

DIN EN ISO 8968-4:2016-09 (E)

Milk and milk products - Determination of nitrogen content - Part 4: Determination of protein and non-protein nitrogen content and true protein content calculation (Reference method) (ISO 8968-4:2016)

Contents

	Page
European forewords	4
Forewords	5
1 Scope	7
2 Normative references	7
3 Terms and definitions	7
4 Principle	7
4.1 Indirect protein nitrogen	7
4.2 Direct protein nitrogen	8
5 Reagents	8
5.1 General	8
5.2 Trichloroacetic acid (CCl_3COOH) solution	8
5.3 Hydrochloric acid standard volumetric solution	8
6 Apparatus	8
7 Sampling	9
8 Preparation of test sample	9
9 Procedure — Direct protein nitrogen approach	9
9.1 Test portion	9
9.2 Determination	9
9.2.1 Precipitation and filtration	9
9.2.2 Preparation of the precipitate	10
9.2.3 Digestion and distillation	10
9.2.4 Titration	10
9.3 Blank test	10
9.4 Calculation and expression of results	10
9.4.1 Calculation of protein nitrogen content	10
9.4.2 Expression of results	11
9.4.3 Calculation of true protein content	11
9.4.4 Expression of the true protein content results	11
10 Procedure — Indirect protein nitrogen approach	12
10.1 Nitrogen determination	12
10.2 Non-protein nitrogen determination	12
10.2.1 Test portion	12
10.2.2 Precipitation and filtration	12
10.2.3 Preparation of the filtrate	12
10.2.4 Digestion and distillation	12
10.2.5 Titration	12
10.3 Blank test	12
10.4 Calculation and expression of results	13
10.4.1 Calculation of non-protein nitrogen content	13
10.4.2 Calculation of protein nitrogen content	13
10.4.3 Expression of results	14
10.4.4 Calculation of true protein content	14
10.4.5 Expression of the true protein content results	14

11	Precision	14
11.1	Interlaboratory test.....	14
11.2	Repeatability.....	14
11.3	Reproducibility	14
12	Test report.....	15
Annex A (informative) Results of a collaborative study — Estimation of precision data of direct and indirect methods for the true protein determination.....		16
Bibliography		17