

DATA BULLETIN

Analysis of N/protein in milk and dairy products with the rapid MAX N exceed

The protein content of dairy products is an important parameter for quality control. Since international standards allow only small error tolerances in protein content, it has to be determined with high precision. The analysis of dairy products is often difficult because of the high fat content of the samples and the consistency ranging from liquid to solid, which poses no problem for the rapid MAX N exceed.

The samples were weighed into standard reusable stainless steel crucibles without any pre-treatment. Analyses were run using a standard method with a total analysis time of about 5 min.

All samples were analyzed twice. The difference between the two analyses was calculated and compared with the maximum allowed difference according to the international standard ISO 14891. A protein factor of 6.38 was applied to calculate the average protein content.

SAMPLE	N [%]	PROTEIN [%]	DIFF. N [%]	max DIFF. N [%] (ISO 14891)
milk	0.497 0.498	3.17	0.001	0.015
buttermilk	0.513 0.515	3.28	0.002	n.a.
yoghurt	0.496 0.511	3.21	0.015	0.080
Emmentaler cheese	4.174 4.101	26.4	0.073	0.182
parmesan cheese	7.212 7.182	45.9	0.030	0.208
cream cheese	0.804 0.796	5.10	0.008	n.a.

The results show the very good analytical performance for all sample types. All samples could be analyzed well within the required precision stated in the international standard ISO 14891.

The rapid MAX N exceed is the first N/protein Dumas analyzer that utilizes the highly successful EAS REGAINER® technology also for larger sample weights. The instrument 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 dairy industry.

INSTRUMENT:

rapid MAX N exceed

DETAILS:

carrier gas: argon

sample: 500–1500 mg dairy products



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