

AT1316A AT1322, AT1322/1

Scintillation whole body counters (WBC) are intended to measure ^{60}Co in lungs (AT1316A) and ^{131}I , ^{133}I in the thyroid (AT1322, AT1322/1).

Features

- Joint and separate using of AT1316A and AT1322 or AT1322/1
- High-speed check-up - 3 min for one person
- Automatic LED stabilization of the energy scale
- Exceeding control of summary radioactivity of ^{51}Cr , ^{54}Mn , ^{58}Co , ^{59}Fe , ^{65}Zn , ^{95}Nb , $^{100\text{m}}\text{Ag}$, ^{103}Ru , ^{124}Sb , ^{141}Ce , ^{144}Ce in lungs (AT1316A)
- Flexible program control of WBC functions, data base management and result reports
- Extended radioactivity measuring range: ^{131}I from 30 Bq and ^{133}I from 40 Bq - AT1322/1
- Compact design

WHOLE BODY COUNTERS

^{60}Co - 50 Bq
 ^{131}I - 30 Bq, ^{133}I - 40 Bq



Application

Whole body counters AT1316A, AT1322 and AT1322/1 are intended for laboratories performing internal dose monitoring of population and NPP staff taking risk to get incorporated radionuclides while using equipment, radioactive materials, in case of radiation accidents



AT1316A



AT1322
AT1322/1



ATOMTEX

INSTRUMENTS AND TECHNOLOGIES FOR
NUCLEAR MEASUREMENTS AND RADIATION MONITORING

Specification

Scintillation detector

AT1316A NaI(Tl) Ø150x100 mm
AT1322 NaI(Tl) Ø40x40 mm
AT1322/1 NaI(Tl) Ø63x63 mm

Detected radiation energy range

AT1316A 50 - 2000 keV
AT1322, AT1322/1 50 - 1500 keV

Minimum measured radioactivity value for 3 min

⁶⁰Co in lungs (AT1316A) 50 Bq
¹³¹I in the thyroid (AT1322) 85 Bq
¹³¹I in the thyroid (AT1322/1) 30 Bq
¹³³I in the thyroid (AT1322) 110 Bq
¹³³I in the thyroid (AT1322/1) 40 Bq

MCA 512 channels

Integral non-linearity not more than ±1%

Relative energy resolution on ¹³⁷Cs

AT1316A not more than ±12%
AT1322, AT1322/1 not more than ±9%

Operation mode setup time 10 min

Continuous operation time 24 h

Reading instability not more than ±3%

Check-up at express control 15 persons/hour

Operating temperature range +10 ÷ +35 °C

Relative humidity at 30 °C up to 75 %

Power requirements

AC mains 220 (+22;-33) V, 50 Hz

Required power

(without printer) not more than 200 VA

Protection class from

electric current damage 1, type B

Radio disturbance

CEI/IEC CISPR 22:1997

Electromagnetic compatibility

CEI/IEC 61000-4-2:1995

IEC 61000-4-4:1995

IEC 61000-4-11:1994

Weight

AT1316A 250 kg

AT1322, AT1322/1 70 kg

Minimum area for placement

AT1316A 2000 x 1500 mm

AT1322, AT1322/1 1300 x 1000 mm

Complete set:

AT1316A: spectrometric smart probe, protective lead shield (smart probe collimator), measuring chair with protective lead shield, reference ¹³⁷Cs gamma radiation source, 9 kBq, reference source holder, devices for calibration and background measuring, AC adapter, smart probe adapter, Manual, user's guide, measuring technique, applied software, PC.

AT1322, AT1322/1: spectrometric smart probe, support with protective lead shield (smart probe collimator), reference ¹³⁷Cs gamma radiation source, 9 kBq, reference source holder, devices for calibration and background measuring, AC adapter, smart probe adapter, manual, user's guide, applied software, PC.

Whole body counters AT1316A, AT1322 and AT1322/1 comply with IEC 61582 International standard requirements. They also conform with the 89/336/EEC directive complying with EN 61326 standard requirements and 73/23/EEC directive complying with EN61010-1, EN 50371 standard requirements.

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