

MARITA STAR

MANUAL RADIOACTIVITY THIN-LAYER CHROMATOGRAPH (TLC ANALYZER)

MOST EFFICIENT AND HIGHLY SENSITIVE DETECTOR FOR β -EMITTING NUCLIDES

- OPEN OR CLOSED WINDOW DETECTION
- MANUAL OR AUTOMATIC
- PEAK INTEGRATION AND BACKGROUND SUBTRACTION
- VERY HIGH SENSITIVITY



The single trace radioactivity thin-layer chromatography detector is using a linear analyzer detector, which is sensitive over the entire chromatogram trace from the start to the front. β -emitting nuclides can be detected very efficiently. Many γ -radiation-emitting nuclides are emitting β -radiation as well. The pure γ -emitting nuclides can be detected also because they produce Compton electrons.

MARITA Star has two simultaneous sensing electrodes: the delay line determines the location of the counted event, the pulse height of the counting wire is used for the electronic collimation. In this way high energy β -radiation can be detected with high resolution using a narrow collimator window. The MARITA Star can measure a single trace at once. Its detector is elevated after the end of the measurement and a new chromatogram plate can be placed for the following measurement.

Additional features are:

- Very low counting gas consumption
- Open window detection for ^3H , closed window detection for ^{14}C , ^{32}P , ^{90}Y , ^{18}F , ^{11}C etc.
- Very high sensitivity
- Antistatic protection grid for open window operation
- Live display of measurement
- Peak integration, background subtraction
- manual or automatic
- Limit of detection calculation

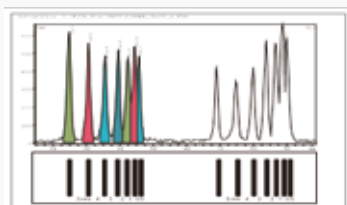
Technical Specifications

Traces	1
Energy discrimination	electronic collimator
Display	live, single chromatogram
Diaphragm	3-20mm wide, magnetic attach
Evaluation	manual or automatic, peak integration, background subtraction, limit of detection
Power supply	110 - 230V, 20 VA
Operating conditions	10 - 40°C, max 70% relative humidity

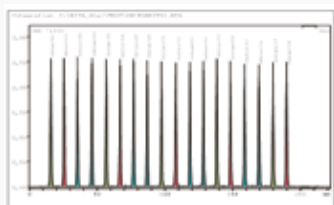
	^3H	^{14}C	high energy β^- or β^+
Detector	proportional counter	gas flow proportional counter	gas flow proportional counter
Detection window	open	closed	closed
Counting gas	-	P10 (90% Argon, 10% Methane)	P10 (90% Argon, 10% Methane)
Resolution	< 1 mm	< 2 mm	^{32}P : < 3 mm
Sensitivity	16 Bq in 10 min	100 dpm in 10 min	100 dpm in 10 min
Background	1.3 cps / 200 mm	80 dpm / 200 mm	80 dpm / 200 mm

Physical Specifications

Dimensions	W235xH135xD500mm (9W9,25"xH5,31"xD15,68")
Weight	9 kg (19,84 lbs)



Resolution test ^{14}C



uniformity test ^{14}C