

# NIRFlex N-500 Calibration for Ice cream



**Calibration is a question of experience. The Büchi pre-calibrated applications relieve you completely from that task. On the other hand you are not limited. The major Büchi advantage: you can use our pre-calibrations or you can calculate your own with NIRCal 5.0.**

## Uses

Fast and accurate simultaneous analysis of several parameters on ice cream using Büchi NIR-Technology. Rapid availability of defined quality criteria is vital for efficient production and quality control. Loss of production is avoided and high reproducibility from charge to charge guaranteed.

## Reference methods

All the reference chemistry is performed with official methods; e.g. heating oven for solids, Soxhlet for fat, Kjeldahl for Protein...

Requirements for this application are:

- the Büchi NIRFlex N-500
- the Measurement Cell Solids with Petri Dish add-on
- the appropriate computer hardware and Büchi NIRWare

## Parameters

A «robust» calibration is guaranteed because more than 300 different samples were analyzed. The following parameters are measured:

- Fat	0.8 – 18.2 %
- Dry mass	30.4 – 49.7 %
- Protein	2.3 – 4.5 %

## Basis of calculation

The Büchi Chemometric software NIRCal® is used in the NIRFlex N-500 parameter predictions. NIRCal® is a proven and tested software tool with comprehensive calculating possibilities.

## Calibration of properties in ice cream by NIRFlex N-500

Parameter	No. of samples for calibration	Calibration range [%]	SEP	R-Coefficient
Fat	393	0.8 – 18.2	0.29	0.995
Dry mass	390	30.4 – 49.7	0.54	0.986
Protein	388	2.3 – 4.5	0.068	0.983

### Reliable

An accurate robust calibration has been established over a wide and comprehensive calibration range using samples from many different sources.

### Precise

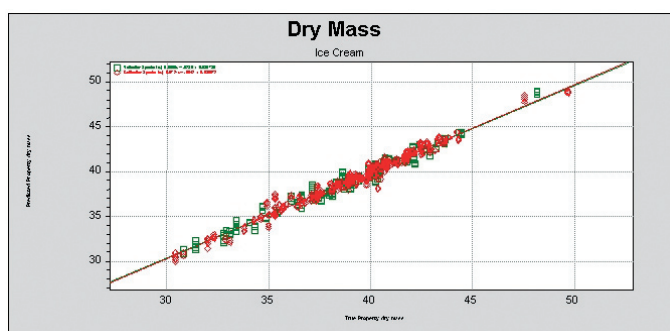
The precision of a calibration is judged by the standard error of the prediction (SEP) and the regression coefficient of the calibration fit. A regression coefficient close to 1 is optimal for the precise prediction of new samples.

### Flexible

The ice cream application for the NIRFlex N-500 is ready-to-use. It allows results to be generated from Day One. With the necessary experience in Chemometrics, the user can adjust the calibration to a different sample matrix – alone or with our support.

### Required hardware:

- Büchi NIRFlex N-500
- Measurement Cell Solids with Petri Dish add-on
- PC-installed Büchi software NIRWare



Order No. N555-508

Pre-calibrated ice cream application

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