

AT1316

Express-control and activity measuring of gamma radiation radionuclides in human organism, dose evaluation of internal irradiation

Features

- Stabilized spectrometric path
- Spectrometric and radiometric measuring modes
- Effective algorithm of spectra processing by maximum likelihood method
- Possibility to extend radionuclides to control in radiometric measuring mode (^{60}Co , ^{137}Cs etc.)
- Radionuclide detection
- Expected effective dose calculation of internal irradiation
- Flexible program control over whole body counter functions, data base creation and result reporting
- Geometry of stationary chair
- Compact design
- Rapid background (phantom) spectra measuring using operating background generation function

Application

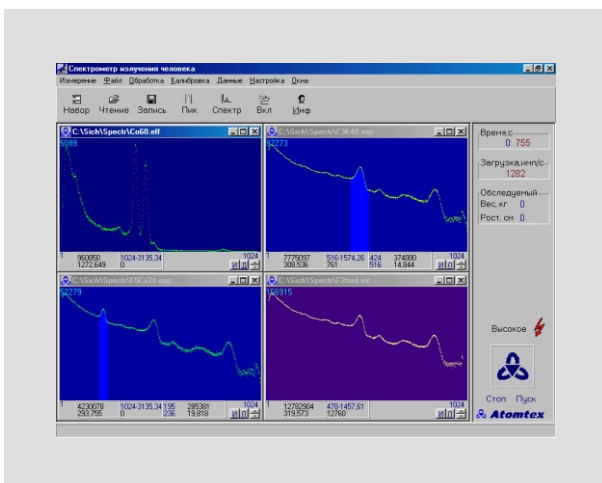
- People and staff monitoring within and after radiation accident
- Dose burden control of internal irradiation by incorporated radionuclides

WHOLE BODY COUNTER

300 Bq for 3 minutes
Check up to 15 persons per hour



- Working in nuclear industry or with open radiation sources staff control



The whole body counter operation is based on incorporated gamma radiation radionuclide detecting and spectrometric data processing by hardware-controlled software to evaluate radiometric parameters of internal contamination taking into account anthropometric personal features

Specification

Detecting radiation energy range	0.05 - 3 MeV
Minimum measuring activity of ^{137}Cs in adult human body (for 3 min).....	300 Bq
Radionuclides to control in standard mode	^{137}Cs , ^{40}K
Measuring geometry (sitting in a chair)	bulb angle of 100°
Intrinsic measurement error	±15%
MCA	1024 channels
Integral non-linearity	not more than ±1%
Operation mode setup time	10 min
Continuous operation time	24 h
Reading instability	not more than ±3%
Checkup at express control	15 persons/hour
Operating temperature range	10 - 35°C
Relative humidity	80 %
AC mains	220 (+22;-33) V, 50 Hz
Required power	not more than 200 VA
Protection class of current damage	1, type B
Radio disturbance characteristics CEI/IEC CISPR 22:1997	
Electromagnetic compatibility CEI/IEC 61000-4-2:1995 IEC 61000-4-4:1995 IEC 61000-4-11:1994	
Weight	250 kg
Minimum area to place	2000 x 1500 mm

Complete set: spectrometric detection unit, protective lead shield (detection unit collimator), measuring chair with protective lead shield, reference ^{137}Cs gamma radiation source of 12 kBq, reference source holder, manual, user's guide, measuring technique, applied software, PC.

The whole body counter AT1316 has pattern approval certificate of Republic of Belarus.

**5, Gikalo st., 220071 Minsk,
Republic of Belarus**
tel. +375 17 2328142, 2844016
tel. / fax +375 17 2328142, 2882988
e-mail: info@atomtex.com
<http://www.atomtex.com>



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