

Cryoscope Standards



The concentration of solute in a liquid solvent, effects several colligative properties of the combined solution, one of which is its Freezing Point. The Freezing Point of milk depends on this phenomenon and milk in its unadulterated state has a freezing point below 0°C. As milk is diluted with water, the freezing point moves closer to that of pure water (0°C). This elevation of freezing temperature is due mainly to reduction in concentration of lactose and inorganic salts, due to the addition of water. The reduced concentration of biological materials such as fats, proteins or other solids are not thought to contribute to the freezing point elevation.

Historically, from a regulatory and practical perspective freezing point value is considered the optimum method for determining the presence of added water in either raw or treated milk. Economically, the addition of water to milk either accidentally or deliberately by producers, or at any other point in the process chain has a profound adverse effect on the milk or milk derivatives industry. The measurement has formed the basis of an official method that dates back to at least 1923 and has become established as a scientific discipline called Cryoscopy. Dating back to the 1950's several manufacturers of Cryoscopes have offered their products in the market place. Such instruments are usually very accurate and precise. Like all scientific instruments, Cryoscopes require calibration and control and in some situations method validation and instrument qualification. Due to our extensive knowledge of metrology and our unequalled number of accreditations, Reagecon offers a range of high quality Standards to facilitate these objectives. The range on offer is completed by the availability of Heat Transfer Fluid.

Product benefits include:

- NIST traceability
- Extremely high accuracy
- Extended shelf life
- High quality, easy to use, secure packaging
- Products manufactured and certified for use on all Cryoscopes compliant to International Reference Standard ISO5764/IDF108 for the determination of Freezing Point in milk

Product No.	Description	Pack Size
MTR01025	Cryoscope Standard 000 (0.000°C)	250 ml
MTR020X	Cryoscope Standard 422 (-0.408°C) (422m°H)	100 ml
MTR02025	Cryoscope Standard 422 (-0.408°C) (422m°H)	250 ml
MTR030X	Cryoscope Standard 530 (-0.512°C) (530m°H)	100 ml
MTR03025	Cryoscope Standard 530 (-0.512°C) (530m°H)	250 ml
MTR03525	Cryoscope Standard 577 (-0.557°C) (577m°H)	250 ml
MTR040X	Cryoscope Standard 621 (-0.600°C) (621m°H)	100 ml
MTR04025	Cryoscope Standard 621 (-0.600°C) (621m°H)	250 ml
CRYBL	Cryoscope Bath Liquid	500 ml
HTF250	Cryoscope Heat Transfer Fluid	250 ml