

## Deliver peak performance in analysis of plant-based products

### MilkoScan™ FT3



MilkoScan™ FT3 delivers the peak performance required for success in the evolving dairy-industry landscape. Now, due to the availability of readymade calibrations for plant-based milk alternatives, it is also a perfect platform for quality and production control of plant-based drinks.

#### Test plant-based products without calibration work

Benefit from global calibrations for plant-based products and a range of parameters for each product type. Representing the latest in rapid analysis with FTIR, MilkoScan FT3 is the perfect platform for both regular dairy and plant-based production.

#### Fast and cost-effective development of new products

Smart flow system handles multiple product categories and auto adjusts to each specific sample. Key calibrations cover multiple products with excellent transferability, reducing the cost of reference testing and calibration management. FossCalibrator™ software enables rapid and effective development of further calibrations.

#### Immediate gains in production and quality control

Secure immediate gains with precise and consistent control of fat, protein, total solids and total sugars. Intuitive touchscreen and software make operation easy for anyone in the plant, ensuring long-term consistency. Rapid and reliable checks on final products.

#### Sample types

Compositional analysis of plant-based products covering: Soy, almond, oat, coconut, rice and pea, including flavoured and unflavoured varieties.

#### Applications

Platform control of raw material, standardisation, process control and optimisation and quality control throughout the production process.

#### Parameters

Global calibration models: Fat, protein, totals solids, total sugars and more.

#### Technology

FTIR technology for analysis of milk, dairy and plant-based products.

# Specifications

| Area   | MilkoScan™ FT3 Specification   |                     |         |                |               |          |          |              |                    |         |         |                  |            |                |                 |             |              |                |                     |
|--|--|---------------------|---------|----------------|---------------|----------|----------|--------------|--------------------|---------|---------|------------------|------------|----------------|-----------------|-------------|--------------|----------------|---------------------|
| <b>Included calibrations</b><br>Milk<br><br>Cream<br>Whey & whey permeate  | Fat, protein, total solids, solids non fat, lactose (incl. low lactose products), glucose, galactose, density, urea, titratable acidity, free fatty acids, casein, citric acid<br>Fat, protein, lactose, total solids, solids non fat<br>Fat, protein, lactose, total solids, solids non fat, titratable acidity   |                     |         |                |               |          |          |              |                    |         |         |                  |            |                |                 |             |              |                |                     |
| <b>Optional calibrations</b><br>Concentrated Whey & Permeate<br>Concentrated & Fortified Milk<br>Yoghurt & Fermented<br><br>Desserts & Ice Cream<br>Plant-based Drinks | Fat, protein, lactose, total solids, solids non fat, titratable acidity<br>Fat, protein, lactose, total solids, solids non fat<br>Fat, protein, lactose, total solids, solids non fat, glucose, fructose, sucrose, total sugars, lactic acid<br>Fat, protein, lactose, total solids, solids non fat, glucose, fructose, sucrose, total sugars<br>Fat, protein, total solids, total sugars  |                     |         |                |               |          |          |              |                    |         |         |                  |            |                |                 |             |              |                |                     |
| Freezing Point (FP)  | Milk freezing point, cream freezing point (by applying conductivity sensor)  |                     |         |                |               |          |          |              |                    |         |         |                  |            |                |                 |             |              |                |                     |
| *Untargeted models for adulteration screening (ASM Models)   | Calibration tool and ready to use abnormal milk screening models.<br>ASM models for: Raw cow's milk, raw buffalo milk, processed milk  |                     |         |                |               |          |          |              |                    |         |         |                  |            |                |                 |             |              |                |                     |
| *Targeted models for adulteration screening (TAM)  | <table border="1"> <tbody> <tr> <td>Ammonium sulphate</td> <td>Maltose</td> <td>Sodium nitrite</td> </tr> <tr> <td>Cyanuric acid</td> <td>Melamine</td> <td>Sorbitol</td> </tr> <tr> <td>Formaldehyde</td> <td>Sodium bicarbonate</td> <td>Sucrose</td> </tr> <tr> <td>Glucose</td> <td>Sodium carbonate</td> <td>Added urea</td> </tr> <tr> <td>Hydroxyproline</td> <td>Sodium chloride</td> <td>Added water</td> </tr> <tr> <td>Maltodextrin</td> <td>Sodium citrate</td> <td>Added fat indicator</td> </tr> </tbody> </table> | Ammonium sulphate   | Maltose | Sodium nitrite | Cyanuric acid | Melamine | Sorbitol | Formaldehyde | Sodium bicarbonate | Sucrose | Glucose | Sodium carbonate | Added urea | Hydroxyproline | Sodium chloride | Added water | Maltodextrin | Sodium citrate | Added fat indicator |
| Ammonium sulphate  | Maltose  | Sodium nitrite      |         |                |               |          |          |              |                    |         |         |                  |            |                |                 |             |              |                |                     |
| Cyanuric acid  | Melamine   | Sorbitol            |         |                |               |          |          |              |                    |         |         |                  |            |                |                 |             |              |                |                     |
| Formaldehyde   | Sodium bicarbonate   | Sucrose             |         |                |               |          |          |              |                    |         |         |                  |            |                |                 |             |              |                |                     |
| Glucose  | Sodium carbonate   | Added urea          |         |                |               |          |          |              |                    |         |         |                  |            |                |                 |             |              |                |                     |
| Hydroxyproline   | Sodium chloride  | Added water         |         |                |               |          |          |              |                    |         |         |                  |            |                |                 |             |              |                |                     |
| Maltodextrin   | Sodium citrate   | Added fat indicator |         |                |               |          |          |              |                    |         |         |                  |            |                |                 |             |              |                |                     |
| Calibration range  | According to application note  |                     |         |                |               |          |          |              |                    |         |         |                  |            |                |                 |             |              |                |                     |
| Accuracy (milk)  | <1.0% C <sub>v</sub> (F, P, L, TS) (guaranteed)<br><0.8% C <sub>v</sub> (F, P, L, TS) (typical)<br><4.0 m°C (FP)   |                     |         |                |               |          |          |              |                    |         |         |                  |            |                |                 |             |              |                |                     |
| Repeatability (milk)   | <0.25% C <sub>v</sub> (F, P, L)<br><0.20% C <sub>v</sub> (TS)<br><1 m°C (FP)   |                     |         |                |               |          |          |              |                    |         |         |                  |            |                |                 |             |              |                |                     |
| Transferability (milk)   | <0.5% C <sub>v</sub> (F, P, L, TS)   |                     |         |                |               |          |          |              |                    |         |         |                  |            |                |                 |             |              |                |                     |
| Carry over (milk and cream)  | <0.5%  |                     |         |                |               |          |          |              |                    |         |         |                  |            |                |                 |             |              |                |                     |
| Adjustment routine   | Automated slope/intercept procedure  |                     |         |                |               |          |          |              |                    |         |         |                  |            |                |                 |             |              |                |                     |
| Sample volume milk and cream   | <8.0 mL  |                     |         |                |               |          |          |              |                    |         |         |                  |            |                |                 |             |              |                |                     |
| Measurement time (milk)  | 30 seconds   |                     |         |                |               |          |          |              |                    |         |         |                  |            |                |                 |             |              |                |                     |
| Sample temperature   | 5 - 55 °C (the sample must be homogeneous)   |                     |         |                |               |          |          |              |                    |         |         |                  |            |                |                 |             |              |                |                     |
| Ambient temperature  | 10 - 35 °C   |                     |         |                |               |          |          |              |                    |         |         |                  |            |                |                 |             |              |                |                     |
| Advanced flow system   | Automatic zero setting and clean. Cleaning defined according to properties and auto-adjust to each specific sample   |                     |         |                |               |          |          |              |                    |         |         |                  |            |                |                 |             |              |                |                     |
| Automatic humidity control   | Protected automatic drying system  |                     |         |                |               |          |          |              |                    |         |         |                  |            |                |                 |             |              |                |                     |
| Intelligent diagnostics  | Built-in ID chips for wear-time logging, service history and troubleshooting   |                     |         |                |               |          |          |              |                    |         |         |                  |            |                |                 |             |              |                |                     |
| Network connections  | LIMS, FossManager™   |                     |         |                |               |          |          |              |                    |         |         |                  |            |                |                 |             |              |                |                     |
| Demineralised water quality  | ISO Grade 3 / ASTM Type IV or better   |                     |         |                |               |          |          |              |                    |         |         |                  |            |                |                 |             |              |                |                     |
| Weight and dimensions (W x D x H)  | 43 kg / 750 x 450 x 408 mm   |                     |         |                |               |          |          |              |                    |         |         |                  |            |                |                 |             |              |                |                     |

\*Using conductivity sensor for optimal performance

MilkoScan™ FT3 is in compliance with AOAC (Association of Analytical Chemists) and IDF (International Dairy Federation).

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GB, April 2021