

INTERNATIONAL
STANDARD

ISO
21422

IDF 242

First edition
2018-09

**Milk, milk products, infant
formula and adult nutritionals —
Determination of chloride —
Potentiometric titration method**

*Lait, produits laitiers, formules infantiles et produits nutritionnels
pour adultes — Détermination de la teneur en chlorures — Méthode
par titrage potentiométrique*



Reference numbers
ISO 21422:2018(E)
IDF 242:2018(E)

© ISO and IDF 2018



COPYRIGHT PROTECTED DOCUMENT

© ISO and IDF 2018

All rights reserved. Unless otherwise specified, or required in the context of its implementation, no part of this publication may be reproduced or utilized otherwise in any form or by any means, electronic or mechanical, including photocopying, or posting on the internet or an intranet, without prior written permission. Permission can be requested from either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office
CP 401 • Ch. de Blandonnet 8
CH-1214 Vernier, Geneva
Phone: +41 22 749 01 11
Fax: +41 22 749 09 47
Email: copyright@iso.org
Website: www.iso.org

International Dairy Federation
Silver Building • Bd Auguste Reyers 70/B
B-1030 Brussels
Phone: +32 2 325 67 40
Fax: +32 2 325 67 41
Email: info@fil-idf.org
Website: www.fil-idf.org

Published in Switzerland

Contents

Page

Foreword.....	iv
1 Scope.....	1
2 Normative references.....	1
3 Terms and definitions.....	1
4 Principle.....	1
5 Reagents.....	1
6 Preparation of solutions.....	2
7 Apparatus.....	3
8 Sample preparation.....	4
8.1 Powders, for milk, milk products and infant formula.....	4
8.2 Cheese, for hard or rinded cheese.....	4
8.3 Butter.....	4
9 Extraction.....	4
9.1 Cheese.....	4
9.2 Butter.....	5
9.3 Milk, milk products, infant formula and adult nutritional products.....	5
9.4 Procedure.....	5
10 Instrument operating conditions.....	5
10.1 Check and maintenance of the combined silver electrode.....	5
10.2 Titration.....	5
10.3 Determination of very low amounts of chloride.....	6
10.4 Blank test.....	6
11 System suitability test.....	6
12 Calculations.....	6
13 Precision.....	7
13.1 General.....	7
13.2 Repeatability.....	7
13.3 Reproducibility.....	8
14 Test report.....	9
Annex A (informative) Examples of titration end point determination.....	10
Annex B (informative) Precision data.....	12
Annex C (informative) Comparison of results between sample extraction with and without additional protein precipitation.....	14
Bibliography.....	16