RAMONA QUATTRO

4 $\beta^{\text{-}}$ RADIOACTIVITY HPLC FLOW DETECTORS IN ONE INSTRUMENT

THE MOST SENSITIVE DETECTION METHOD FOR LOW ENERGY β⁻ NUCLIDES.



- ULTRA HIGH RESOLUTION
- 4 DETECTORS IN 1 INSTRUMENT
- FOR ALL HPLC BRANDS WITH ANALOG DETECTOR SIGNAL OUTPUT

RAMONA* quattro contains 4 beta-radioactivity-coincidence-flow-detectors in 1 instrument. RAMONA* quattro is using 4 pairs of $2 \times 1 1/8$ " photomultipliers in coincidence in order to arrange 4 flow cells, one after the other. 4 coincidence-detectors are measuring the beta-radioactivity in HPLC-flow individually.

Wraytest



The recording PC can display 4 individual traces of HPLC-flow detectors on the screen. Each trace shows the same chromatogram slightly delayed. The individual fraction is flowing from the first to the second, third and fourth coincidence detector and is recorded individually. The flow time from the first to the second, third and fourth detector can be determind individually. Entering the individual flow delay from the first to the second, third and fourth detector to the recording program, 4 simultaneous chromatograms can be obtained and each trace delay can be adjusted individually. After that, 4 individual chromatograms can be added up and in trace 5 the sum of the 4 individual chromatograms is displayed. The display of the 4 single traces can be suppressed and only the sum shown. Peak-intergration can be performed during measurement and live display. This procedure improves the sensitivity of the radioactivity-flow-detector-system effectively. While the peaks are growing linearly by 4, the background is adding up to 2 = sgr of 4 only.

Additional features are:

- Wet parts made out of stainless steel, quartz glass, PTFE •
- Shielding: stainless steel, low activity lead
- Automatic change liquid scintillator to solid scintillator .
- Optional control program Gina Star with live display on PC screen
- At least 2x more sensitive as the classical Ramona Star

Technical specifications

Photomultiplier	4x2 photomultiplier 1 1/8"
Flow cell	Internal solid scintillator 4 x 40 µl 4 x 100 µl
Eluate flow rate	100 - 1000 µl / min

Operation mode with Gina control (optional)

Display	Live on PC screen				
Y-scale	Selectable during run, no loss of data by overriding range				
X-scale	Individually selectable during run, no loss of data				
Smoothing	Individually, during run				
Delay calibration of	Individually displayed on screen	**			The da to
Summation of traces	Automatically		00.3	104	100
Display of sum trace	Individually	1	1	i	5
Peak integration	Live	- Maria	m	M	n
Operation mode stand-alone					

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Output	0-2,5 V, 20 bit
Digital display	4 x 20 character LCD
Parameter entry	Guided dialogue
Ratemeter range	Selectable
Smoothing	Selectable

Physical specifications

Dimensions

W470×D430×H162mm (W18,50"xD16,92"xH6,37")

Weight

30 kg (66,13 lbs)

