

# ADVANCED® 4250 SINGLE-SAMPLE CRYOSCOPE

## SUPERIOR ACCURACY AND RELIABILITY IN TWO MINUTES

The Advanced® 4250 Single-Sample Cryoscope uses the industry-preferred freezing point method to precisely determine the amount of added water in milk.

The Model 4250 Cryoscope utilizes high precision thermistors to sense the sample temperature, control the degree of super-cooling and freeze induction, and to measure the freezing point of the sample.

Though varying slightly by animal (cow, sheep, goat, buffalo) and diet, the freezing point of authentic samples of fresh, raw milk should be fairly consistent.

Milk becomes susceptible to both dilution and contamination as soon as it has been harvested. Milk samples found to have a freezing point warmer than established regional norms may be suspected of dilution. Furthermore, milks found to have a freezing point colder than normal may have soured or become contaminated. Combinations of both effects are quite possible and detected by freezing point.

### Superior Results

The Advanced 4250 offers both the International Reference and screening freezing point methods for rapid, precise, reliable results.

### Versatile Operating Mode

Standard design includes m°C or m°H scale, timed plateau or plateau seeking modes, and multi-language display prompts.

### Ease Of Use

Microprocessor control optimizes on-board data management capability and promotes seamless instrument operation.

Calibration of the Advanced 4250 requires no user adjustments; just follow the instrument's prompts.

### Productivity Rewards

The 4250 cryoscope allows your plant to manage a premium milk supply, ensure quality products and improve your operating efficiency.

### Robust Design

A frost-free cooling chamber eliminates most routine maintenance. In addition, the 4250 sample probe and stir-wire are fully accessible for easy cleaning.

Other features including simple push-button design, multi-language capability, statistical analysis, and automated calibration make the Advanced 4250 Single-Sample Cryoscope an industry standard.

### Flexible Reporting Options

The 4250 offers a full range of data handling capabilities with an on-board printer and barcode scanner. Instrument memory provides electronic storage and retrieval of up to 30 test results.

### Hot-Line® Service

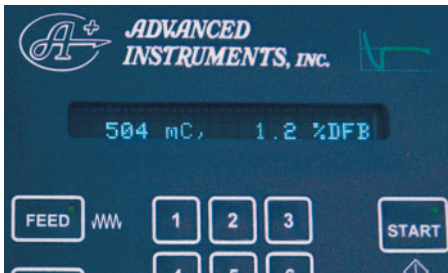
Advanced Instruments Hot-Line Service and worldwide distributor network provide comprehensive customer service and technical support 24/7.

By using the Model 4250 cryoscope, sample tubes (P/N 3LA823) and associated supplies, laboratories will meet ISO5764 regulations related to added water in milk.



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With the Model 4250, a user can develop a freezing point range by producer, enabling storage of a “base” freezing point in the instrument memory and displaying with each sample test result the percent difference between the test result and the stored base.



The Intel® Microprocessor allows the user to recall the last 30 test results along with date and time.



The Model 4250 can be used with an optional bar code scanner –providing positive sample identification and minimizing transcription errors.

Available from:

### Model 4250 Single-Sample Cryoscope Specifications

Sample Volume	2 or 2.5 mL
Test Time	Approximately 90 seconds in the 30-second timed mode
Sample Capacity	Single Sample
Units	-m°C or -m°H
Resolution	1 m°C or m°H
Range	0 to 1000 m°C or m°H
Communications	On-board printer, DTE RS-232 serial port, and optional barcode scanner

#### Performance at Reference Conditions<sup>1</sup>

Linearity	Less than ±0.5% from a straight line
Repeatability	±2 m°C or m°H (1 S.D.)
Drift	Less than 1 m°C or m°H per month

#### Performance Over Operating Conditions

Temperature Effects	Less than 1 m°C or m°H per 5°C (9°F) ambient temperature change
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#### Operating Conditions

Temperature	18 to 35°C (64 to 95°F)
Humidity	5 to 80% relative humidity, (non-condensing)

Storage Temperature -40 to +45°C (-40 to +113°F)

#### Electrical

Voltage	100 to 130 VAC (50/60 Hz) or 200 to 250 VAC (50/60 Hz)
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Power Consumption 150 Watts

Dimensions 16.0” H x 13.0” W x 18.0” D  
40.6 cm x 33.0 cm x 45.7 cm

Net Weight 28.0 lbs. (12.7 kg)

Shipping Weight 39.0 lbs. (17.7 kg)

Warranty One year limited warranty on workmanship and all parts except glass, plastic, and parts warranted by their makers

#### Certification



<sup>1</sup>Reference Conditions 20 to 25°C (68 to 77°F); 40 to 60% relative humidity; tolerances of reference or calibration solutions excluded

Specifications subject to change

### Other Advanced Instruments cryoscopes:

#### Advanced Model 4C3 Cryoscope

For rapid testing of high volume workloads.

#### Hot-Line® Technical Service

Advanced Instruments Hot-Line® Service and worldwide distributor network provide comprehensive customer service and technical support.

For more information on Advanced Instruments’ family of instruments, please call us or email us at [info@aicompanies.com](mailto:info@aicompanies.com).



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