

## **P.27.- Molecular multi-detection for speciation testing in feed products. How to address the open question: "What animal species are in this product?"**

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The challenge in the animal feed industry today is driven by the desire and need to produce safe feed for farmed animals. In order to safely and naturally feed farmed animals the composition of the feed must be known at the species level, and this is the challenge. We present a breakthrough technology that has the potential, in conjunction with PCR expertise available in the feed testing industry, to meet this challenge. A high Density DNA chip which supports over 80,000 probes with the capacity to identify over 25 species as well as the classes bird, mammal and fish. The ability to detect these two taxonomic levels is a unique feature of this tool. The probes have been designed based on vertebrate *cytochrome B* sequences to be specific and sensitive. The upstream process involves DNA extraction, PCR, transcription and labelling before the DNA chip system is introduced for hybridisation, scanning and analysis with a simple user-interface. This presentation will present the technology and results of analysis of feed sample analysis. These include samples heated to over 133°C, pre and post pressure cooked, mixed and pure. Finally, we will discuss the potential applications for this tool for feed analysis.

### ***Keywords***

*GeneChip, Meat and Bone Meal, Species, PCR, Animal Feed*