N / protein analysis has never been that easy!

SUBSTANCE	PROTEIN [%]	ABS. SD [%]
PET FOOD	5.88	0.1
YEAST	13.81	0.1
DRIED YEAST	46.44	0.1
WHEAT FLOUR	10.81	0.03
SLUDGE	16.13	0.1
SOY FLOUR	35.06	0.1
STARCH 1	0.11	0.01
STARCH 2	0.21	0.01
WHEAT BRAN	15.75	0.1
GLUTEN	68.44	0.1
CHEESE	34.06	0.1
CERVELAT (COLD CUT)	21.56	0.6

Sample weight: 200–300 mg, Protein Factor: 6.25

TRUSTFUL QUALITY

Our consumables and spare parts are designed to meet the highest quality standards and reliability. They are certified and validated in accordance with international norms and standards. Whether it is FDA 21 CFR part 11, CE or ISO 9001 – Elementar applies the tightest international regulations governing quality control and product safety.

NORMS AND STANDARDS

The rapid N exceed is in accordance with the majority of international food, feed and fertilizer standards such as ISO 16634-1, ISO 16634-2, ISO 14891, ICC 167, EBC 9.9.1, AOAC 99003, AOAC 99215, AOAC 99223, AOAC 99313 as well as a manifold of national standards, e.g. Lufa and DIN.

IDEAL SOLUTION FOR

- Private food production facilities
- Food analysis contract laboratories
- Public food and farming laboratories
- Academic research groups

SAMPLE TYPES ANALYZED

- Food & beverage
- Food supplement
- Animal feed
- Pet food
- Fertilizer

Low cost per sample

Low consumption of reducing agent and oxygen. Utilization of well-priced carrier gas alternatives to helium.

High data quality

Outstanding precision and accuracy through high performance combustion. Matrix-independent results. Longterm stability of calibration.

Extreme durability

Outstanding robustness and longevity thanks to state-of-the-art technology. 10 year warranty on furnace and TCD cell.

High sample throughput

Designed for 24 / 7 unattended operation. Industry-leading system uptime for highest laboratory efficiency.

Elementargroup – your partner for elemental analysis

Elementargroup is the world leader in high performance analysis of organic elements. Continuous innovation, creative solutions and comprehensive support form the foundation of the Elementar and Isoprime brands ensuring our products continue to advance science across agriculture, chemical, environmental, energy, materials and forensics markets in more than 80 countries.

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EXCELLENCE IN ELEMENTS

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rapid N exceed

Time to rethink in protein analysis

Low cost per sample · **High data quality** · **Extreme durability** · **High sample throughput**

elementar
EXCELLENCE IN ELEMENTS

rapid N exceed

Setting new standards in precision and cost per sample

KEY FEATURES

- Lowest cost per sample
- Inexpensive CO_2 as carrier gas
- EAS REDUCTOR® for up to 2,000 samples
- Fastest analysis (3–4 min.)
- 300 measurements per day
- Ease of use

Lowest cost per sample

The rapid N exceed significantly reduces the consumption of reducing agent thanks to the proprietary EAS REGAINER technology and intelligent oxygen dosing through a ceramic lance. It is now possible to run up to 2,000 samples without the need to exchange the EAS REDUCTOR. In addition, the rapid N exceed uses well-priced CO_2 as carrier gas for unsurpassed low cost per sample.

High sample throughput

The rapid N exceed offers the fastest N/protein determination in less than 4 minutes. During operation the sample feeder is accessible and reloadable at any position and time. The instrument is designed for safe unattended overnight measurements. This allows for more than 300 measurements per day in routine operation.

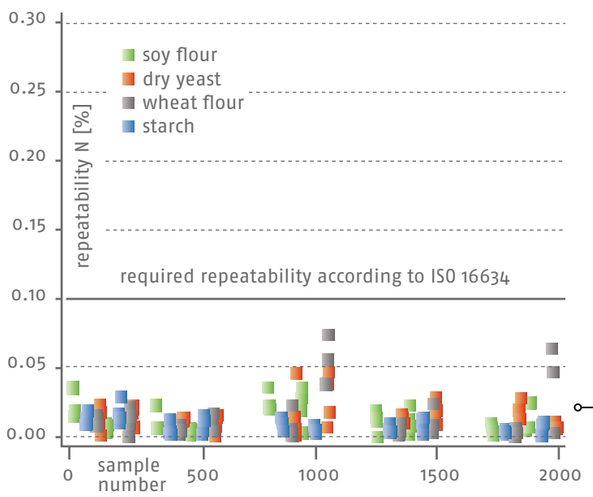
DUMAS, THE METHOD OF CHOICE

All elemental analyzers from Elementar are designed for minimal sample preparation and secure, unattended 24 / 7 operation. They use the safe, simple and environmental friendly Dumas principle. No boiling of concentrated acids, no hazardous waste and no extensive cleaning of glassware in contrast to the wet chemical, time-consuming Kjeldahl method. Results including sample preparation and digestion in less than four minutes! In many application areas Dumas is the standard method, e.g. for N/protein determination of cereals, grains as well as flour and starch.

Faster, more precise, cost-saving, and eco-friendly. The rapid N exceed sets new standards in protein analysis according to the Dumas method. With our patent pending EAS REGAINER® technology, analysis costs are minimized drastically. At the same time, the number of samples that can be measured continuously multiplies. The new rapid N exceed stands for absolute precision and high detection sensitivity.

Reliable results

The rapid N exceed guarantees outstanding precision and accuracy through controlled oxygen jet-injection directly into the active zone and an industry-proven catalytic post-combustion. This leads to matrix-independent results for even hard to digest samples. No need for time-consuming, frequent calibrations or expensive matrix specific standards. All this results in reliably high data quality and a detection limit in the low ppm range.



Outstanding repeatability for different sample matrices over 2,000 consecutive analyses using the rapid N exceed. Each data point is calculated according to the given norms. The required repeatability is marked by a line.

Future-proof investment

Thanks to the outstanding robustness and longevity for all elemental analyzers a 10 year warranty on furnace and thermoconductivity detector (TCD) cell is granted. With our well-known long term oriented dedication to technical support Elementar provides spare parts for a minimum of 10 years after the end of production. This yields outstanding low total cost of ownership and gives customers confidence in return of investment.

EAS REGAINER TECHNOLOGY

Traditionally combustion instruments use heated metals (copper, tungsten) to bind excess oxygen and to reduce formed nitrogen oxides to N_2. This resulted in typical reduction metal lifetimes of several hundred samples. Elementar developed a new (patent pending) method which lowers the maintenance dramatically. In continuous flow the EAS REDUCTOR is regenerated during each combustion phase by the inexpensive EAS REGAINER so that the instrument can be used for the analysis of up to 2,000 samples. In conjunction with the use of carbon dioxide as carrier gas this drastically reduces cost per sample.