

# MALISA STAR

## MANUAL LIQUID SCINTILLATION COUNTER

### $\beta^-$ RADIOACTIVITY DETECTION IN LIQUID SCINTILLATOR

- FOR  $^3\text{H}$ ,  $^{14}\text{C}$  ETC.
- SIMPLE SAMPLE DRAW WITH EASY OPENING / CLOSING
- ENABLES VERY HIGH COUNT RATES
- IMPROVED SPECTRAL RESOLUTION



MALISA Star is a manual liquid scintillation counter specially designed for  $\beta^-$  radioactivity detection in a liquid scintillator. MALISA Star is equipped with dead time correction which enables very high count rates. Linear pulse summation improves the spectral resolution for precise separation of different energy spectra of various alpha, beta and gamma emitting nuclides. Low activity lead and stainless steel are provided in order to reduce background count rate to a minimum. The liquid crystal display guides the user through the parameter selection and provides clear visual measurement results.

MALISA Star has a simple sample draw, which can be opened and closed easily. By simply extracting the sample draw, the measurement is automatically terminated. 1 or 2 counting channels can be selected with individual lower and upper discriminators, with 2 counting channels, spill-over correction is provided. Quench corrections can be applied, using various configurations of counting channels. A spectrum scan can be performed in order to determine the spectrum position and shape under quench conditions. Absolute activity can be calculated by entering background and efficiency values.

Additional features are:

- designed to accept standard plastic or glass liquid scintillation vials of 20ml volume
- can be adapted to mini vials of 7ml volume thanks to a simple insert
- high count rates up to 200.000 c/s
- applicable for  $\beta$ - radioactivity detection in liquid scintillator, 3H contamination, 3H wipe test
- automatic pulse summation
- no self-absorption
- calibration to Bq
- fast coincidence

#### Technical specifications

Sensitivity	$^3\text{H}$ : 2 Bq / $^{14}\text{C}$ : 1Bq
Power	100-230V, 50-60 Hz
Loading	sample draw
Sample size	20 ml - 7 ml
Photomultiplier	2x2" size
Pulse summation	automatic
Shielding	12 mm stainless steel, 20 mm lead Low level : 12 mm stainless steel, 50 mm lead
Counting channel(s)	1 or 2
Pre-settings	count: 999999000 / time: ..h..m..s
Discriminator level	A: 0-999 / B: 0-999
Efficiency	$^3\text{H}$ : 65% / $^{14}\text{C}$ : 95%
Background LL	$^3\text{H}$ : 15 c/m / $^{14}\text{C}$ : 28 c/m
Calibration	spectrum scan - internal standard - channel ratio
Print out	RS232C - all parameters - all data
Data output	LCD - thermal printer - PC



#### Technical specifications

Dimensions	W470xD370xH180mm (W18.50xD14,56xH7.08")
Weight	40 kg (88,18 lbs)



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