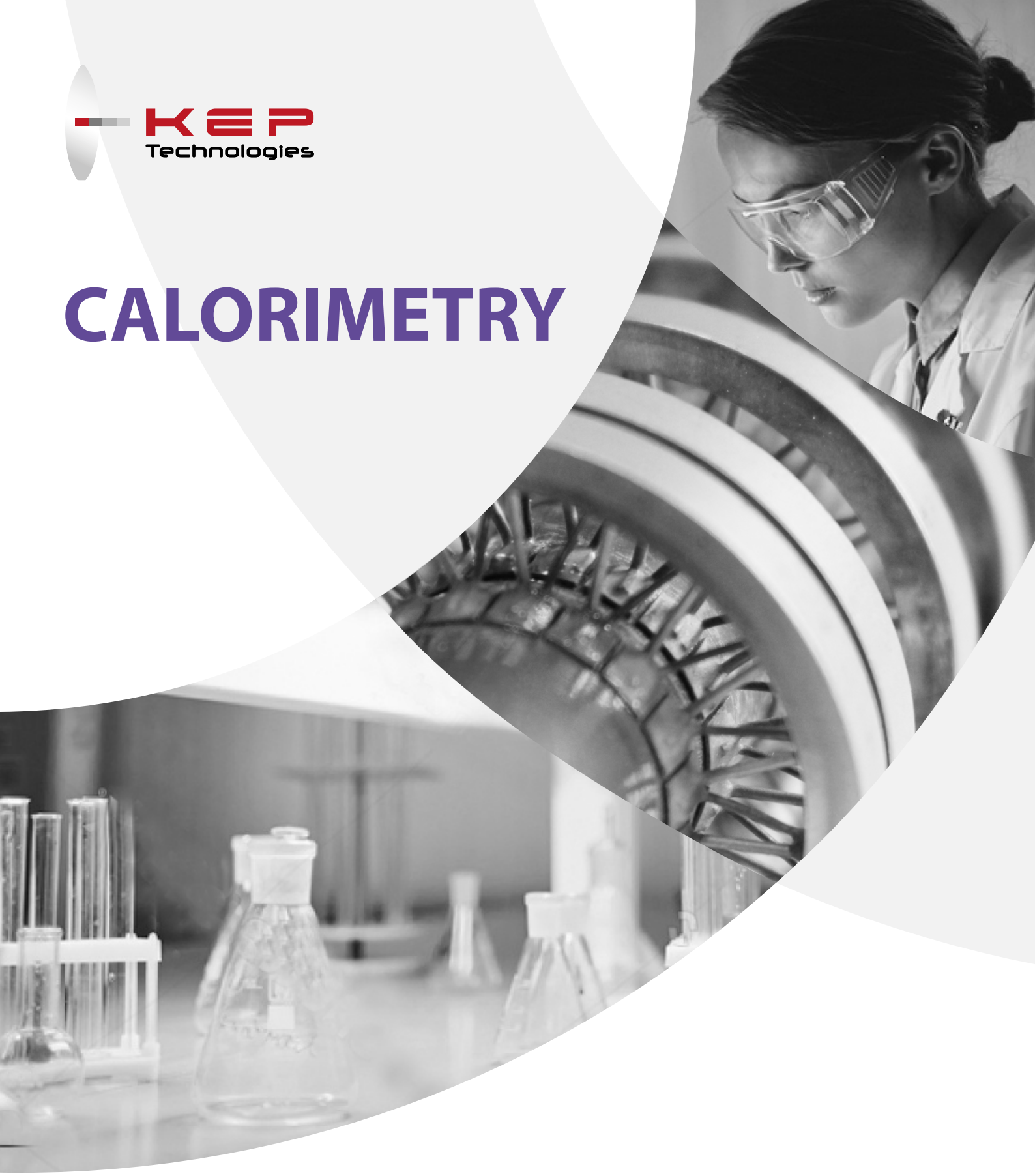
KEP Technologies

CALORIMETRY



setaram
KEP TECHNOLOGIES

« For over 70 years, through it's
Setaram brand KEP Technologies Group has
been delivering innovation and excellence in the field of
scientific measurement instrumentation.

Our product line is designed to inspire scientists with unique levels of precision and the ability to examine materials even under near impossible conditions. Addressing a wide range of applications in industry and leading scientific establishments, KEP Technologies puts customer needs, service and support at the centre of all we do.

With our new Innovation Centre in Geneva more than ever our focus is to identify and meet even the most discerning needs with solutions designed by the brightest engineers and scientists. The superiority of our Calvet sensor technology in measuring up to 95% of heat is testament to this.

You can be assured that whether you work in Life Sciences, Process Safety and Energetics, Energy and Environment, Inorganic or Organic Materials Science our skilled managers will ensure the most relevant solution for your projects and applications.

With a direct presence in four continents and an excellent global distributor network we are here to listen to your needs and provide you with the information, tools and skills to address them.

We firmly believe that only through Innovation and Customer Excellence can we truly deliver our vision to
Reimagine Material Characterization. »

Sylvain Calzaroni
Managing Director

BACKGROUND & MARKETS

KEP Technologies is not simply an instrument company, but a full solution provider.
We do not claim that a single product is suited for all applications and have with our Setaram brand developed a range of products with different characteristics to more closely meet your demands.

Applications as different as the heat capacity measurement of a candidate new nuclear fuel or the determination of the denaturation temperature of a protein's solution demand different instrument performance. We are confident that with KEP Technologies you will find a dedicated calorimetry solution with the performance you need to get the best understanding of your materials. This being the case no matter which of our below market segments you may work in.



LIFE SCIENCES

API, Excipients, Drug delivery systems, Proteins, Enzymes, Food, Carbohydrates, Fats.
Stability, Polymorphism, Unfolding, Denaturation, Aggregation, Melting, Gel formation, Gelatinization



PROCESS SAFETY

Energetic materials, Propellants, Explosives, Reactants and products of chemical reactions at large scale.
Heat capacity, Synthesis reaction, Decomposition, Runaway reaction, Temperature and Pressure rise.



ENERGY & ENVIRONMENT

Oil & Gas, Gas hydrates Stability, Wax crystallization, Biomass, Hydrogen storage materials, Nuclear fuel and wastes, Catalysts & adsorbents, Thermal energy storage materials, Batteries, Gas & vapour sorption, Heat capacity, Thermal stability, Transitions



INORGANIC MATERIALS SCIENCE

Nanomaterials, Metals, Alloys, Ceramics, Glass, Cement, Plaster, Minerals. Sintering, Thermal expansion, Corrosion, Hydration, Transitions, Heat capacity, Thermal stability



ORGANIC MATERIALS SCIENCE

Polymers, Thermoplastics, Thermosets. Glass transition, Oxidation resistance, Heat capacity, Thermal stability, Curing ratio, Transitions

CALORIMETRY

Our range of instruments for the characterization of materials across wide temperature ranges and using all common calorimetry techniques.

Full Customization



LVC
Large Volume Calorimeters

Coupling Options



FLEXI WET
Humidity Control



FLEXI HP MS
Evolved gas



GASPRO
Gas sorption



Ambient to 1600°C

2D 3D CP

CALVET DC

CALVET DC ALEXSYS



500°C to 1000°C

3D CP

CALVET PRO



-120°C to 800°C

2D 3D CP



Ambient to 400°C, 500°C

SCREENING & ACCELERATING RATE CALORIMETRY



Ambient to 200°C, 300°C, 600°C / -196°C to 200°C

3D CP

CALVET CALORIMETERS

MICROCALVET CALORIMETERS



-45°C to 120°C / -20°C to 170°C

2D 3D CP

EXPERIMENTAL OPTIONS & VERSATILITY

CALISTO - CALORIMETRY SOFTWARE

CALISTO 2.0 is the industry standard calorimeter software developed for all Setaram instrumentation and applications. It's quick to install and comprises of two independent parts:

- **CALISTO ACQUISITION:** dedicated to the control and data acquisition of our calorimetry systems.
- **CALISTO PROCESSING:** for the treatment of calorimetry data independent of instrument type.

CALISTO software includes over 100 customer-requested features and promises to be the most powerful, flexible and intuitive data treatment software in calorimetry.

See calisto-software.com for more information on the power of Calisto 2.0 software.

2D DSC – DIFFERENTIAL SCANNING CALORIMETRY
Measures heatflow, heat and heat capacity

3D 3D CALVET SENSOR
Three dimensional measurement capturing up to 95% of heat for unparalleled accuracy and precision

DROP CALORIMETRY
Measures heat when the sample is dropped from outside into the calorimeter

COUPLING
Couples with GASPRO option

EGA – EVOLVED GAS ANALYSIS
Combine your DSC, TGA or STA with any gas analyser for quantitative analysis using techniques such as FTIR, MS, GC-MS, FTIR/MS or FTIR/GC-MS

GAS SORPTION ANALYSIS
Characterizes materials sorption capacities and rates

HUMIDITY
Can be coupled with the FLEXI WET or other relative humidity accessories

CP HEAT CAPACITY
Ideal tool for accurate heat capacity measurements

MIXING
Can mix two or more samples inside the calorimter sensor for heat of mixing measurements

CORROSIVE AND REACTIVE GASES
Able to run in various aggressive atmospheres according to the calorimeter's configuration

SCREENING & ACCELERATING RATE CALORIMETRY
Ideal for thermal stability data and pressure release risks

PRESSURE VACUUM
Operates under high pressure and vacuum

CUSTOMIZED SOLUTIONS

Setaram's standard product line provides a variety of options for ultimate instrument versatility.
There may be times though when you require more, or new options to expand your research. We will work with you to find the right solution for your specific application whether that be:

- **Expanded options for our current product line**
- **Customized laboratory, sample or process conditions**
- **New instrument development**
- **Specialized contract testing**

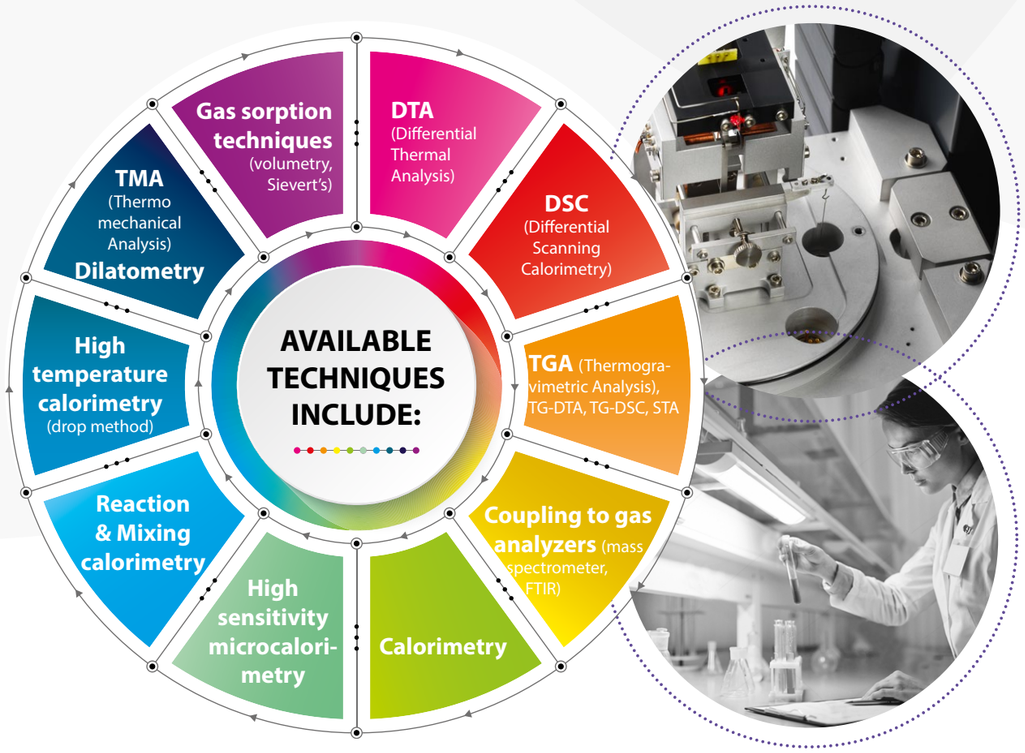
Your research may require more specialized analytical equipment. Data acquired under your experimental conditions may be far from the true conditions of the materials used, and so unreliable. Perhaps you continue to want maximum information from a single experiment. With these realities in mind KEP Technologies offers customization of your instrument to best address your needs.

Led from our new Innovation Center in Geneva, our R&D service routinely develops robust and reliable customized instruments compliant with very specific customer needs. We can modify any aspect from the instrument's design to address ergonomics, sensors, operation range, electronics and software.

APPLICATION SUPPORT

Our global applications expertise, acquired over 70 years, combines our goal to help push research boundaries with our practical, hands-on approach to application support, demonstrations and contract testing.

On a daily basis we help solve client's problems from standardized testing on single or multiple samples, method development, complex data interpretation support and detailed instrument or application-oriented training across a wide range of techniques. An extensive database of thermal data across a broad range of applications can also be found in our Application Library on the Setaram website.



With Setaram application laboratories in 4 of our global sites, and a global network of Setaram partner laboratories, we can help you develop your application to advance your research goals.

TRAINING AND CONSULTING

Programs for Newcomers and Advanced Users
We have general sessions for individuals or groups that teach everything from instrument functionality to advanced techniques to ensure optimal use of your instrument.



Focused on a particular instrument or application we help more experienced users optimize and design experimental conditions to enhance and improve data quality.

Customized sessions are individual training in your laboratory or at our local headquarters. We design these with you to help you acquire specific experience in instrumentation, software or applications.

CUSTOMER SUPPORT

We're fully committed to ensuring our customers get the best from their purchase and to providing complete solutions to specific analytical challenges.

Technical Assistance
Our highly qualified technical support team is available to help you with your specific needs.
Please visit *setaramsolutions.com/technical-support* to connect with your local technician.

Routine Maintenance, Support Training, & Post Warranty Service Contracts
All our instruments offer years of uninterrupted service and to complement this we offer a range of verification and support contracts tailored to your individual system and requirements. In addition to running experimentation specifically designed to «prove» the instrumentation, technicians can train customers on routine maintenance and calibration procedures. Prices of these contracts depend on the system, the level of support required and the location of the installation. As such prices are available upon request.

Product Upgrades
As your needs grow, so can your instrument capability. Whether you need new accessories and adaptations or are interested in trading-in your instrument for the latest model, we can help you.

3Q
3Q is a full IQ/OQ/PQ process and verification of your system and data quality provided for customers requiring a high degree of confidence in the data provided. Discuss with your local sales representative or request a quotation at *setaramsolutions.com/contact*

MC• Specifications are given as indications only and are not contractual • 07/20

KEP Technologies

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