



## Analysis of processed animal proteins in animal feed

AGROLAB specifically tests animal feed for PAP to prevent risks in animal nutrition.

Monitoring and analyzing processed animal proteins (PAP) in feed is part of ensuring a safe food chain. AGROLAB offers comprehensive analysis and tests your feed for compliance with legal requirements.

### Legal background

In order to prevent the spread of BSE, a total ban on the feeding of PAPs to food-producing animals was introduced in 2001. Pets and fur animals were not affected. Several derogations were adopted over the years (summarized on the right).

**Since 2021, the feeding of PAP has been allowed again in the following combinations:**

- + Poultry to pig
- + Pig to poultry
- + Insects to pigs and poultry
- + Pig/poultry/insects to aquaculture animals
- + Caution – no change for ruminants:  
ruminants must not be fed with PAP from other species and PAP from ruminants must not be fed to other species (exception: eggs, milk, hydrolysed protein).
- + Collagen and gelatine from ruminants to pigs, poultry and aquaculture animals



## Your advantage:

The respective scope of the examination is based on the legal requirements.



### Microscopic examination (basic examination)

- Feed for pigs and poultry: terrestrial vertebrates + animals in aquaculture
- Feed for ruminants: terrestrial vertebrates + terrestrial invertebrates + aquaculture animals
- Feed of unknown destination: terrestrial vertebrates + terrestrial invertebrates + aquaculture animals



### DNA detection using PCR (in the case of positive microscopic findings)

- Always: PCR test for ruminant DNA
- Feed for pigs: additional PCR test for pig DNA
- Feed for poultry: additional PCR test for poultry DNA



## Analytics – methods and processes

It is the responsibility of the feed manufacturers to comply with this legal framework and to prevent the unauthorized feeding of PAP. The right choice of analytics is crucial here.

### Microscopic examination

The first step is to conduct a microscopic examination to determine whether PAP is present in the feed. Pigs and poultry are among the terrestrial vertebrates, insects among the terrestrial invertebrates, and fish among the aquaculture animals, for example.

It is very important that you provide us with information about the animal species for which the feed is intended. This is the only way we can ensure that we use the correct and, if necessary, more cost-effective analytical approach. This applies in particular to single feeding stuffs, as the target animal species is often not clearly indicated. Knowledge of the composition of the feeding stuff is also important, as the presence of certain animal components such as milk, eggs, collagen, gelatine and calcium phosphates derived from bones can help the laboratory staff to assess the sample.

### DNA detection using PCR

Assuming that PAP is present in the feed, a specific analysis of ruminant DNA and, if necessary, of pig or poultry DNA is carried out by PCR. This is done if the microscopic examination yields positive results or if the declaration of the feed by the manufacturer indicates the presence of PAP components.

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