

# Milk Powders - Chemistry

International trade in dairy products is based on confidence from suppliers, customers and regulatory agencies that test results are equivalent between all laboratories throughout a global supply chain. The DairyChek programme provides independent verification that testing laboratories meet the dairy industry's exacting standards.



### PROGRAMME OBJECTIVE

The DairyChek Proficiency Testing scheme has been developed over many years to provide a system for laboratories to validate their testing capability and to benchmark their results among an established network of competent laboratories. The scheme provides independent test verification for more than 120 dairy and nutritional laboratories in 16 countries. The sample types are selected to cover a range of properties representative of internationally traded dairy products.

## **BENEFITS OF PARTICIPATING IN DAIRYCHEK:**

## Confidence in Results

Measurement of performance in comparison with other laboratories provides confidence that:

- Precision and Accuracy of test results and test methods are within acceptable limits
- Results from participating laboratories (or groups of laboratories) are equivalent
- In-house methods are equivalent to national or international standard methods

## Credibility

Performance can be demonstrated to:

- Customers
- Regulatory Authorities
- Accreditation Agencies

## Compliance with

- Laboratory Standards (e.g., ISO 17025)
- · Regulatory and market access requirements

# Optimising Yields

Low levels of bias in simple tests (e.g. moisture) can add up to significant volumes of lost yield (and value) over time.

# ➤ Training

Test performance from individual analysts can be monitored and reported over time.

# **PROGRAMME FEATURES**

- Comprehensive range of sample types and tests, covering the major recognised chemistry and microbiological test methods.
- Separation of data by method (where appropriate).
- High quality and cost-effective reference materials.
- Technical direction from an independent Technical Advisory Group ensuring relevance to current industry needs.
- Accredited to ISO/IEC 17043: Conformity Assessment

   General Requirements for the competence of proficiency testing providers; and ISO 17034: General requirements for the competence of reference material producers.

### **SAMPLE TYPES**

- Skim Milk Powder\*†
- Whole Milk Powder\*†
- \* including micronutrients

Butter Milk Powder

† including vitamins A, C, D

### **AVAILABLE TESTS:**

## WHOLE MILK POWDER (DAA)

Fat (RG)

Moisture (102°C Oven)

Moisture (KF)

Moisture (Reference Dryer)

рН

WPNI Ash

Free Fat - % in powder Titratable Acidity

Insolubility Index 24°C

Protein (Kjeldahl)
Protein (Combustion)

**Protein Combustion** offered in the **June** and **October** 

## SKIM MILK POWDER (DTA)

Fat (RG)

sample set

Moisture (102°C Oven) Moisture (Reference Dryer)

рΗ

WPNI

Titratable Acidity
Insolubility Index 24°C

Protein (Kjeldahl)

# **BUTTER MILK POWDER (DRA)**

Fat (RG)

Moisture (102°C Oven) Moisture (Reference Dryer) Titratable Acidity Insolubility Index 24°C Protein (Kjeldahl)

## **BULK DENSITY (DXA)**

Bulk Density (100 taps)

## **MICRONUTRIENTS (DHA)**

Calcium Chloride Copper

Iodine

Iron

Magnesium

Manganese

Phosphorus

Potassium

Sodium Zinc

**Iodine** offered in the February sample set

## **VITAMINS (DAC)**

Vitamin A Vitamin C Vitamin D

Vitamin D offered in the February and August sample

# INSTANTISED WMP (DAG)

# **Functional Properties**

Coffee Sediment Cold SDP Sediment 85 Dispersibility (Grade 1-7) Wettability

# PURITY & SCORCHED PARTICLES (DAH)

Recovery & Identification Scorched Particles (Grade A-D)

**Scorched Particles** added to the **April** and **October** sample set

Global Proficiency also offers other DairyChek proficiency products including **Fat Products**, **Cheese**, **Protein Products** and **Contaminants** — please request a copy of the Programme Description if you are interested.





# Milk Powders - Microbiology

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## Compliance with

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## Optimising Yields

Low levels of bias in simple tests (e.g. moisture) can add up to significant volumes of lost yield (and value) over time.

## Training

Test performance from individual analysts can be monitored and reported over time.

## **PROGRAMME FEATURES**

- Comprehensive range of sample types and tests, covering the major recognised chemistry and microbiological test methods.
- Participation by numerous accredited laboratories gives high confidence for inter-lab comparisons.
- Separation of data by method (where appropriate).
- Cost-effective quality control materials.
- Technical direction from an independent Technical Advisory Group ensuring relevance to current industry needs.

Accredited to ISO/IEC 17043: Conformity Assessment - General Requirements for the competence of proficiency testing providers; and ISO 17034: General requirements for the competence of reference material producers.

## **SAMPLE TYPES**

**Milk Powder:** Provided as a six-sample set. Samples consist of 6 freeze-dried vials containing microorganisms, with sachets of whole milk and skim milk powder to enable the preparation of a simulated powder sample homogenate.

### **AVAILABLE TESTS:**

## MILK POWDER (DAE)

Aerobic Plate Count

Bacillus cereus (Count, Detection)

Clostridium perfringens (Count, Detection)

Coliforms (Count, Detection, MPN)

E. coli (Count, Detection, MPN)

Enterobacteriaceae (Count, Detection)

Coagulase-positive Staphylococci (Count, Detection)

Yeast & Mould Count

Mesophilic Aerobic Spore Count

Sulphite-reducing Clostridia Spore (SRC) Count

Thermophilic Aerobic Spore Count (100°C)

Thermophiles Count

**Coliforms MPN** and **E. coli MPN** offered in the **August** sample set.

**Bacillus cereus** detection and **Clostridium perfringens** detection offered in the **February and August** sample sets.

## Notes:

For Cr. sakazakii testing please refer to our PathoGens programme

## **ALSO AVAILABLE**

**Inhibitory Substances:** Samples with varying levels of Penicillin G, paired with milk powder and protein powder matrices.

Global Proficiency also offers other DairyChek proficiency products including **Fat Products**, **Cheese**, **Protein Products** and **Contaminants** – please request a copy of the Programme Description if you are interested.

## FOR MORE INFORMATION PLEASE VISIT OUR WEBSITE

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