

Applications

- β- radioactivity detector for Thin-Layer-Chromatography (β+)
- nuclides 3H, 14 C etc
- nuclides 18F, 11 C etc
- external standardisation
- ultra high sensitivity

General description

RITA – the radioactivity thin-layer-chromatography detector – is using a linear analyser detector, which is sensitive over the entire chromatogram trace from the start to the front. The entrance window can be open for 3H-applications or closed for 14C or any other beta⁻ radiation emitting nuclides. Many gamma radiation emitting nuclides are emitting beta radiation as well. The pure gamma emitting nuclides can be detected as well, because they produce some Compton electrons.

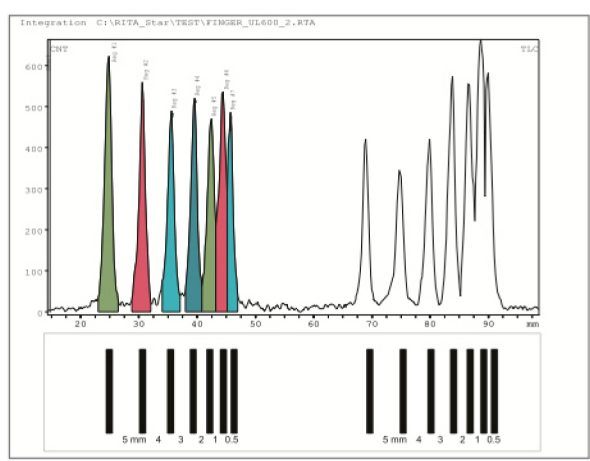
RITA has 2 simultaneous sensing electrodes: the delay line determines the location of the counted event, the pulse height of the counting wire is used for the electronic collimation. Thus high energy beta radiation can be detected with high resolution using a narrow collimator window. RITA can measure many single traces one after the other. The Rita detector is elevated after the end of the measurement and moved automatically to the next trace position. Multi traces can be displayed in 3-dimensional presentation or a 2-dimensional distribution over the entire 200 x 200 mm TLC plate can be calculated and presented. Counting gas is a non-inflammable mixture of 90% Argon and 10% Methane, which is traded as P10 gas. The gas consumption is very low. 2 TLC plates of 200 x 200 mm each can be placed in Rita at the same time. A metal/glass cover closes Rita completely and protects the environment as well as Rita itself from electronic frequency emissions (CE).

Features

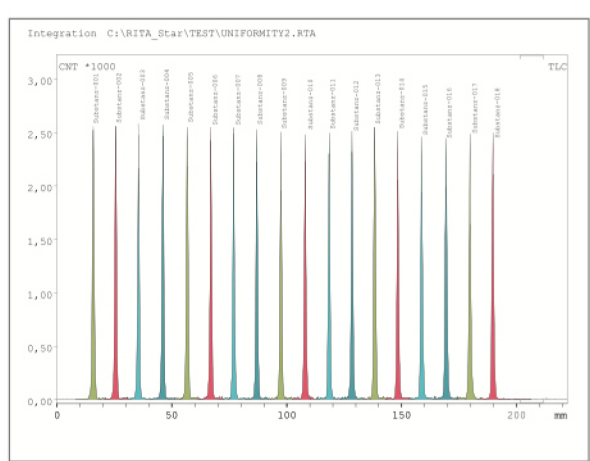
- open window detection for 3H
- antistatic protection grid for open window operation
- closed window detection for 14C etc
- very high sensitivity
- live display of measurement
- peak integration, background subtraction
- manual or automatic
- limit of detection calculation

Ordering information

- 02110001** RITA * β-TLC analyser for single and multiple traces
2 and 3 dimensional presentation
 - 02000105** RITA* homogeneity +resolution standard
14C source 22140000dpm
200 x 10 mm with holder
 - 02110010** RITA*IQ/OQ 14C standard for check of homogeneity + resolution
18 spots homogeneity test
4 spots sensitivity test
1-3-mm resolution test
- counting gas and valve are expected on-site



resolution test



uniformity test

Technical data

detector:	gas flow proportional counter
counting gas:	P10 90% Argon, 10% Methane
gas consumption:	1l/min
detection area:	single step 200 mm long, 20 mm wide
detection window:	open or closed, 0,9 mg/cm2
diaphragm:	3 - 20 mm wide magnetic attached
resolution:	3H < 1 mm 14C < 2 mm
sensitivity:	3H 1000 dpm in 10 min 14C 100 dpm in 10 min
background:	80 dpm/200 mm
energy discrimination:	electronic collimator
traces:	1-80
display	live single chromatogram
evaluation:	manual or automatic peak integration background subtraction limit of detection
dimension (wxhxd):	700 x 320 x 560 mm
weight:	45 kg
power supply:	110- 230 V, 20 VA
operating conditions:	10-40°C max 70% r.H.

Sole Distributor in China and Hong Kong : NIKYANG Enterprise Limited

Hong Kong • 852-2569 2154
 Shanghai • 86-21 6351 1828
 info@nikyang.com

Guangzhou • 86-20 8329 2451
 Beijing • 86-10 6527 8522
 www.nikyang.com

