STANDARDS ASSOCIATION OF AUSTRALIA

Australian Standard

METHODS OF CHEMICAL AND PHYSICAL TESTING FOR THE DAIRYING INDUSTRY

AS 2300.1.3
GENERAL METHODS AND PRINCIPLES—DETERMINATION OF FAT—GRAVIMETRIC METHOD

PREFACE

This Standard was prepared by the Association's Committee on Chemical Analysis of Dairy Products as a general method for testing a range of dairy products for fat content using a gravimetric procedure.

This method supersedes similar methods which had been previously published as sections of Australian Standards applicable to specific products. The earlier methods were:

AS	
N48—1965	Section 5, which was an endorsement of BS 1742—1951 with amendment
N60—1978	Section 11
N72—1970	Section 3
N75—1970	Section 4
1084—1975	Section 2 and Section 17
1629—1974	Section 5.2. This was first published as parts of AS N61—1965 and AS N67—1970

SECTION 1. GENERAL METHOD

1.1 SCOPE. This Section sets out a general gravimetric method for the determination of fat in dairy products.

NOTE: Methods of preparation of test samples of specific products for determination of fat content by this method are described in Section 2.

1.2 APPLICATION. A general method is given and this is applicable to prepared samples of a range of dairy products.

1.3 DEFINITION. For the purpose of this Standard, the definition below applies:

Fat content—the substances determined by the procedure described in this Standard.

1.4 PRINCIPLE. The protein in the test portion is dissolved and the fat is freed for extraction by treatment with ammonia or acid solution. Ethanol is added to prevent emulsion formation and the fat is extracted with diethyl ether, after which light petroleum is added to eliminate the lactose and water from the ethereal layer. Solvents are removed by distillation or evaporation, and the mass of the extracted substances which are soluble in light petroleum is determined.

NOTE: Digestion with ammonia is in accordance with the Röse-Gottlieb principle. Digestion with acid is in accordance with the Schmid-Bondzyndki-Ratzlaff principle.

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