



CONCEPT LIFE SCIENCES

CONCEPT LIFE SCIENCES METHOD STATEMENT NUT007 PROTEIN

INTRODUCTION

The performance of this method is validated in accordance with internationally recognised procedures.

This method is only conducted at the following Concept Cambridge

This procedure describes the determination of protein in foodstuffs.

PRINCIPLE

The nitrogen analyser operates using the Dumas principle - oxidation of sample followed by the reduction of nitrogen oxides to nitrogen; this is then measured using a thermal conductivity cell. The nitrogen result is converted to protein using established factors dependant on sample type.

Note: The nitrogen that is determined may contain a contribution from non-protein nitrogen sources, e.g. urea (mushrooms), nitrates and nitrites (preservatives), caffeine and theobromine (in coffee and chocolate products).

PERFORMANCE CHARACTERISTICS

SUBSTANCES DETERMINED

Nitrogen expressed as protein.

RANGE OF APPLICATION

0.1 – 30 g / 100 g (may be extended by using a lower sample weight)

LIMIT OF DETECTION

0.1 g / 100 g

ANALYTICAL QUALITY CONTROL

Analytical quality control is maintained by a number of measures:

- Calibration with authentic standards (with defined minimum performance characteristics)
- Analysis of control samples within each analytical batch, such as independent standards, matrix spikes or reference materials
- Ongoing quality assured by the use of control charts in conjunction with warning and action limits for the QC sample data
- Participation in external proficiency testing and interlaboratory schemes such as FAPAS



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REFERENCES

- Official Methods of Analysis (AOAC) 16th Edition, 1977. 992.15 Crude Protein in Meat and Meat Products (including Pet Foods).
- JAOAC, Vol. 72, No.5, 1989, P770.
- Pearson's Chemical Analysis of Foods, 9th Edition, Longman Group UK Limited, 1991, 0-582-40910-1.