P.41.- Validation of the determination of meat and bone meal in feedingstuff with NIR spectroscopy

S. Termes[1], J. Bosch[2], R. Tauler[3], A. Puigdomènech[4]

[1]Laboratori Agroalimetari. Departament d'Agricultura, Ramaderia i Pesca (DARP), Generalitat de Catalunya. Ctra. Vilassar a Cabrils, s/n. Cabrils, Barcelona. Spain (stermesb@gencat.net)
[2]Idem (jaume.bosch@gencat.net)
[3]Department of Environmental Chemistry Institute of Chemistry and Environmental Research, CSIC. Jordi Girona, 18-26, Barcelona. SPAIN. (rtaqam@iiqab.csic.es)
[4]Departament d'Universitats, Recerca i Societat de la Informació (DURSI). Gabinet Tècnic de Recerca. Generalitat de Catalunya. Via Laietana 33, Barcelona. SPAIN (aapuica@gencat.net)

Determination of Meat and Bone Meal in feedingstufs is an important topic since their presence has been related with mad cow decease. Several Regulations and Commission Directives have been adapted to avoid the presence of Meat and Bone Meal in feedingstufs and to establish standard methods of analysis. In 2003 the Commission Directive 2003/126/EC of 23 December 2003 established classical microscopy as the preferred method of analysis.

The main inconvenience of microscopy method is that it needs long time of analysis. In this context, NIR spectrometry has been recently proposed as a fast screening method, to reduce analysis time and to reduce the number of samples to be analysed by microscopy. NIR equations developed in the calibration step must be validated before they can be used in routine analysis of feedingstuff. In this work, NIR equations are validated with a group of samples prepared in the laboratory. Values obtained using the proposed NIR spectrometric methods are compared and validated with known 'true' values and with those obtained using microscopy.

Keywords

Meat and Bone Meal, Feedingstuff, NIR Spectrometry, Microscopy, Validation