

N/Protein Determination in Probiotic Drink according to the Kjeldahl method

Reference: **IDF 20-1, ISO 8968-1 Second Edition 2014-02-01** Milk and milk products - Determination of nitrogen content; **AOAC 991.20** Nitrogen (Total) in Milk

Tested with **VELP Scientifica DKL 20 Automatic Kjeldahl Digestion Unit** (Code S30100210) and **UDK 169 Automatic Kjeldahl Analyzer with AutoKjel Autosampler** (Code S30200160)



Typical Results on Probiotic Drink

The results are automatically calculated by UDK 169 as a percentage of nitrogen and percentage of proteins. This is "protein" on a total nitrogen basis.

Sample quantity (ml)	Nitrogen %*	Protein %
5	0.201	1.283
5	0.203	1.295
5	0.202	1.288
5	0.201	1.283
5	0.201	1.284
5	0.204	1.303
5	0.202	1.288
5	0.200	1.278
5	0.199	1.267
5	0.200	1.274
5	0.200	1.274
5	0.202	1.288
5	0.202	1.286
5	0.202	1.287
5	0.200	1.279
Average ± SD%	0.201 ± 0.001	1.284 ± 0.009
RSD% **	0.686	0.686

Expected Protein Content: 1.3 g/100 ml

Protein Factor: 6.38

* % w/V

** RSD% = (Standard Deviation * 100) / Average

The complete procedure was verified by using 5 ml of glycine standard solution (3%) containing 28 mg of nitrogen, as reference substance. The obtained recovery was >99%.

Conclusion

The obtained results are reliable and reproducible in accordance with the expected values, with a low relative standard deviation (RSD < 1%), that means high repeatability of the results.

Benefits of Kjeldahl method by using DKL 20 and UDK 169 with AutoKjel Autosampler are:

- High level of precision and reproducibility
- Maximum productivity and full automation
- Worldwide official method
- Reliable and easy method
- Time saving
- Moderate running costs