

RAMONA

2" analog output radioactivity HPLC-flow-monitor



β -Radiochromatography



Applications

β^- radioactivity HPLC
internal solid scintillators
external scintillators
liquid scintillator admixture

β^-/γ radioactivity HPLC
external solid scintillators

General description

RAMONA 2" analog output is a new radioactivity-HPLC-flow detector in the long tradition of more than 2000 units installed since 1983.

Photomultipliers with a 2" diameter photocathode have been selected for highest sensitivity and for very low background.

Liquid scintillation admixture is the most sensitive detection method for very low energy beta minus nuclides such as ^3H .

Alternative internal solid scintillators of suitable material and particle size are offering the same efficiency for ^{14}C as liquid scintillator admixtures. Various internal solid scintillator materials and particle grades have been recommended for low energy β^- applications.

Potential contaminations of solid scintillators have been analysed and avoided. Various external scintillators are recommended for high energy β^- or gamma applications. raytest invented the identification of every flow cell with various internal or external scintillators, particle size, cell volume etc for GLP-applications. By reading the cell-chip the fast coincidence time is automatically adapted to the scintillator material.

Puls summation is applied for high spectral resolution. 2 identical, simultaneous counting channels are available. Each channel has individual lower and upper discriminators for various applications and calibrations.

The integrated micro processor counts single events in each channel. The information of detected counts per interval time is converted by the internal ratemeter to an analog voltage of 0 – 1 V. To most brands of HPLC an auxiliary detector can be connected by 0 – 1V. All parameters like range, interval time, background subtraction, cell volume etc are entered by keyboard and displayed on a 4 line 20 character LCD.

Features

all wet parts: stainless steel, quartz glass, PTFE

shielding: stainless steel, low activity lead

photomultiplier: 2 x 2"

fast coincidence: automatic change solid/liquid scintillator

pulse summation: high spectrum resolution

low background: by graded shielding

high efficiency: by selected photocathodes

operation: internal μ -processor control

keyboard entry of counting parameters
display of all parameters and results on LCD
0-1V analog output for most HPLC brands

Ordering information

01002026 RAMONA * 2" stand alone
 β^- HPLC-flow-detector
select flow cell for your application
from list

01040020 waste control box

01046C14 RAMONA * C14 standard





RAMONA

2" analog output Radioactivity HPLC-flow-monitor



HPLC-System with radioactivity flow detector and liquid scintillator admixture

Technical data

		solid scint	liquid scint
efficiency	3H	20%	60%
	14C	90%	90%
background	3H	20 c/m	25 c/m
	14C	30 c/m	30 c/m
sensitivity E ² %	3H	20	144
	14C	270	270

internal solid scintillator flow cells

- S11nnnn internal glass scintillator flow cell
...nn particle size 30 – 250 μm
..nnn volume 50 – 370 μl
- 012nnnn internal CaF scintillator flow cell
nn... particle size 40 – 250 μm
..nnn volume 50 – 370 μl
- 013nnnn internal US glass scintillator flow cell
nn... particle size 30 – 250 μm
..nnn volume 50 – 370 μl
- S11μ2805 internal glass scintillator flow cell
28 grade 10-20μm particle size
05 volume 5 μl

external solid scintillator flow cells

- 01047nn external plastic scintillator flow cell
100, 300, 600 μl volume
- 01048nn external BGO scintillator flow cell
100, 300, 600 μl volume
- S1049nn external BGO scintillator flow cell
for gamma coincidence
100, 300, 600 μl volume

liquid scintillation admixture flow cell

- S1045nn liquid scintillator admixture
600 μl volume
1300 μl volume
2500 μl volume

liquid scintillator admixture pump see separate page



liquid scintillator admixture flow cell



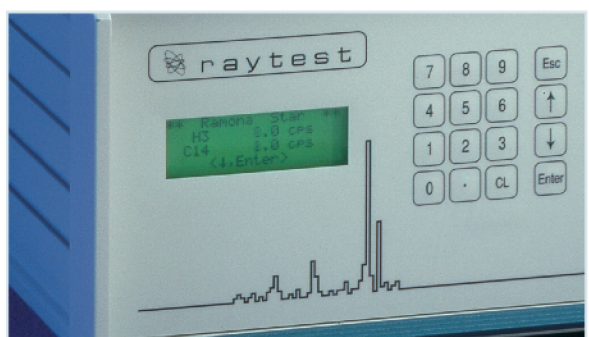
external solid scintillator flow cell



internal solid scintillator flow cell



external plastic scintillator flow cell



LCD, 4 lines, 20 characters, 16 entry keys

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