



DNA-based meat traceability

Faced with the complexity of the food supply chain, ensuring reliable traceability can be uphill struggle for food operators. This is particularly so in the meat industry. The high number of steps involved in meat production and processing require a robust system to ensure a secure traceability along the entire supply chain.

The advantages of a genotyping traceability system

DNA analysis can contribute to the setting up of a sound traceability system.

Each animal has a unique genetic fingerprint which can serve as a tracer of all products processed from its carcass. The appropriate technical procedure, genotyping in this case, provides the DNA markers that enable both the monitoring and the validation of a theoretical traceability scheme.

Implementing a DNA-based traceability system involves sampling tissues from each animal, characterising its genotype, and then comparing it with the genetic fingerprint of the product to be monitored.

The principles behind the concept

- The ability to demonstrate, both scientifically and unambiguously, the correspondence between a piece of meat and the animal it came from.
- The potential to monitor and verify the reliability of declared paper traceability systems in the meat supply chain, from the animal's birth to its slaughter, and further along all additional steps up to the final consumer.
- The product origin validation.

The same approach can be used to protect quality "label" meat products from counterfeit.

Today's consumers demand full traceability, including identity, origin and specific characteristics. Being able

to demonstrate that a robust system exists is a real competitive differentiator for those involved in the meat sector.

Eurofins TAG™ offer

Our molecular biology experts developed this offer 10 years ago in response to the urgent need for traceability during the BSE crisis (bovine spongiform encephalopathy).



This traceability system was developed in partnership with food professionals and local authorities. Its reliability was confirmed by studies of bovine populations of 14,000 animals.

The Eurofins TAG™ system includes:

- establishing a specific sampling plan for each client
- elaborating a tissue database (reference samples)
- genotyping the samples (DNA extraction, amplification of selected molecular markers, generation of genetic fingerprints)
- validating the announced traceability by comparison of the genetic fingerprints of the reference and control samples.

Eurofins TAG™ also provides evidence of the animal's origin, the quality "label", the place of birth, the farming method, the paternity or the lack of genetic particularity.