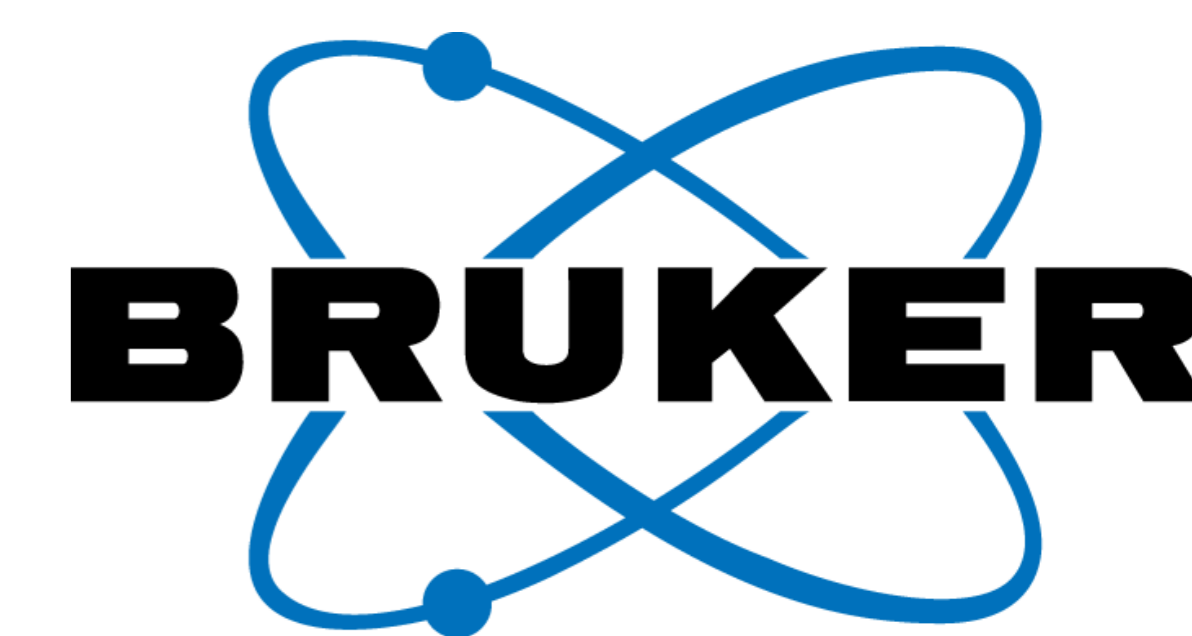


Monitor bio-/chemical reactions in real-time on the Fourier 80



Many scientists in the pharmaceutical & chemical industry and academic research rely on accurate monitoring of chemical reactions to determine reaction kinetics, investigate alternative synthesis routes, and optimize process conditions. Among various monitoring analytical techniques used, NMR spectroscopy is unique providing both direct quantification and structural information about the species at atomic level.

Bruker's reaction monitoring NMR portfolio is now also available on the **Fourier 80** compact benchtop NMR platform. The **Fourier RxnLab** offers a tailored solution for routine bio-/chemical reaction monitoring in flow (Fig.1).



Fig. 1 Fourier RxnLab, a complete solution for reaction monitoring and process control using benchtop NMR.

High-performance NMR in a compact footprint

- Fourier 80 with adjustable temperature (+25°C to +60°C)
- Equipped with **patented**, temperature-controlled transfer lines and controlled reaction path (Fig. 2)
- Maintains desired temperature, from the bio-/reactor to the pump, to the Fourier 80 and back to the bio-/reactor
- No need for elevated sample temperature? - The **Fourier RxnLite** offers our flow solution to monitor reactions at +25°C

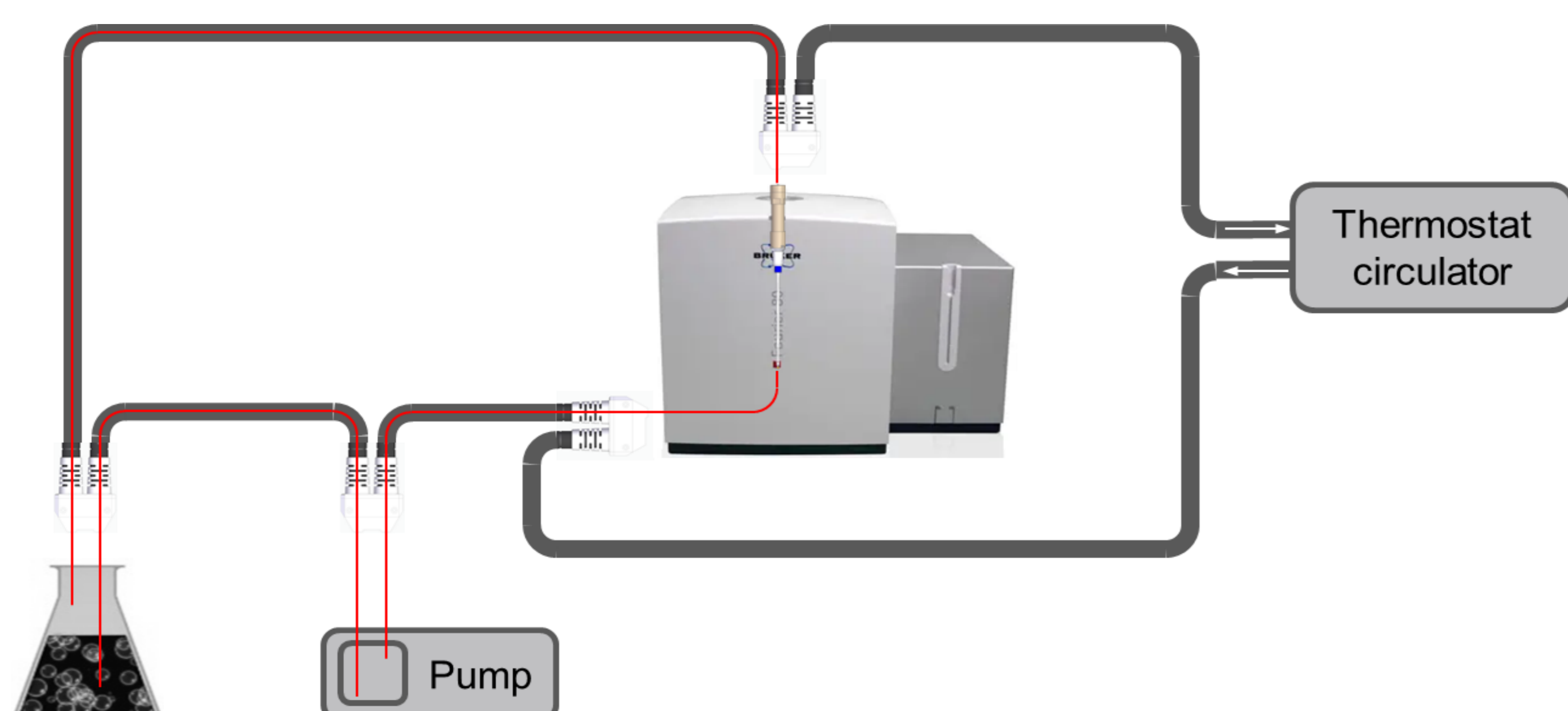


Fig. 2 Fourier RxnLab, your complete temperature-controlled solution to monitor bio-/chemical reaction at different temperatures.

Next to the InsightMR flow unit for Fourier 80 there is:

- ✓ Well-established InsightMR 2.0 software interface with on-the-fly acquisition parameters Optimization (Fig. 3)
- ✓ Seamless data transfer from acquisition to analysis
- ✓ Immediate access to real-time kinetic profiles.

The Fourier RxnLab allows scientists to make informed decisions about whether changes to the chemistry, acquisition conditions, or data analysis routines are required to achieve the best possible results.

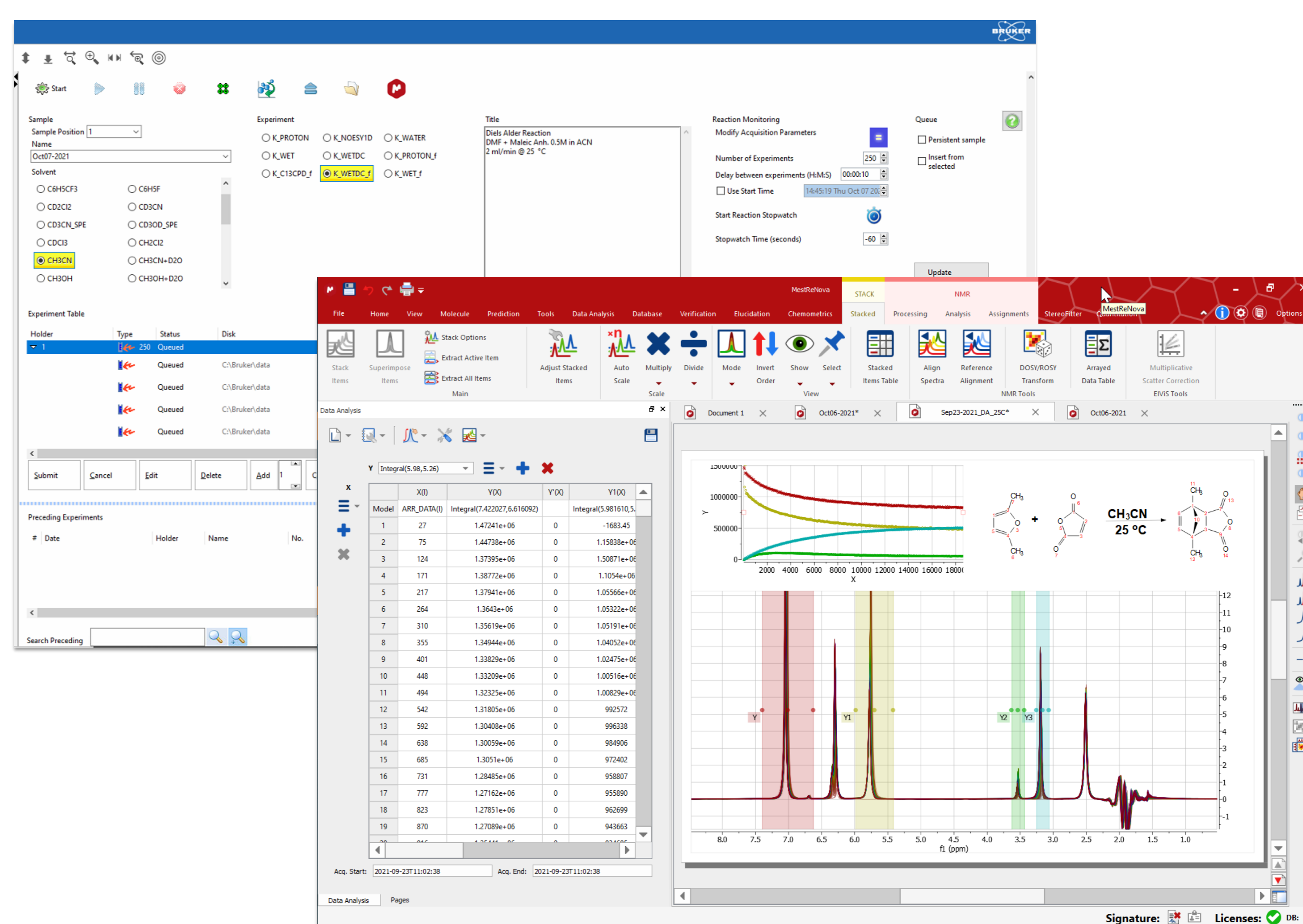


Fig. 3 InsightMR 2.0 software: One solution for analysing on-the-fly bio-/chemical reaction by NMR at high and low field.

Your Benefit:

- Bringing NMR to the (bio-) reactor for (bio-)process control
- On-the-fly quantitative build-up curves without the need for tedious calibration steps
- Direct knowledge transfer from high field NMR systems (understanding) to benchtop systems (control)
- Increased selectivity, resolution and sensitivity compared to vibrational spectroscopy
- Used also to calibrate other techniques
- Straightforward installation and operation with optimal learning curve
- Affordable and with minimal cost of ownership
- Field-upgrade of Fourier RxnLite to RxnLab possible.

The smart & easy way to do reaction monitoring by NMR!