



Liquid chromatography detectors

mikron  
mikron  
mikron  
mikron



# Analysis directly at the measurement site. Portable. Insertable. Runge mikron.



all devices in their original size



small  
small  
small

# Photometer,

Absorption photometer with one or maximum two modular interchangeable LED light sources.

# fluorimeter

Fluorimeter with modular interchangeable LED light sources and emission filters.

# and conductivity meter.

Conductivity meter for medium and high conductivity values.



# modular



## Flexible.

Light sources, filter and measuring cell can be adapted to changing tasks.

Ideal solution for changing routine tasks, yet more affordable and compacter than a fully variable detector.

## Future-proof.

Technical progress in LEDs is ongoing – with the **mikron** you can be part of it, even after two or five years.

- ⋮
- led 220 nm
- led 230 nm
- led 240 nm
- led 255 nm
- led 280 nm
- led 360 nm
- led 400 nm
- ⋮

## Upgradable.

Your **mikron** system grows in line with your requirements – or your financial possibilities. Start with one wavelength and then upgrade later on.



## Connective.

USB-C connector for data and energy, drivers for Data Apex Clarity, SCPA ChromStar, SCPA PrepCon, LabVIEW, open Runge protocol for customised implementation

- small**
- cool**
- durable**
- thrifty**
- non-toxic**

LED technology is what makes **mikron** possible functions at 4 °C (39 °F), no waste heat at least 5,000 operating hours under 2.5 W power consumption no mercury vapour lamp



# runge mikron 31 photometer

Absorption photometer with two modular interchangeable LED light sources.



The mikron 31 by Runge is the photometer for changing routine tasks. If you're not dependent on spectra, you can opt for this extremely small, light and affordable device that is surprisingly adaptable.

With this device, you take the detector to the measurement site and not vice versa.

It simultaneously takes measurements on one or two wavelengths (rapid scanning). You select the wavelengths from a broad range that extends from UV-C to IR-A. It is easy to change the LED cassettes, they are automatically recognised. Furthermore, you can retrofit wavelengths in the future that are not yet available today – that means security for the future and protection for your investment.

The mikron 31 can be used directly in chilled environments, for instance at 4 °C (39 °F) in bioanalysis.

Its optical design with a reference channel guarantees a high degree of accuracy with no external calibration. Drivers for many reputed software packages are available to record and analyse the measured values. The underlying Runge protocol is open.

The mikron 31 photometer by Runge offers you an unprecedented combination of compact size and adaptability. HPLC pocket model, right at the measurement site.

Light source	number	1... 2	
	wavelength range	nm	240 ... 1050 fixed, interchangeable wavelength
	optical bandwidth	nm	< 15
	accuracy $\lambda$	nm	$\pm 2,5$
	precision $\lambda$	nm	$\pm 0,5$
Signal	sample rate	Hz	1 ... 100
	noise	AU	typ. $< 10^{-5}$ at 255 nm, time constant 1 s
	linearity	AU	typ. $> 2,5$ at 255 nm
Measuring cell	types	analytical: 10 $\mu$ l volume, 10 mm path length, $1/16$ inch ports preparative: 1.6...6.4 $\mu$ l vol., 0.5...2 mm path len., $1/8$ inch ports	
	wetted materials	stainless steel (optionally titanium, PEEK), PTFE, fused silica	
Connectors	data, energy	USB type C, $I_{max} < 500$ mA, $P_{max} < 2.5$ W	
Data acquisition	drivers	Clarity, SCPA ChromStar, SCPA PrepCon, LabVIEW	
	protocol	open Runge protocol	
Standards	Conformity markings	CE	
	EMC	DIN EN 61000-3-2, class A; EN 55022, class B	

# runge mikron 71 fluorimeter

Fluorimeter with modular interchangeable LED light sources and emission filters.



The mikron 71 by Runge is the first pocket model fluorimeter in the world. It allows you to take the detector to the measurement task whether it's in the field, the laboratory or in a production plant.

This detector comes with fixed but exchangeable wavelengths for stimulation and emission. It is, therefore, ideally suited for changing routine tasks for which no spectra are required, for instance aflatoxin identification. You benefit twofold from this simplicity: in terms of space and price.

Thanks to its LED light source, the mikron 71 can be used directly in a chilled setting at 4 °C (39 °F) in bioanalysis. A wide range of wavelengths is available for stimulation and emission and will grow in line with technical progress.

The optical design of the mikron 71 with a reference channel ensures a high degree of accuracy with no external calibration. Drivers for many reputed software packages are available to record and analyse the measured values. The underlying Runge protocol is open.

With its mikron 71 Runge makes fluorimetry accessible to broad echelons of users.

Light source	number	1		
	wavelength range	nm	240 ... 650	fixed, interchangeable wavelength
	optical bandwidth	nm	< 15	
	accuracy $\lambda$	nm	$\pm 2,5$	
	precision $\lambda$	nm	$\pm 0,5$	
Emission filter	wavelength range	nm	350 ... 800	fixed, interchangeable wavelength
	optical bandwidth	nm	< 20	other specifications on enquiry
Signal	sensitivity	$10^{-15}$ g anthracene at 255 nm stimulation / 400 nm emission		
	sample rate	Hz	1 ... 100	
Measuring cell	types	analytical: 5 $\mu$ l volume, $1/16$ inch ports		
	wetted materials	stainless steel (optionally titanium, PEEK), PTFE, fused silica		
Connectors	data, energy	USB type C, $I_{max} < 500$ mA, $P_{max} < 2.5$ W		
Data acquisition	drivers	Clarity, SCPA ChromStar, SCPA PrepCon, LabVIEW		
	protocol	open Runge protocol		
Standards	Conformity markings	CE		
	EMC	DIN EN 61000-3-2, class A; EN 55022, class B		

# runge mikron 81 conductivity meter

Conductivity meter for medium and high conductivity values



Thanks to its compact size the mikron 81 conductivity meter by Runge can be used directly at the measurement site. Take the detector to the measurement task and not vice versa.

It has a broad measurement range of five decades which can be adjusted even more accurately to your requirements by selecting the appropriate measuring cell. Consistently precise and fast temperature compensation along with automatic switching of the measurement ranges in the signal amplifier ensure a high degree of accuracy across the entire broad measurement range.

The mikron 81 can be operated in chilled environments down to 4 °C (39 °F). This factor and the use of suitable materials means it is the ideal choice for applications in biology, pharmaceuticals and the food industry.

By means of internal measurement resistances the mikron 81 calibrates itself every time it is switched on and when instructed. It also automatically identifies the cell constant of the existing measuring cell. Drivers for many reputed software packages are available to record and analyse the measured values. The underlying Runge protocol is open which means that you can also write your own scripts in order to work with this detector.

The mikron 81 offers you the performance of a top-grade laboratory device in the format of a probe.

Conductivity	range	S/cm	$10^{-6} \dots 10^{-2}; 10^{-5} \dots 1$	depending on cell constant
	accuracy	%	$\pm 2$	through three point calibration
	sample rate	Hz	10	
Temperature	range	°C	0 ... 100	
	accuracy	°C	$\pm 0,1$	
	sample rate	Hz	10	
Measuring cell	type		analytical: 5 µl volume, $\frac{1}{16}$ inch ports	
	wetted materials		titanium, PEEK, PTFE	
	cell constant	1/cm	5; 50	others on enquiry
Connectors	data, energy		USB type C, $I_{\max} < 500 \text{ mA}$ , $P_{\max} < 2.5 \text{ W}$	
Data acquisition	drivers		Clarity, SCPA ChromStar, SCPA PrepCon, LabVIEW	
	protocol		open Runge protocol	
Standards	Conformity markings		CE	
	EMC		DIN EN 61000-3-2, class A; EN 55022, class B	





The Potsdam Centre for Technology, the registered office of Runge

## Local distributor:

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