

P.23.- Improvement of the STRATFEED microscopy method for determination of animal origin constituents on feedstuffs control

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After the 90's BSE crisis, official methods for feedstuffs control must be suggested in the European Union to observe the fulfilment of law controls against this disease and the use of animal tissues as feed components.

Currently, the microscopy method has been shown as the most effective method to carry out with the European controls due to its easy use in any laboratory, low cost, accuracy and detection limit down to 0.1%, as shown in several interlaboratory assays

Due to the need to establish a common method in the European Union, the Stratfeed project has proposed a common protocol to assay it and, if it is the case, to adopt it as the only European microscopy method. Recently the JRC have developed a validation study with this method in which we have participated.

However, in our view, this method presents some lacks when is compared to the analytical method developed in our laboratory. Our method is been used under accredited system by ENAC (Spanish National Accreditation Agency) since 2001 to official feedstuffs sample control in Andalusia region.

Hence, we suggest the next modifications to improve the proposed protocol by the Stratfeed project:

- a) Do not grind the samples before they were studied under stereoscopic microscope.
- b) Separate the samples in three fractions (light, medium and sediment) instead of two fractions by the proposed method.
- c) Separate each of the above fractions through three sieves of 1, 0.5 and 0.25 Ø mm in four subfractions.
- d) Examine all the obtained fractions with the stereoscopic microscope and confirm the suspicious particles using the compound microscope.

As result of these modifications, the next improvement could be succeed in:

- a) Increase the same class particles number for each fraction.
- b) Avoid the cross contamination among samples by mill use.
- c) Assure very low detection limits (0.05 to 0.5%).
- d) Easier microscopic analysis.
- e) In some cases is possible to distinguish between mammal and poultry bones.

Keywords

Animal tissues identification, microscopic methods, MBM.