



Rapid & reliable identification of meat species by Real-Time PCR

Providing quicker and reliable results

The recent issues of horsemeat adulteration of meat products have highlighted the need for reliable species testing of such products to ensure confidence in the supply chain and regulatory compliance.

The Food Labelling Regulations of 1996 specifies the requirements for all meat ingredients that characterise the product to declare an indication of quantities of such meat.

Fast & reliable results

Eurofins' ISO17025 accredited DNA laboratory "Eurofins Medigenomix" in Germany has a proven track record in DNA testing in this area.

Eurofins meat species testing is an accredited, semi-quantitative test on the basis of Real-Time PCR and DNA sequencing. The combination of two independent DNA methods together with long-term experience in this testing area, allows Eurofins to reliably determine contaminations of foreign DNA of < 1 % in relation to the DNA amount.

The DNA tests are applicable to various matrices and include raw, processed and cooked product. Eurofins routinely tests

for:

- Beef
- Pork
- Goat
- Sheep
- Horse
- Turkey
- Chicken

Positive results are always verified by DNA sequencing, the gold standard for qualitative species determination.

Methods are also available for analysis of highly processed meats where the DNA may be significantly degraded.

Immunological techniques such as ELISA, can be used for screening purpose but care must be taken as there may be cross reactivity with non-target meats species or other artefacts. The limit of detection may not be suitable for low levels of meat.

We offer flexible test systems to suit the different demands. A choice of tests for only three species (economic rates allow for large testing series) or our standard of seven species or testing for additional species is available.

Advantages

The advantages of the Eurofins rapid Meat species identification are:

- Standard Screening of seven or alternatively three species in parallel for one price.
- Flexible test system: Testing of additional species (e.g. venison, donkey, etc) is possible.
- DNA Sequencing to identify the species present.
- Real-Time PCR used for “semi” quantification analysis (major/minor portions) of the species present.
- Can be applied on highly processed food.
- Level of detection as low as 0.01 % can be achieved.
- Highly experienced lab accredited for 5 years for quantitative species determinations (ISO 17025:2005).
- Fast turnaround time available: 2-3 days.

Meat species real-time PCR testing

Test Description	Species tested	Eurofins Test Code
Meat Species Identification by Real-Time	Beef, pork, horse, sheep, goat, chicken, turkey	BJ00T
Meat Species Identification by Real-Time PCR (three species)	Beef, pork, horse	BJ0T3
Meat Species Identification of processed food by Real-Time	Beef, pork, horse, sheep, goat, chicken, turkey	BJ00X
Meat Species Identification of processed food by Real-Time PCR	Beef, pork, horse	BJ0X3
Determination of the species of a piece of meat by DNA Sequencing (qualitative analysis)	All species, incl. game, venison, exotic, etc.	JJB0J

Comprehensive service

Eurofins provides a comprehensive range of state-of-the-art analytical techniques to support our customers' in establishing the safety, composition, authenticity, origin, traceability and purity of our food. Our laboratories in the UK provide microbiological testing, nutritional information, pesticide residues, contaminants, mycotoxins and heavy metals analysis. We are supported by an international network of Eurofins Competence Centres providing vitamins, authenticity and specialist analysis. Please contact us for further information.

