Australian Standard®

Methods of chemical and physical testing for the dairying industry

Method 10.6: Caseins, caseinates and coprecipitates—Determination of free acidity of caseins

PREFACE

This Standard was prepared by the Standards Australia Committee on Chemical Analysis of Dairy Products to supersede the corresponding method given in AS N60—1970, *Methods for the sampling and analysis of acid and rennet casein.* This method is based on International Standard ISO 5547, *Caseins—Determination of free acidity (reference method).*

METHOD

1 SCOPE This Standard sets out a method for determining the free acidity of caseins, obtained by acid precipitation or lactic fermentation, and of rennet caseins.

2 REFERENCED DOCUMENTS The following documents are referred to in this Standard:

AS	
2300	Methods of chemical and physical testing for the dairying industry
2300.1.1	General methods and principles—Determination of total solids and moisture
2300.10.1	Caseins, caseinates and coprecipitates—General information and preparation of samples
ISO	
5547	Caseins— Determination of free acidity (reference method)

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

Free acidity of casein—the number of millilitres of 0.1 mol/L standard sodium hydroxide solution required to titrate an aqueous extract of 1 g of casein.

4 PRINCIPLE An aqueous extract at 60°C of a test portion of the casein is filtered, cooled and titrated with a standard volumetric solution of sodium hydroxide using phenolphthalein indicator.

5 REAGENTS

5.1 General requirements Unless otherwise specified, all reagents shall be of analytical reagent grade, and distilled water or water of equivalent purity shall be used.

5.2 Sodium hydroxide, approximately 0.1 mol/L standardized volumetric solution.

5.3 Phenolphthalein indicator, 10 g/L ethanolic solution.

6 APPARATUS

6.1 Conical flask, 500 mL capacity—fitted with a ground-glass stopper.