DATA BULLETIN

Determination of the N/protein content of animal feed with the rapid MAX N exceed

The N/protein content is a determining factor concerning the quality of animal feed. It must be measured accurately in order to assess the nutritional quality. The rapid MAX N exceed is capable of analyzing the protein content with a high precision. The instrument utilizes the innovative EAS REGAINER® technology, reducing costs of analysis and maintenance significantly.

The samples were finely ground and weighed into standard reusable open crucibles. Analyses were run using a standard method implemented in the instrument software, with a total analysis time of about 5 minutes and argon as carrier gas.

All samples have been analyzed ten times. The average difference between two successive analyses has been calculated to compare to international standard ISO 16634−1 (diff. N < 0.1%) and the relative standard deviation (RSD) to compare to international standard AOAC 990.03 (RSD < 2%).

A protein factor of 6.25 was applied to calculate the average protein content.

SAMPLE	N [%]	PROTEIN [%]	RSD [%] of 10 analyses	DIFF. N [%] of 2 analyses
mare feed	2.91	18.2	1.47	0.072
dairy cow feed	2.93	18.3	0.58	0.021
laying hen feed	2.34	14.6	1.42	0.033
piglet breeding feed	2.89	18.0	1.63	0.062
ewe lamb feed	2.82	17.6	0.69	0.035
quail breeding feed	3.29	20.6	1.16	0.033

The results demonstrate the excellent analytical performance of the rapid MAX N exceed. All samples could be analyzed well within the required precision of the international standards ISO 16634−1 and AOAC 990.03.

The rapid MAX N exceed offers fast N/protein determination with minimal maintenance, resulting in a high sample throughput, ideal for applications in industrial quality control, such as in the animal feed industry.