Exotherm 2000

Dynamic fat crystallizer

Dynamic Crystallization of Fat and Fat based products
A Complete Solution

Bench top instrument composed of:
- Exotherm 2000 interface
- Computer
- Cooling bath

A robust design ensures:
- Precise control of temperature and shear
- Very sensitive temperature and torque readout
- Practical handling design
- Extremely low gap between stirrer and beaker wall (less than 0.2mm)

Sample beaker

Sample from 200 ml to 700 ml

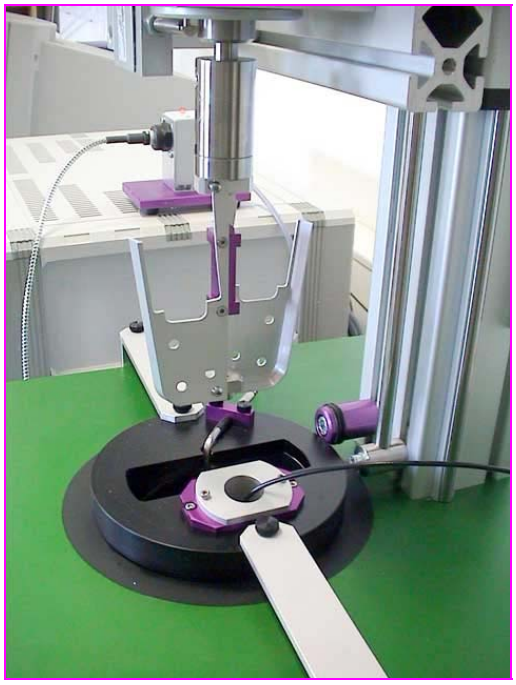
- Made in aluminium with special coating for long life and effective heat transfer
- Equipped with 5 temperature sensors PT100 1/10 DIN
- Conical shape in order to ensure perfect *wall to wall* contact with the cooling/heating cell
- Only one electrical and waterproofed connector for an easy cleaning

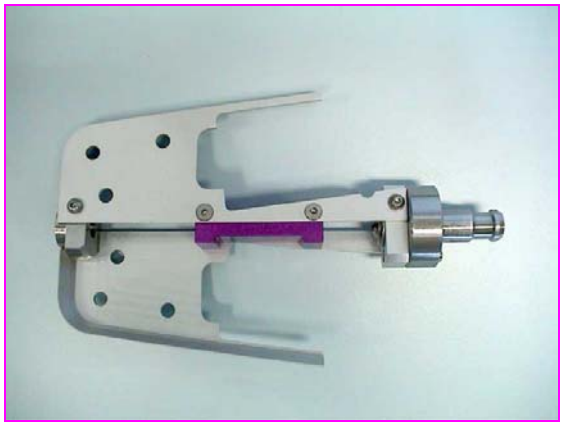
- Central temperature probe with two sensors for two different heights of measurement
- Inner graduations every 100 ml up to 500 ml
- On the left of the central probe, a special temperature sensor is visible. It is used to measure the temperature of the product near the wall.

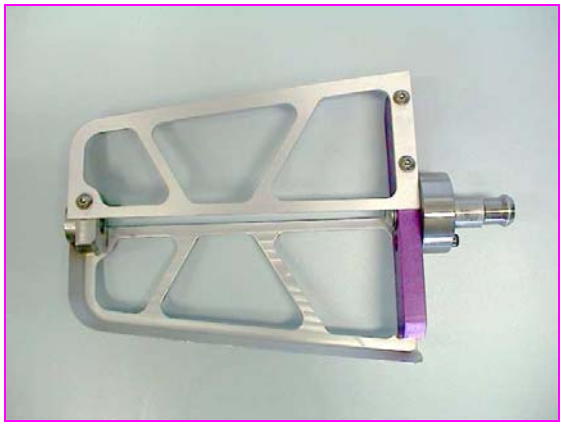
Waterproof connector

A complete choice of blades

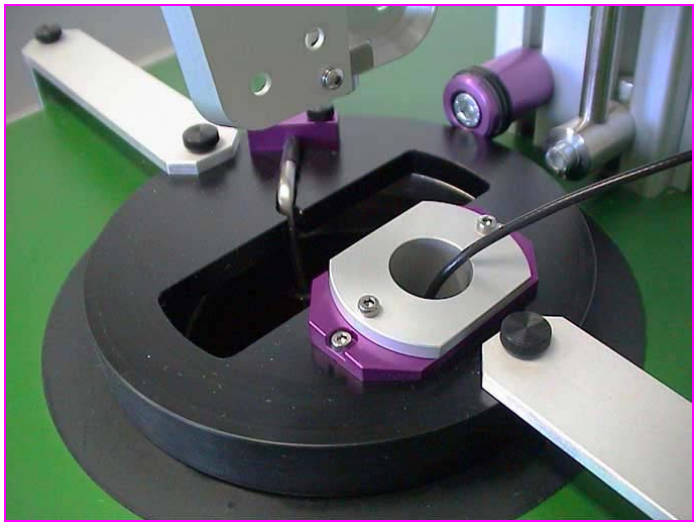
Any shapes upon request





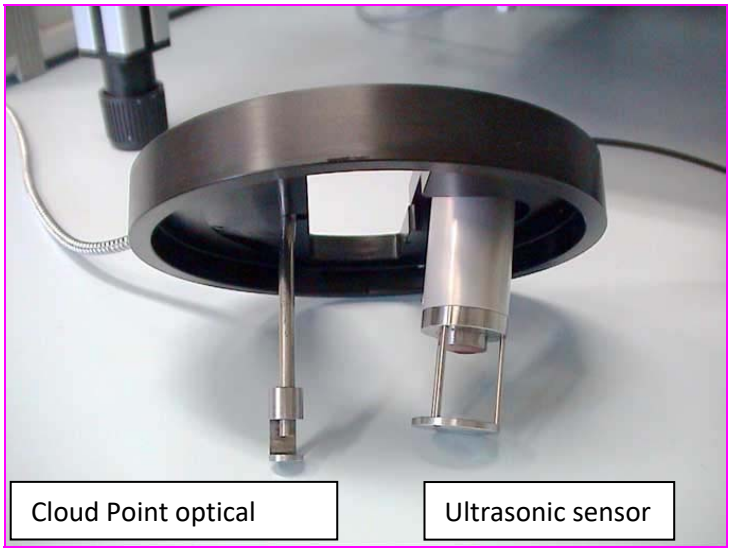


Closer view on optical & ultrasonic sensor



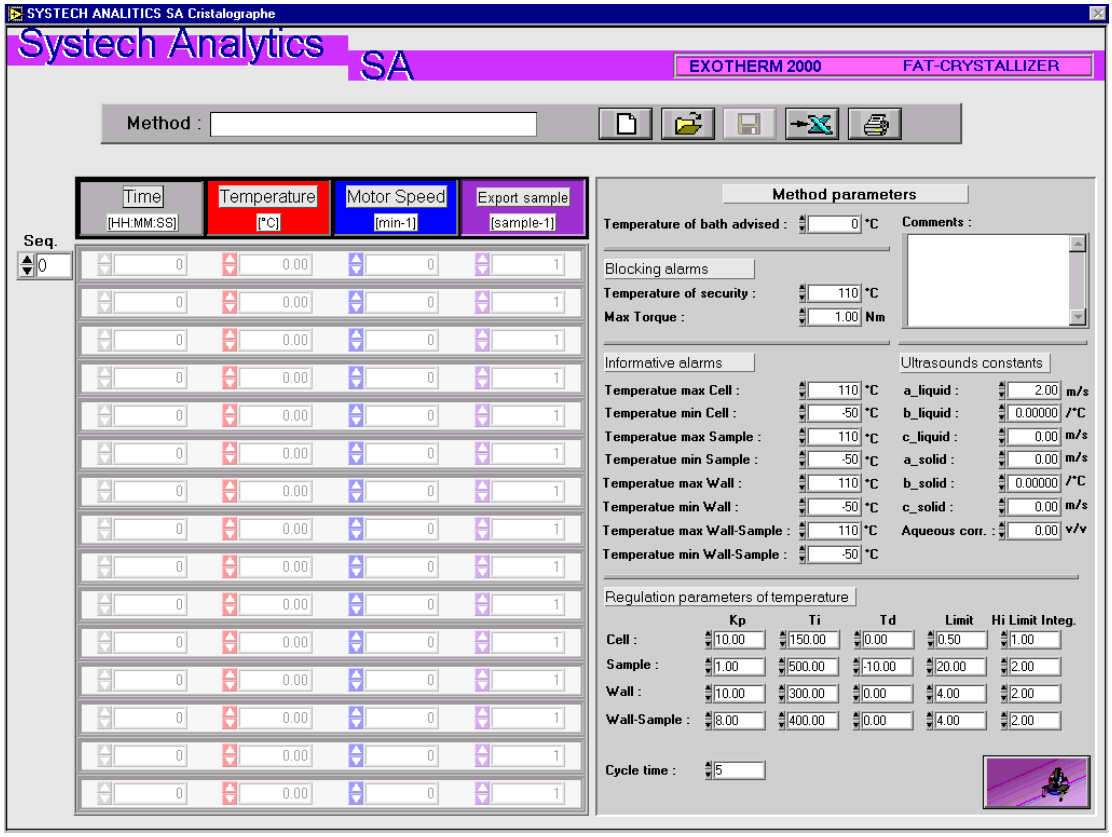
All sensors can be easily removed for cleaning

Thanks to laser soldering, the ultrasonic mirror is precisely placed and hold

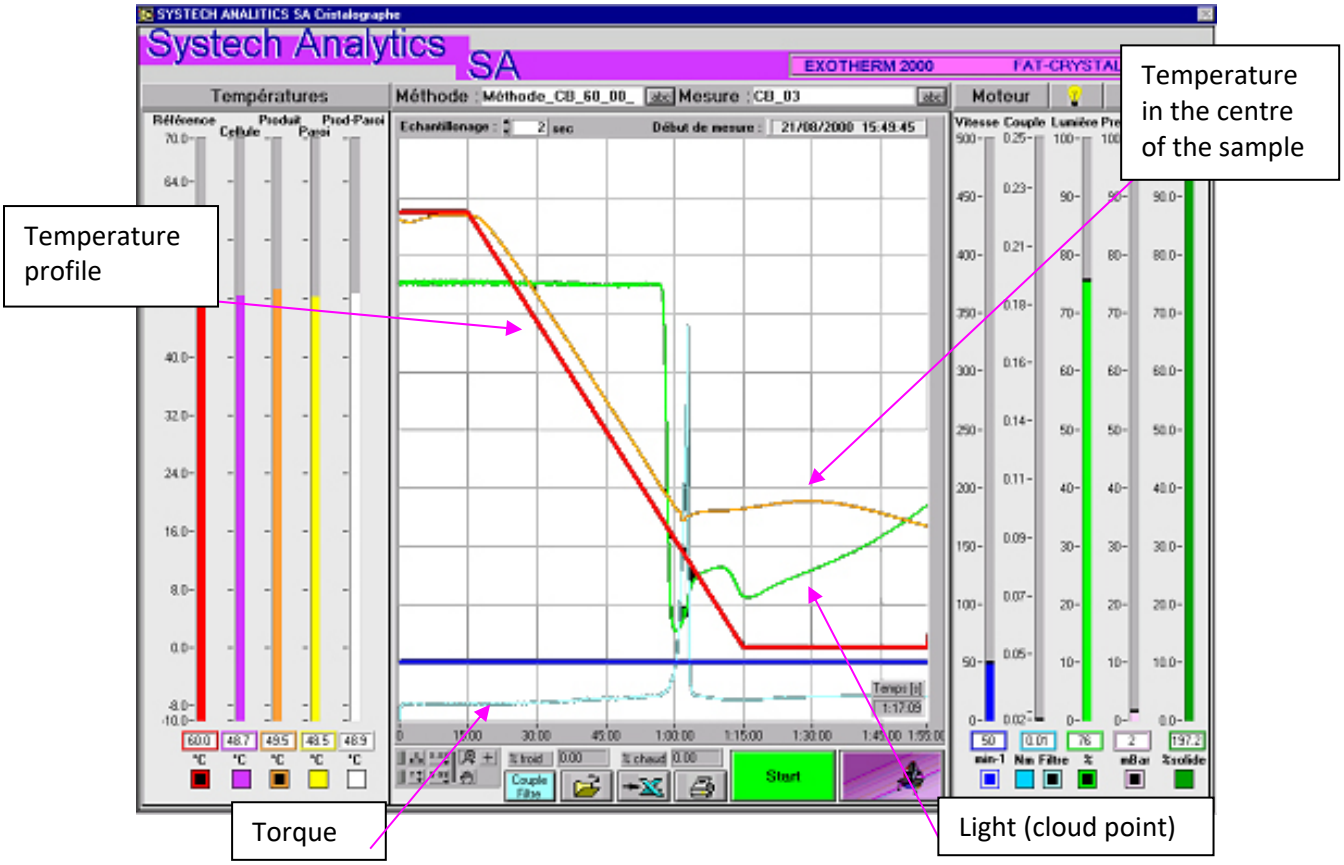


Software overview

A complete set of parameters can be programmed

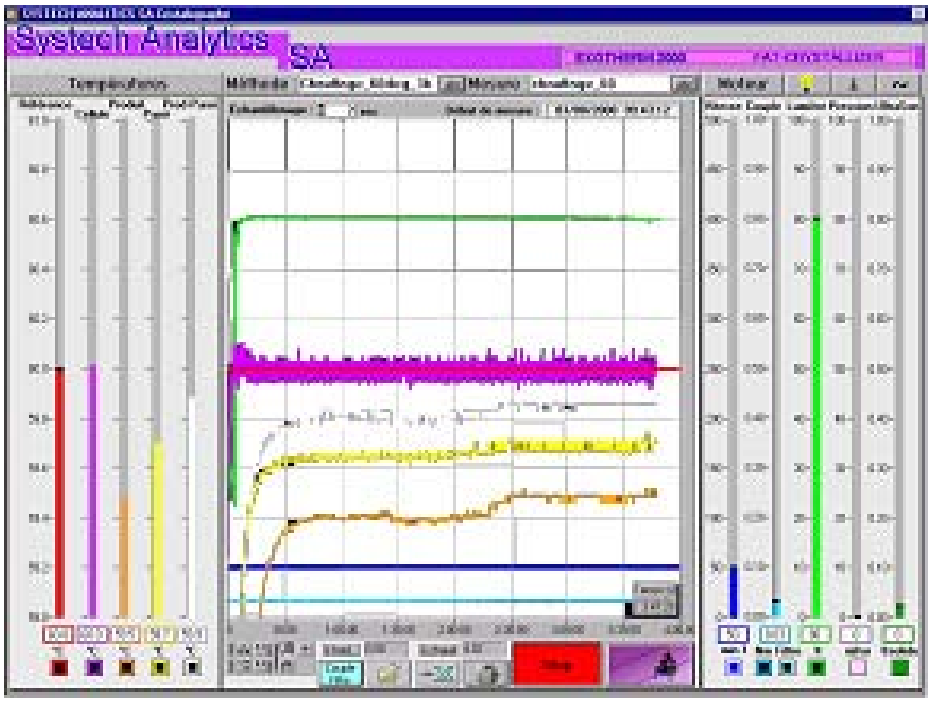


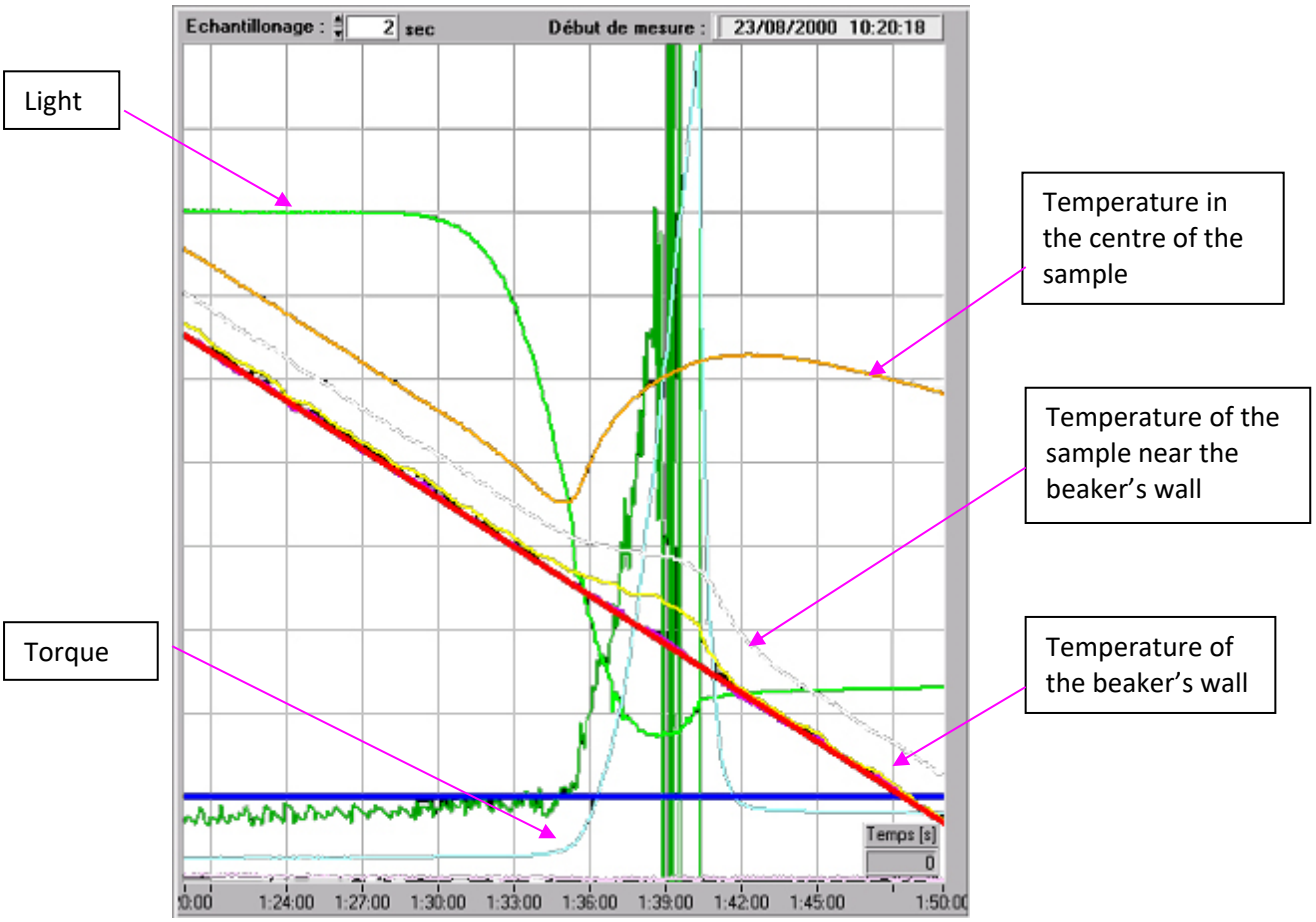
Typical measurement curves



Software highlights

- Very long measurement time (up to 24h or more).
- All measurement parameters can be set in a method (unlimited numbers of methods).
- Parameters of the temperature control's loop can be easily modified by the user.
- Automated saving of measurement.
- Exportation of methods and measures to Excel file format
- All parameters of the ultrasonic equation are accessible.
- Easy and precise calibration of temperature and ultrasonic sensors.
- Alarm and automatic stop on stirrer motor.
- Digital filter on torque measurement (all filter parameters are accessible).
- Temperature and motor's speed profiles can easily be set in the methods.
- Sampling time can be modified from 1s to many minutes. Different sampling times can be programmed during one measurement. Very useful to lower the size of the Excel files and to keep high resolution on particularly interesting parts of the measurement.
- Zoom functions on the graphics.
- All measurements are saved in a database.
- Measurement can be put on « standby » mode. Very useful to change the method parameters during measurement without a complete restart.





EXOTHERM 2000
LABORATORY IMPLEMENTATION