



data sheet

expressRT™-100 reaction monitoring system

Eksigent's ExpressRT-100 system allows for unattended monitoring of synthetic reactions to deliver meaningful kinetics data for real-time decision making by process chemists.



expressRT•100

easy-to-use reaction monitoring system

The ExpressRT-100 system combines three components: a compact sampling module; a high-speed microflow LC system; and a breakthrough software interface for reaction trend plots, easy data analysis, and customizable calculations.

Unlike other systems that just collect samples or just provide static measurements, the ExpressRT-100 system gives you complete, real-time control of your synthetic reactions—redefining what can be accomplished with a reaction monitoring system:

- *Generate real-time kinetics data during a reaction for rapid decision-making.*
- *Reduce time required to develop a synthesis.*
- *Modify reactions on the fly and detect failed reactions sooner (save time & solvent).*
- *Collect samples and data 24/7, without an attendant.*
- *Use advanced data processing tools to plot trends, review statistics, and more without export to third party software.*

rapid decision making

Waiting an hour to find out that your reaction should have been stopped after five minutes can be frustrating and a waste of time and materials. Take advantage of the ExpressRT-100 system's interface that lets you gather data points throughout a reaction, view the results in real-time and decide whether to stop, change the conditions or continue. Stop waiting, get your results immediately.

no attendant needed

Make the most of your time by telling the ExpressRT-100 system when to take samples. Need to gather reaction data at five minute intervals over a two hour synthesis? Simply set your time points, press go and come back when complete.

fast analysis

The ability of the ExpressRT-100 system to generate rapid high-resolution chromatography allows for sampling and analysis rates in as little as every three minutes. This eliminates the need for data extrapolation and gives you the actual progress of your reaction with less effort.

extreme data processing

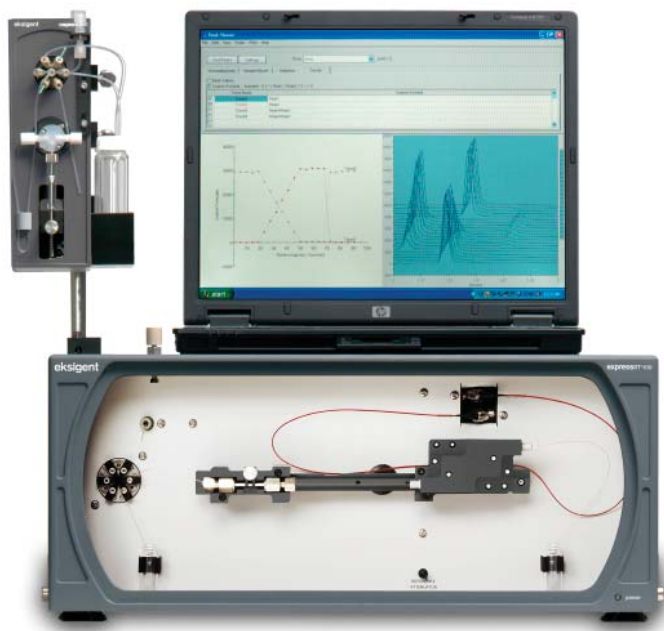
- *Shows trends in real-time of reaction progress.*
- *Customize calculations to meet your specific tasks.*
- *View all chromatograms from a single screen.*
- *Associate chromatograms with points on the plot.*

get moving

No matter where you go in the lab, you can bring the ExpressRT-100 with you. Each ExpressRT-100 system comes with a compact and sturdy mobile cart that holds the LC and computer. The sampling station can conveniently be placed in the fume hood next to the reaction. Move it near your reaction vessel or anywhere in the lab, but most importantly, move it away from your valuable bench space.

expressRT-100 system designed for real-time online reaction monitoring

The new ExpressRT-100 is completely automated and can be preprogrammed to take samples from a reaction vessel requiring only 20µL of sample at a user-defined time-interval, delivering up-to-the-minute kinetics data for overnight reactions.



Eksigent's real-time reaction monitoring LC

The ExpressRT-100 system takes samples from reaction vessels, then dilutes and injects them directly into an Eksigent Microflow™ LC. The system utilizes a proprietary filtration system that easily accommodates heterogeneous or high viscosity mixtures and gives you the ability to measure both achiral or chiral reactions. Customized software allows easy measurement of both conversion and percent impurity while gaining a better understanding of the kinetics, for development and optimization of a synthetic reaction.

expressRT-100 system specifications

sampling module

- Minimum cycle time: 3 minutes
- Sampling volume: as low as 20 µL
- Pre-programmed sample dilution factors: 1, 2, 3, 10, 30, 100, 300, 1000
- Dilution accuracy: ±1%
- Dilution precision: <3% RSD
- Wetted parts: Fluoropolymers (FEP, PFA, CTFE), fused silica, 316SS, PEEK
- pH range: 2–12
- Dimensions: 3.9" (10 cm) wide x 5.9" (15 cm) deep x 7.9" (20 cm) high
- Weight: 2 kg

capillary-scale LC analyzer

- Detection: UV absorbance
- Detection range: 200–380 nm
- Flow cell: 45 nL volume, 4 mm optical path length
- Non-linearity: <5% @ 2 AU
- Mobile phase system: binary gradient
- Flow rate range: 1–20 µL/min
- Column size: 300 µm ID, 3–15 cm length
- Sample injector: variable volume, 20–250 nL
- Gradient delay volume: <350 nL
- Dimensions (with cart): 26" (66 cm) wide x 23.6" (60 cm) deep x 59.1" (150 cm) high
- Weight: 75 kg

computer

- CPU: Pentium 4 or AMD 3500, >3.0 GHz
- Hard drive size: 80 Gb
- RAM size: 1 Gb
- CD drive: DVD-RW
- Operating system: WinXP, SP2
- LAN connection: Ethernet 10/100

service and warranty

The system includes a one-time installation and training by an Eksigent service representative along with a one-year warranty on parts and labor.

ordering information

description	Part Number
ExpressRT-100 with laptop computer	950-00046
ExpressRT-100 with desktop computer	950-00041
ExpressRT-100 without computer	950-00045



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Eksigent is creating new possibilities for life science research, drug discovery & development, and medical devices with its innovative Microflow™ and Nanoflow™ fluid delivery systems.

Eksigent's LC systems deliver dramatic increases in analysis speed, throughput, and sensitivity. Eksigent's drug delivery systems bring new levels of precision to portable drug delivery.

Today, leading research, pharmaceutical, and biotechnology firms around the world use Eksigent's innovative solutions.