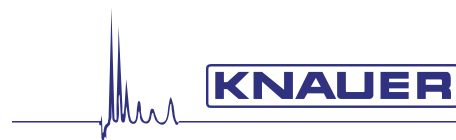


Autosampler – for automatic injection of sample sequences



TRIATHLON



The **TRIATHLON** meets your needs with options such as Peltier sample cooling and integrated stream switching. Many comfortable features of the **TRIATHLON** allow unattended operation.

- **Micro sampling**
- **Fast injection routine**
- **Pre-concentration, pipetting, diluting, derivatisation**
- **Service friendly**
- **Automated method development**

Reagent mixing routine enables aspirating and dispensing any volume amount from vial into another on the sample tray. The **TRIATHLON** can handle sample volumes even in the μl range accurately and reproducibly is also excellent for research and high throughput analysis. Large volume injections with tray segments containing 4 ml vials or 10 ml vials complete the specifications of this autosampler.

The versatile all-round autosampler realizes impressive results in injection precision, micro volume handling and sample capacity.

Technical data

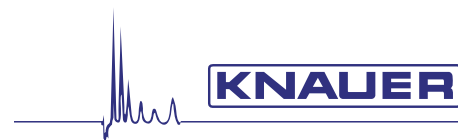
Sample capacity	Standard: 96 vials, 12 vials per segment. LSV: 72 vials, 8 vials per segment. Micro: 160 vials, 20 vials per segment
Vial dimensions	Standard segment: 1.5 ml vials, LSV segments: 4 ml vials, micro segments: 0.5 ml vials
Methods	Routine operations with injection, wash, and time based methods
Advanced operations	Mix methods (mixing, diluting, and pre-column derivatization), user defined programs
Injection methods	Full loop, partial loopfill, μl pick-up
Injection volumes	1 μl –1,000 μl , in 1 μl increments
Minimum sample volume	Partial loopfill: 35 μl ; μl pick-up: 5 μl
Replicate injections	Up to 9
Analysis time	Max 10 hr
Series	(Run sequence) vial numbers, method types, programmable priority vials
Needle wash	Programmable: 300–9,999 μl , separate needle wash port and waste
Wash solvent	250 ml integrated wash solvent bottle
Dispenser unit	100 μl , 250 μl (STD), 500 μl or 1,000 μl syringe
Vial detection	Missing vial detection by vial sensor
Headspace pressure	Built-in compressor, approx. 0.05 MPa
Switching time injection valve	< 100 ms
Reproducibility	Flushed loop injections: RSD \leq 0.3 %
Options	Sample tray cooling elements (4–40 °C), integrated stream switching with dual six way valve, solvent selection six port valve
Power; weight	115/220 V, 50/60 Hz; 28 kg

Ordering information

Order No.	Article
A0320	TRIATHLON
A03201	TRIATHLON COOL
A03202	TRIATHLON, preparative version
A0664	Accessory Kit
A3440	Preparative Kit

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Autosampler – for automatic injection of sample sequences



ENDURANCE

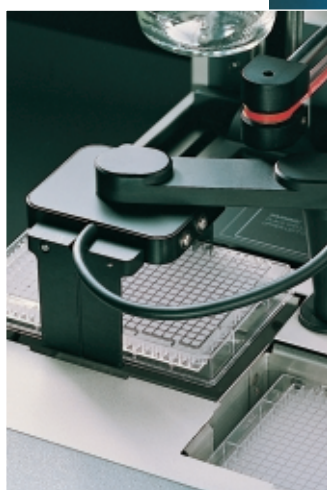
If your samples require well plates **ENDURANCE** is your best choice. The optional Peltier based tray cooling can also be used for sample heating up to 40 °C. Operations with injection, wash, mix and time based methods are completely integrated.

- Well plate autosampling
- High throughput capability
- Fast injection routine
- Convenient tray cooling and heating
- Sample preparation capabilities
- Early maintenance service mode

Three injection modes can be selected: full loop, partial loopfill, and μ l pick-up for maximum flexibility.

Reagent addition, mixing routines, pre-column derivatization, dilutions complete the excellent features of the **ENDURANCE**. With the optional extra switching valve you have a powerful tool for automated sample enrichment and clean-up.

Using the optional plate feeder for 6 extra well plates, **ENDURANCE** holds as much as 2,688 samples in 384 well plates. This is one of the few instruments that can process so many samples while unattended.



Well plate with x, y, z movement of the rack carriage.



Technical data

Sample capacity	1 well plate (128 x 86 mm) + 4 x 10 ml vials for reagents, diluents and transport liquid
Samples	Priority wells and calibration wells
Methods	Routine operations containing injection, wash, and time based methods
Advanced operations	Mix methods (mixing, diluting and pre-column derivatization), user defined programs
Injection methods	Full loop injections, partial loopfill injections, μ l pick-up injections
Injection volumes	0.1 μ l – 1,000 μ l, in 0.1 μ l increments
Minimum sample volume	Partial loopfill: 25 μ l; μ l pick-up: 5 μ l
Replicate injections	Up to 9
Analysis time	Max 10 hr
Series	(Run sequence) well numbers, method types
Needle wash	User programmable: 300 – 9,999 μ l, separate needle wash port and waste
Wash solvent	250 ml integrated wash solvent bottle
Dispenser unit	100 μ l, 250 μ l (STD), 500 μ l or 1,000 μ l syringe
Plate detection	Integrated fixation of the well plate when leaving the well
Headspace pressure	Built-in compressor, approx. 0.05 MPa
Switching time injection valve	< 100 msec
Cycle time	< 1 min, well to well
Reproducibility	Flushed loop injections: RSD \leq 0.3 %
Options	Sample loops in the range of 5 μ l to 1 ml Feeder: an integrated transport system with sample tray cooling elements (4 – 40 °C) and additional capacity of 6 x 96 / 384 well plates or 2 x 96 deep well plates Biocompatibility valve: Rheodyne 9,000 series injection valve
Power; weight	115 / 230V, 50 / 60 Hz; 22 kg

Ordering information

Order No.	Article
A1500	ENDURANCE
A15001	ENDURANCE COOL

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