GME
GELATINE MANUFACTURERS OF EUROPE

POSITION PAPER

Identification of animal species origin in gelatine

For the identification of animal species origin in foodstuff, in the recent years several public and commercial laboratories published analytical methods mainly based on DNA identification by PCR (Polymerase Chain Reaction). Some of these laboratories also tested their systems for the application with gelatine and claim to have a valid method for this highly processed product.

The origin of the gelatine produced is actually guaranteed through the manufacturer by the complete and documented traceability of raw materials, the gelatine process technology and the production procedures. To have additional evidence that the gelatine produced is derived from either bovine, porcine or other animal source, GME would welcome a reliable and reproducible testing method for confirming the origin of the finished gelatine and, therefore, fully supports the research in this field.

However no formally validated reference method for gelatine to confirm the origin of its raw materials is available yet. Several tests organised by GME members with specialized laboratories clearly indicated that the current PCR methods are not always suitable for identifying the animal species origin of gelatine and gelatine containing products. False-positive and false-negative results or differences between laboratories do occur due to the specificity of the gelatine processes.

An alternative approach with Elisa testing has not been validated so far.

The above has been confirmed as well by the European Reference Lab for animal proteins in feedstuffs:

"The EURL-AP confirms that there is no PCR method validated for the determination of animal species present in gelatins.
Due to the specific process of these products, there remains no or very few targets that could be amplified by PCR.
False negative results would be frequent rather than false positive results and a LOD would be also very complicated to determine.
To the best of our knowledge, the situation is identical for ELISA or immunological methods in general."

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