

The importance of animal identification and traceability in food

Animal identification and traceability have become all the more important for consumers, manufacturers and government laboratories. In the event of a crisis, being able to respond promptly and effectively will set businesses apart from their competition. From farm to fork, achieving traceability and conducting animal species testing is crucial for the quality control of products.

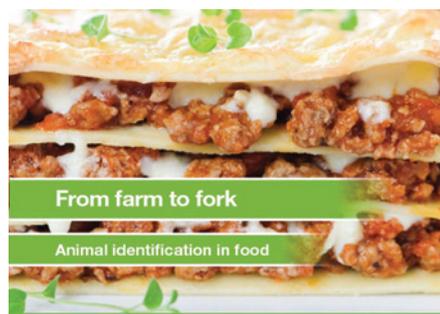
by The Technical Team,
Biotecon Diagnostics.
www.bc-diagnostics.com

This is particularly true when it comes to detecting potential contamination in processed and ready meals, in food that has been prepared according to religious dietary requirements (pork-free food/halal) or in vegetarian/vegan products.

Biotecon Diagnostics' foodproof Animal Detection 1 LyoKit gives peace-of-mind when it comes to ruling out contamination. It is precise, highly sensitive and rapid in its determination of porcine, bovine and equine DNA (horse, donkey, and zebra species) in one multiplex assay and in less than three hours.

Product adulteration as a major concern for discerning consumers

Since the horse meat scandal in Europe in 2013, where horse meat was detected in 'beef' burgers in Great Britain and in lasagne in Germany, consumers have become all the more savvy and, at the same time, sceptical



with regards to product adulteration. Producers of processed or minced meat therefore have a heightened responsibility to disclose all ingredients, including the respective meat products and the animal from which they originate.

The admixture of unwanted meat ingredients in foods arises as a result of negligent and unscrupulous processing of products. This is something the food industry needs to monitor more carefully.

Animal identification due to religious demands

Almost a quarter of the world's population is either Muslim or Jewish and religious stipulations about food needing to be 'halal' or 'kosher' (pork-free), respectively, is particularly important as not even the smallest amount of contamination is tolerated.

In order to meet these expectations, our test systems can be used to reliably and specifically prove whether a certain food contains the following animal DNA: pork, beef, horse, donkey, zebra, chicken, duck, goat, water buffalo, shrimp, and crabs.

Interestingly enough, many non-Muslims eat halal meat for ethical reasons, namely for better safety and control.

There is a definite trend towards halal becoming more mainstream rather than

remaining a niche market, which businesses are beginning to react to.

This means there is a growing demand for purely qualitative and particularly sensitive tests, which are required for the detection of pork.

Accordingly, Biotecon Diagnostics' foodproof Animal Detection 1 LyoKit has been successfully tested on some of the most complex food matrices including, gelatin products (jelly, powder), muscle meat, ready meals (for example lasagne), snack foods and confectionery.

Health-conscious and/or vegan

Consumers are generally becoming more and more health conscious, actively seeking out products that are gluten-free, GMO-free, all-natural and/or vegan.

As such, the trend towards becoming vegan has quadrupled over the last few years. Being vegetarian or vegan nowadays is as much about having an ethical standpoint as it is about choosing a healthier lifestyle for many people, who are proactively cutting out meat from their diets.

The new foodproof Animal Detection 1 LyoKit guarantees: 100% convenience, 100% security, 100% exclusivity. In around 2.5 hours, the fast and user-friendly multiplex test can detect porcine, bovine and equine DNA. So you can be sure the food you are testing is free of any of these animal types.

Key benefits of the foodproof Animal Detection 1 LyoKit include:

- **Fast:** <3 hours to result, less hands-on time with the ready-to-use lyophilised master mix.
- **Sensitivity:** High overall sensitivity of 0.001% of detection limit, even in highly complex matrices, such as gelatin.
- **Differentiation:** Allows the identification of porcine, bovine, horse, donkey, and zebra species in one test.

Today, authenticity and transparency are what consumers gravitate most towards. Accredited and validated products present an opportunity for food companies to stand out as safe and quality producers.

By actively taking the right measures, such producers are addressing the diverse needs of customers and ultimately winning their brand loyalty as a result. ■