

Lara Coflux™ Reaction Monitoring

Realtime Calorimetry

- Instant safety data
- Realtime information on power and enthalpy
- Precise temperature control and stability
- No baseline calibrations required
- Safer control of exotherms and endotherms
- Detection of reaction end point
- Optimise reagent additions
- Early indication of reaction issues
- Detection and tracking of crystallisations
- Rapid return on investment

Coflux was developed by Syrris
exclusively for the Radleys' Lara CLR



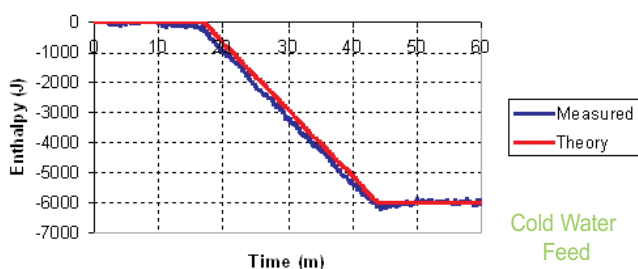
Lara Coflux offers high levels of performance and flexibility...



Specifications & Test Results

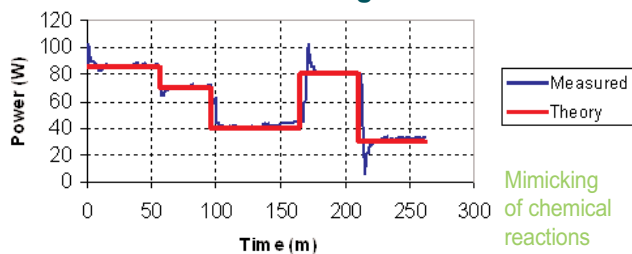
- Instant power, enthalpy and heat transfer coefficient readings
- Response time < 20s
- Temp range of -30°C to +180°C
- Full data logging
- Easy vessel exchange
- Working volumes up to 1 litre
- True variable split jacketed vessel

Enthalpy Monitoring



Cold Water Feed

Power Monitoring



Mimicking of chemical reactions

Calorimeter Requirements

Ideally a Calorimeter will satisfy 3 main criteria:

- Temperature Control
- Experimental Repeatability and Accuracy
- Usability

However none of the traditional calorimetric techniques fulfill all these criteria. Coflux is different...

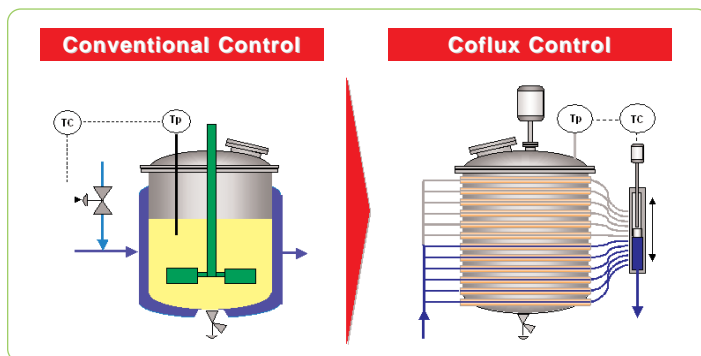
	Temperature Control	Measurement Repeatability	Usability*
Adiabatic/pseudo adiabatic	✗	✓	✓
Power compensation	✓	✓	✗
Heat flow	✓	✓	✗
Heat balance	✓	✗	✓
Heat balance (CoFlux™)	✓	✓	✓

*Usability

- Amount of calibration required
- Stability of calibration under changing process conditions
- Speed of measurement
- Interference with process (heating elements, process delay)

Temperature Control

In Coflux Calorimetry the temperature control is provided by a series of coolant coils that can be open or closed on demand. The use of these coils massively improves thermal response and removes any dependency on the heat transfer coefficient of the system. In conventional Calorimetry temperature control is usually provided by altering the temperature of the coolant fluid. This leads to slow response times and dependency on time consuming baseline calibrations.



Utilises Lara Software

Coflux utilises the existing Lara CLR software to the full, making use of any third party equipment that is available. Easily adapted PID controls allow the creation of closed loop feedback systems. System data is provided in real-time using an intuitive and flexible graphical display. All data is systematically logged.

For the latest information please visit www.lara-clr.com



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