

# RAMONA STAR

## $\beta^-$ RADIOACTIVITY HPLC FLOW DETECTOR

THE MOST SENSITIVE DETECTION METHOD  
FOR LOW ENERGY  $\beta^-$  NUCLIDES.

- PERFECT FOR GLP APPLICATIONS
- LOWEST BACKGROUND
- HIGH EFFICIENCY
- MOST SENSITIVE
- LIQUID OR SOLID SCINTILLATOR
- OPTIONAL DUAL BGO DETECTORS FOR PET METABOLITE ANALYSIS



Liquid scintillation is the most sensitive detection method for low energy beta nuclides such as  $^3\text{H}$ . Alternative internal solid scintillators of suitable material and particle size offer almost the same efficiency for  $^{14}\text{C}$  as liquid scintillator admixtures. Environmental and cost considerations have promoted internal solid scintillators.

Photomultipliers with a 2" diameter photocathode have been selected for highest sensitivity and efficiency and for lowest background by graded shielding. Potential contaminations of solid scintillators have been analysed and avoided. The process allows the identification of every flow cell with various 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, which allows an automatic change of solid / liquid scintillator. Pulse summation is applied for high spectral resolution. The integrated micro-processor counts single events in each channel and converts the number of counts per time interval to the analogue output signals of 0-1V.

Additional features are:

- Wet parts made out of stainless steel, quartz glass, PTFE
- Shielding: stainless steel, low activity lead
- Keyboard entry of counting parameters
- Display of all parameters and results on LCD
- Can be integrated with HPLC from major manufacturers (Agilent, Shimadzu etc.)

### Options

#### • Internal solid scintillator flow cell (for <sup>14</sup>C)

013ppvv	internal US scintillator flow cell pp... particle size 30 30-50 µm pp... particle size 31 45-63 µm ...vvv volume 50-370 µl
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#### • External solid scintillator flow cell

01048vvv	external BGO scintillator flow cell 100, 300, 600 µl volume
S1049nvvv	external BGO scintillator flow cell for gamma coincidence 100, 300, 600 µl volume



#### • Liquid scintillation admixture flow cell + liquid scintillator pump

<b>Flow cell</b>	S1045vvv Liquid scintillation admixture 200 µl volume / 600 µl volume 1300 µl volume / customized volume
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<b>Pump</b>	Body: stainless steel Piston: saphir Valves: rubin Pressure: 0-1.000 PSI Control: manual / remote
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Ramona with pump



### Technical specifications

		Solid scint.	Liquid scint.
Efficiency	<sup>3</sup> H	5%	60%
	<sup>14</sup> C	90%	90%
Background	<sup>3</sup> H	0.2-0.3 c/s	0.1-0.2 c/s
	<sup>14</sup> C	0.3-0.4 c/s	0.2-0.3 c/s

### Physical specifications

<b>Dimensions</b>	W470xD430xH160mm (W18,50"xD16,92"xH6,29")
<b>Weight</b>	max. 16 kg (35 lbs) without flow cell and column



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