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PEOPLE'S REPUBLIC OF CHINA

JJF 1820-2020

Calibration Specification for Milk Quantitative Composition Analyzers

乳品成分分析仪校准规范

(English Translation)

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Introduction

This specification is based on JJF 1071-2010 "Rules for Compiling National Measurement and Calibration Specifications", JJF 1059.1-2012 Compilation of "Measurement Uncertainty Evaluation and Representation" and JJF 1265-2010 "Biometric Terms and Definitions". Linearity error the calibration methods and technical indicators of the measurement repeatability and the use of ISO 9622.:2013/IDF141..2013 "Milk and Liquid Dairy Products

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Infrared Spectroscopy Application Guide (Milkandliquidmilkproducts-Guidelinesforthe applicationofmid-infraredspectrometry) section 6.1.4 and section 11.1.

This specification is the first release.

Calibration Specification for Dairy Ingredient Analyzer

1 Scope

This specification is applicable to dairy ingredient analyzers (hereinafter referred to as analyzers) based on the principle of mid-infrared spectral absorption calibration.

2 Reference documents this specification refers to the following documents.

JJF 1071-2010 Compilation Rules for National Measurement and Calibration Specifications GB/T 6682-2008 Analytical laboratory water specifications and test methods for dated reference documents, only the dated version applies to this specification; for those without date references the latest version (including all amendments) is applicable to this specification.

3 Overview

The analyzer is based on the principle of spectral absorption to quickly measure the content of protein, fat, lactose and other components in liquid milk instrument. The analyzer determines the absorbance of liquid milk at a specific wavelength in the mid-infrared the built-in absorbance-content curve equation calculates the protein, fat, lactose and other contents in dairy products. Analyzer Pass it is often composed of light source, wavelength controller, sample cell (including sampler), detector, signal conversion/output, etc.

4 Measurement characteristics Analyzer calibration items and technical index requirements are shown in Table 1.

Table 1 Calibration items and technical index requirements

Calibration items

Technical index

Fat protein lactose

Indication error/(g/100g) ± 0.30 ± 0.30 ± 0.30 Measurement repeatability/(g/100g) 0.04 0.04 0.04 Linearity error /% 2 2 2 Note. The above technical indicators are not used to determine eligibility, for reference only.

5 Calibration conditions

5.1 Environmental conditions According to the environmental conditions specified in the instrument manual, the ambient temperature, relative humidity, etc. should be recorded during the calibration process data.

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5.2 Calibration reference materials and other equipment

5.2.1 Dairy standard substance. at least contains protein, fat, lactose (or total sugar) content, relative expansion is not correct

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