



2020 Catalogue Training

Theory and operation of Calorimeters,
Thermal Analyzers and
Manometry instruments

DSC, Calorimetry, TGA, TG-DTA, TG-DSC,
TMA, Evolved Gas Analysis, Sorption

TRAINING

Our 2020 Training Catalogue is for Laboratory managers or users of Setaram Thermal Analysis, Calorimetry or Manometric Instruments.

You will find a training session whatever your need whether that is understanding the basics of measurements or becoming an advanced user of a specific technique or instrument.

For each session we start with theory, followed by measurement principles before going through each part of the instrument in detail.

Operational conditions are explained as well as pre-requisites for each accessory of the instrument (crucible, cell, atmosphere...) One or more analyses will be done with the trainer for different instrument configurations. We will cover predictive and curative maintenance so users can maintain their instrument in perfect working order as well as change the configuration.

We will use data acquisition and data treatment software and focus on the areas of primary interest to you.

We can offer customized sessions where the program and duration are agreed with you in advance. It can be focused on instrument or technique or specific application where training will be focused on interpretation of thermal data.

Examples :

- Survey of polymer degradation
- Thermal properties of food
- Thermogravimetric method set-up
- Calorimetry method for stability and compatibility of pharmaceutical products

A questionnaire helps to evaluate your needs and propose the best session for you.

TRAINING TEAM

Training sessions are done by our highly qualified Applications Laboratory staff, who are fully committed to help customers increase their skills and efficiency.

PRICES (1/2)

TRAINING	PRICE (**)	DURAT.	DATES
Setline DSC/DSC+	990€	1,5 days	Contact us
Setline STA/STA+	990€	1,5 days	Contact us
DSC131	990€	1,5 days	Contact us
LABSYS	990€	1,5 days	Contact us
LABSYS OPTION*	330€	0,5 day	Contact us
THEMYS	1320€	2 days	Contact us
THEMYS OPTION*	330€	0,5 day	Contact us
SETSYS	1320€	2 days	Contact us
SETSYS OPTION*	330€	0,5 day	Contact us
CALVET PRO (SENSYS)	990€	1,5 days	Contact us
CALVET PRO (SENSYS) OPTION*	330€	0,5 day	Contact us
MICROCALVET (μ DSC7)	990€	1,5 days	Contact us
MICROCALVET (μ DSC7) OPTION*	330€	0,5 day	Contact us
MICROCALVET ULTRA (μ SC)	990€	1,5 days	Contact us
MICROCALVET ULTRA (μ SC) OPTION*	330€	0,5 day	Contact us
CALVET (C80)	990€	1,5 days	Contact us
CALVET (C80) OPTION*	330€	0,5 day	Contact us
CALVET CRYO (BT215)	990€	1,5 days	Contact us
GASPRO (PCTPro)	990€	1,5 days	Contact us
GASPRO (PCTPro) OPTION*	330€	0,5 day	Contact us

PRICES (2/2)

Calisto (for 1 technique)	330€	0,5 day	Contact us
Calisto (multi-techniques advanced)	660€	1 day	Contact us
Calisto - Visio training (for 1 technique)	330€	0,5 day	Contact us
Calisto - Visio training (multi-techniques advanced)	660€	1 day	Contact us

* Option only available coupled with an instrument training session. Duration and price per option.

** Prices are for one person. Lunch included.

Price for customized training in Caluire is 1260 € per day per person (600 € per day per additional person)

On-site customized training price is 1260 € per day per person + transport and living costs.

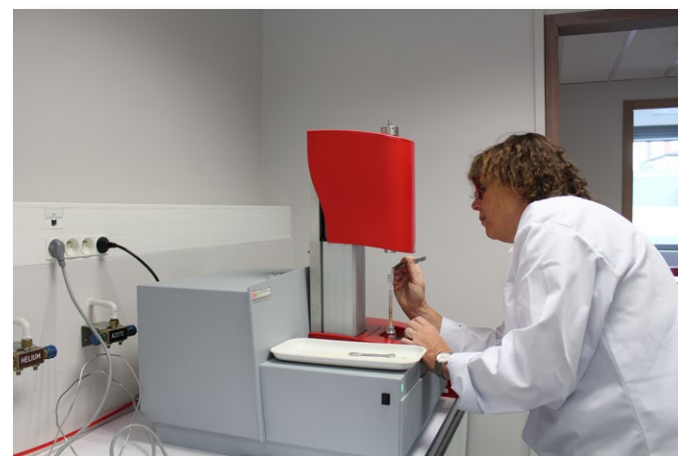
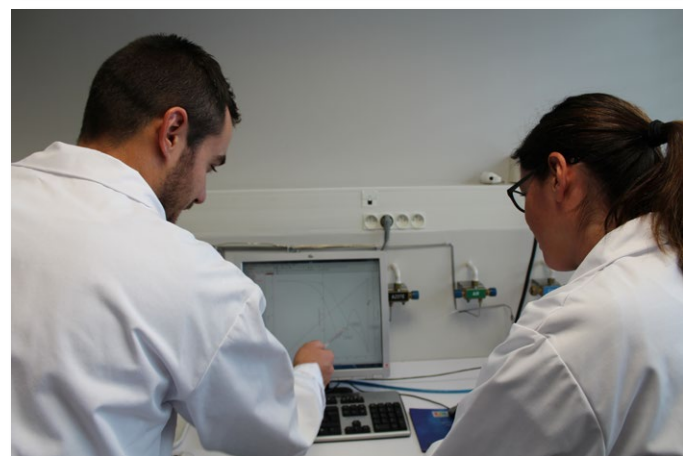
Training package : one day fee for 3 people is 2580 € + transport and living costs.

Training package : one day fee for 5 people is 3780 € + transport and living costs.

(All prices exclude tax)

TRAINING LOCATIONS

- SETARAM Applications Laboratory : 7 rue de l'Oratoire, 69300 Caluire, France
- On Customer Site



CERTIFICATION

SETARAM is recognized as a training center by the French Government (n° 82.69.09783.69).

REGISTRATION

KEP TECHNOLOGIES EMEA
Applications Laboratory
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69300 Caluire, France

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☎ +33 (0)4 72 10 25 25



Documents Training

Theory and operation of Calorimeters,
Thermal Analyzers and
Manometry instruments

DSC, Calorimetry, TGA, TG-DTA, TG-DSC,
TMA, Evolved Gas Analysis, Sorption

PRELIMINARY QUESTIONNAIRE



SETARAM Instrument training session

Contact Details

Name :

Role :

Company :

Surname :

Phone :

Email :

Equipment on which you would like to be trained

Name :

Option(s) :

Serial number :

Software used

Calisto

Setsoft2000

Setsoft

Field of Analysis

Expectations

Training location

On-site

SETARAM Application Laboratory (Caluire, France)

Number of attendees

REGISTRATION



Training

Training title and reference :

Dates :

Price :

Attendee

Name :

Role :

Surname :

Phone :

Email :

Company

Name :

Address :

Zip Code :

Phone :

SIRET :

VAT number :

Activity :

City :

Email :

Activity Ref. :

Training Manager or Line Manager

Name :

Role :

Surname :

Phone :

Email :

Person in charge of the administrative file

Name :

Role :

Surname :

Phone :

Email :

Training Agreement

A training agreement is systematically sent to you upon receipt of your registration

Financing Organization

Membership number :

Organization name :

Address :

Zip Code :

Phone :

SIRET :

VAT number :

File number :

City :

Email :

Activity Ref. :

Date and signature :

Company stamp :

Once completed and signed, please send to emea.training@setaram.com

THERMAL ANALYSIS APPLIED TO SETLINE DSC/DSC+



Training

Price

990€

Duration

1.5 days

Environment

- Training room
- Laboratory for hands on practice
- Experienced trainers



Theory

- Theoretical presentation of the DSC
- Instrument : equipment and its key parts, preventive and curative maintenance
- Calibrations and corrections: energy calibration and temperature correction
- Optimization of key experimental parameters
- Review of key applications and discussion around customer applications
- Presentation of the autosampler



Practice

- Blank measurement
- Standard sample measurement
- Calisto software utilization



THERMAL ANALYSIS APPLIED TO SETLINE STA/STA+



Training

Price

990€

Duration

1.5 days

Environment

- Training room
- Laboratory for hands on practice
- Experienced trainers



Theory

- Presentation of thermal analysis techniques : TGA, DSC
- Instrument : equipment and its key parts, preventive and curative maintenance
- Calibrations and corrections: energy calibration and temperature correction
- Optimization of key experimental parameters
- Review of key applications and discussion around customer applications
- Presentation of the autosampler



Practice

- Blank measurement
- Standard sample measurement
- Calisto software utilization



DIFFERENTIAL SCANNING CALORIMETRY APPLIED TO DSC 131



Training

Price

990€

Duration

1.5 days

Environment

- Training room
- Laboratory for hands on practice
- Experienced trainers



Theory

- Theoretical presentation of the DSC
- Instrument : equipment and its key parts, preventive and curative maintenance
- Calibrations and corrections: energy calibration and temperature correction
- Optimization of key experimental parameters
- Review of key applications and discussion around customer applications



Practice

- Blank measurement
- Standard sample measurement
- Calisto software utilization



THERMAL ANALYSIS APPLIED TO LABSYS



Training

Price

990€

Duration

1.5 days

0,5 day per option

Environment

- Training room
- Laboratory for hands on practice
- Experienced trainers



Theory

- Principles of thermal analysis : DTA, DSC, TGA
- Instrument : equipment and its key parts, preventive and curative maintenance
- Calibrations and corrections: energy calibration and temperature correction
- Optimization of key experimental parameters
- Review of key applications and discussion around customer applications



Practice

- Rod installation
- Blank measurement
- Standard sample measurement
- Calisto software utilization



Options



- Evolved gas analysis
- DSC 3D rod

For each option, the following points will be addressed:

- Theoretical presentation of the option
- Assembly / Disassembly of the option
- Starting a measurement and analysis of the result

THERMAL ANALYSIS APPLIED TO THEMYS



Training

Price

1320€

Duration

2 days

0,5 day per option

Environment

- Training room
- Laboratory for hands on practice
- Experienced trainers



Theory

- Principles of thermal analysis : DTA, DSC, TGA, TMA
- Instrument : equipment and its key parts, preventive and curative maintenance
- Calibrations and corrections: energy calibration and temperature correction
- Optimization of key experimental parameters
- Review of key applications and discussion around customer applications



Practice

- Blank measurement
- Standard sample measurement
- Calisto software utilization
- Change of measurement configuration (TGA to TG-DTA/DSC or TGA to TMA)



- FLEXI WET (Wetsys) : humidity generator
- Evolved gas analysis
- Second measuring head : balance or TMA
- Option 2400°C

Options



For each option, the following points will be addressed:

- Theoretical presentation of the option
- Assembly / Disassembly of the option
- Starting a measurement and analysis of the result

THERMAL ANALYSIS APPLIED TO SETSYS



Training

Price

1320€

Duration

2 days

0,5 day per option

Environment

- Training room
- Laboratory for hands on practice
- Experienced trainers



Theory

- Principles of thermal analysis : DTA, DSC, TGA, TMA
- Instrument : equipment and its key parts, preventive and curative maintenance
- Calibrations and corrections: energy calibration and temperature correction
- Optimization of key experimental parameters
- Review of key applications and discussion around customer applications



Practice

- Blank measurement
- Standard sample measurement
- Calisto software utilization
- Change of measurement configuration (TGA to TG-DTA/DSC or TGA to TMA)



Options



- FLEXI WET (Wetsys) : humidity generator
- Evolved gas analysis
- Second measuring head : balance or TMA
- SETSYS 2400°C

For each option, the following points will be addressed:

- Theoretical presentation of the option
- Assembly / Disassembly of the option
- Starting a measurement and analysis of the result

THERMAL ANALYSIS APPLIED TO CALVET PRO (SENSYS)



Training

Price

990€

Duration

1,5 days

0,5 day per option

Environment

- Training room
- Laboratory for hands on practice
- Experienced trainers



Theory

- Principles of thermal analysis : DSC, TG-DSC
- Instrument : equipment and its key parts, preventive and curative maintenance
- Calibrations and corrections: energy calibration and temperature correction
- Optimization of key experimental parameters
- Review of key applications and discussion around customer applications



Practice

- Blank measurement
- Standard sample measurement
- Calisto software utilization



Options



- Evolved gas analysis
- High pressure DSC
- FLEXI WET (Wetsys) : humidity generator
- Sintered tube

For each option, the following points will be addressed:

- Theoretical presentation of the option
- Assembly / Disassembly of the option
- Starting a measurement and analysis of the result

MICRO CALORIMETRY APPLIED TO μ DSC3, MICROCALVET (μ DSC7), MICROCALVET ULTRA (μ SC 2C), MICROCALVET ULTRA 4C (μ SC 4C)



Training

Price

990€

Duration

1,5 days

0,5 day per option

Environment

- Training room
- Laboratory for hands on practice
- Experienced trainers



Theory

- Principles of calorimetry
- Instrument : equipment and its key parts, preventive and curative maintenance
- Calibrations and corrections: energy calibration and temperature correction
- Optimization of key experimental parameters
- Review of key applications and discussion around customer applications



Practice

- Standard sample measurement
- Calisto software utilization



Options



- High pressure cell
- Mixing cell

For each option, the following points will be addressed:

- Theoretical presentation of the option
- Assembly / Disassembly of the option
- Starting a measurement and analysis of the result

CALORIMETRY APPLIED TO CALVET (C80)



Training

Price

990€

Duration

1,5 days

0,5 day per option

Environment

- Training room
- Laboratory for hands on practice
- Experienced trainers



Theory

- Principles of calorimetry
- Instrument : equipment and its key parts, preventive and curative maintenance
- Calibrations and corrections: energy calibration and temperature correction
- Optimization of key experimental parameters
- Review of key applications and discussion around customer applications



Practice

- Standard sample measurement
- Calisto software utilization



Options



- High pressure cell
- Mixing cell

For each option, the following points will be addressed:

- Theoretical presentation of the option
- Assembly / Disassembly of the option
- Starting a measurement and analysis of the result

CALORIMETRY APPLIED TO CALVET CRYO (BT2.15)



Training

Price

990€

Duration

1,5 days

Environment

- Training room
- Laboratory for hands on practice
- Experienced trainers



Theory

- Principles of calorimetry
- Instrument : equipment and its key parts, preventive and curative maintenance
- Calibrations and corrections: energy calibration and temperature correction
- Optimization of key experimental parameters
- Review of key applications and discussion around customer applications



Practice

- Standard sample measurement
- Calisto software utilization



MANOMETRY APPLIED TO GASPRO (PCTPro)



Training

Price

990€

Duration

1,5 days

0,5 day per option

Environment

- Training room
- Laboratory for hands on practice
- Experienced trainers



Theory

- Reminder on sorption phenomena
- Principles of Sievert's method
- Instrument : equipment and its key parts, preventive and curative maintenance
- Description of PCT and Kinetic Measurements
- Description of calibration methods of dead volume
- Optimization of key experimental parameters
- Review of key applications and discussion around customer applications



Practice

- Measurement of a standard sample: Pretreatment, Calibration of dead volume, PCT or kinetics measurement
- Hy-data and Hy-Analysis Software



Options



- Cryo Pro and/or Cryocell
- Microdoser

For each option, the following points will be addressed:

- Theoretical presentation of the option
- Assembly / Disassembly of the option
- Starting a measurement and analysis of the result

CALISTO - 1 TECHNIQUE



Training

Price

330€

Duration

0,5 day

Environment

- Training room
- Laboratory for hands on practice
- Experienced trainers



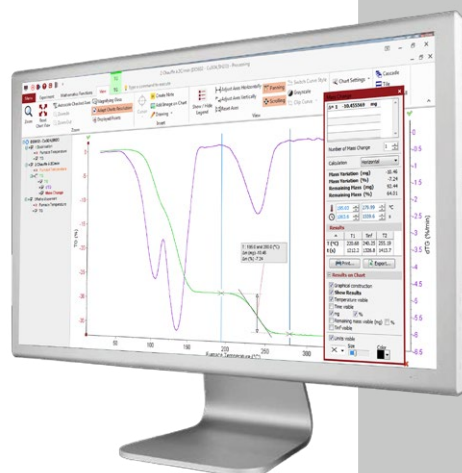
Theory

- Calisto Acquisition: direct programming and programming of an experiment
- Main tools of Calisto Processing
- Calculations of temperature correction and sensitivity coefficients
- Processing a HeatFlow curve (DSC/ATD)
or
- Processing a mass variation curve (TG)
or
- Processing a displacement curve (TMA)



Practice

- Importing an experiment
- Curve processing
- Exporting data or graphs



CALISTO - MULTI-TECHNIQUES



Training

Price

660€

Duration

1 day

Environment

- Training room
- Laboratory for hands on practice
- Experienced trainers



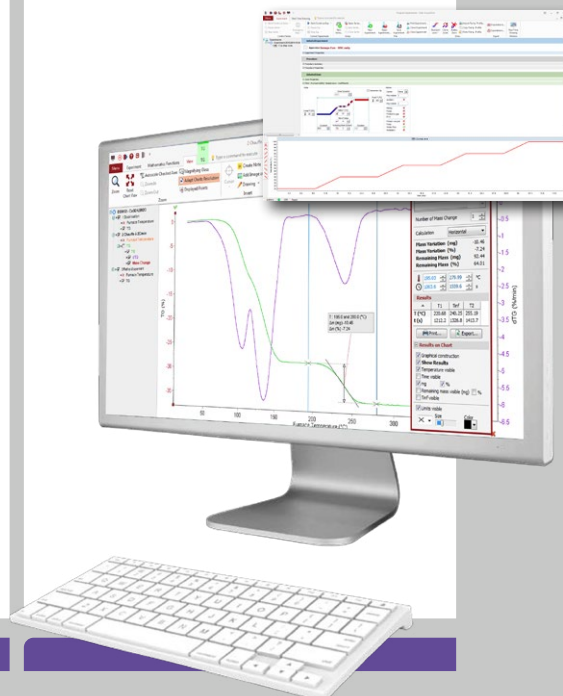
Theory

- Calisto Acquisition: direct programming and programming of an experiment
- Main tools of Calisto Processing
- Calculations of temperature correction and sensitivity coefficients
- Processing a HeatFlow curve (DSC/ATD)
- Processing a mass variation curve (TG)
- Processing a displacement curve (TMA)
- Review of advanced tools: calculation of heat capacity (C_p), peak separation, crystallinity rate, purity, MS/FTIR/GC-MS data imports...



Practice

- Importing an experiment
- Curve processing
- Exporting data or graphs



CONTACT

For any training needs on a SETARAM instrument not mentioned above, please contact the Applications Laboratory.

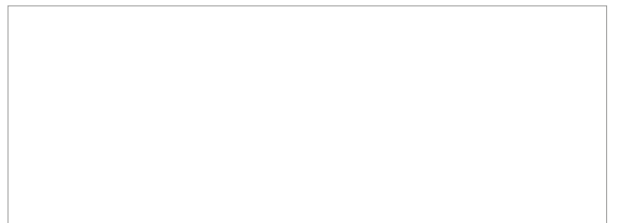
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