of contamination in the faeces may be: moderate digestion of the feed or a little too much protein in the ration. The separate *Aspergillus fumigatus* var. *fum.* is possibly harmful to humans (lungs). Both species of *Aspergillus* f. are very harmful to the animal. Other *aspergillus fumigatus* sc. may be slightly less harmful to the animal than the *Aspergillus fumigatus* var. *fum.* The result is shown in units ASP (no k.v.e./g).

Aspergillus section nigri (selective microbiological analysis, microscopically confirmed, method Koch) Less often occurred harmful fungal species.

Aspergillus parasiticus (selective microbiological analysis, microscopically confirmed, method Koch) Less often occurred harmful fungal species. The *Aspergillus parasiticus* can produce the aflatoxin that can be transferred to milk.

Aspergillus spp. (selective microbiological analysis, microscopically confirmed, method Koch) Other *Aspergillus* species that have not been mentioned above.

Clostridium botulinum (selective microbiological analysis, microscopically unconfirmed) This bacteria is better known as Botulism. If desired, further research can be carried out by RNA confirmation. An infection in the gut system can be eliminated by adaption measures to the ration (result shown in k.v.e./g).

Clostridium perfringens conform NEN-EN-ISO 7937 The analysis detected suspicious *Clostridia perfringens*, which is yet to be confirmed (as additional optional research). This bacteria produces, for example, the nerve poison lecithinase, an enzyme that affects the nerves. An infection in the gut system can be eliminated by adaption measures to the ration (result shown in k.v.e./g).

Clostridium spp. conform NEN-EN-ISO 7937 (microbiological analysis) These are various *Clostridia*, no *botulinum* or *perfringens*. Within this broad group of *Clostridia* not all species secrete toxins. If desired, further identification can be determined.

Other sulfite reducing bacteria conform NEN ISO 15213:2003 (microbiological analysis) *Clostridia botulinum*, *perfringens* and the *Clostridium* spp. are (also) sulphite reducing bacteria. Under the title of other sulphite reducing bacteria are only the non-*Clostridia* shown. Sulphite reducing bacteria are an extensive group of bacteria which have the similarity that they produce sulphides, which can fix trace elements such as zinc, manganese, cobalt and copper during the digestion process. The origins of these bacteria, a low oxygen soil among other causes, is comparable to other *Clostridia* in the analysis list, which also produce sulphides.

Penicillium roquefortine group (selective microbiological analysis, microscopically confirmed, method Koch) Infections caused by the *Penicillium roquefortine* group are very common. These do not produce any truly toxic mycotoxins, but they do cause a less optimal digestion. It is common in this case to find a (slightly lower) contamination in the feed.

Undigested feed (rinse sieve analysis, particles > 1.0 mm, gravimetric) Results shown in % of the (dried) faeces.

Fatty acid content (sum parameter, spectrometric) The total of fatty acids found in faeces and urine or salts of fatty acids such as acetic acid, propionic acid, butyric acid, acetates, propionates, butyrates etc.

Koch - Eurolab

Layout: 08-2017 4QRDC.XLT

4-Jun-2019

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