

DATA BULLETIN

High precision nitrogen analyses in yeast samples with the rapid N exceed

In case of homogeneous yeast samples very small differences in nitrogen content can unambiguously be determined with the rapid N exceed. The stable and sensitive thermal conductivity detector (TCD) allows highly reproducible analyses over months without calibration efforts. The rapid N exceed is designed for fast, accurate and cost-effective determination of N/protein in plant material, food and feed as an environmentally friendly alternative to the classical Kjeldahl method.

One fresh and one dry yeast product were weighed into tin boats and formed to pellets with the Elementar pellet press. The samples were analyzed seven times. The average nitrogen and protein content and the corresponding absolute standard deviation are presented below together with the relative standard deviation (RSD) of the measurements. The protein content is calculated from the nitrogen content using a protein factor of 6.25.

SAMPLE	WEIGHT [mg]	N [%]	PROTEIN [%]	RSD [%]
dry yeast	250	7.43 ± 0.018	46.4 ± 0.11	0.24
fresh yeast	450	2.21 ± 0.007	13.8 ± 0.05	0.32

The results clearly demonstrate the excellent analytical performance of the rapid N exceed. The N/protein content could be analyzed with a very high precision. The relative standard deviation of the yeast analyses was well below 0.5%.

The innovative EAS REGAINER® technology of the rapid N exceed allows the analysis of several thousands of samples without maintenance. This results in a reduction of the costs per analysis with more than a factor two compared to similar instruments on the market.

INSTRUMENT:
rapid N exceed

DETAILS:
carrier gas: carbon dioxide
sample: 250–450 mg yeast



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