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Meets the requirements of IEC 61526 standard

Number U2514-07 in State Register for Measuring Instruments

*State Sanitary-Epidemiological Conclusion # 05.03.02-04/25552
of May 23, 2007*

Branches of Use

- Nuclear power industry
- Emergency Services and Civil Defense
- Radiological laboratories
- Labor protection
- Medicine
- Sanitary and epidemiological services
- Ministry of Internal Affairs
- Metallurgy
- Mining industry
- Radioactive waste storage sites

Purpose of Use

- Measurement of gamma and X-ray radiation individual dose equivalent rate (DER).
- Measurement of gamma and X-ray radiation individual dose equivalent (DE).
- Clock, alarm clock.

Application

The dosimeter may be used as an electronic direct reading device. It can be applied together with "PDC ECOMONITOR" software (see p.71) and as a stand-alone device.

Specifications

Measurement ranges and main relative errors:

- gamma and X-ray radiation individual dose equivalent rate $H_p(10)$	$\mu\text{Sv/h}$	0.1...1 000 000; (1...10 $\mu\text{Sv/h}$; $\pm 20\%$; 10 $\mu\text{Sv/h}$...1 Sv/h; $\pm 10\%$)
- gamma and X-ray radiation individual dose equivalent $H_p(10)$	mSv	0.001 ... 9 999 ; $\pm 15\%$
Energy range of detected gamma and X-ray radiation and energy dependence	MeV	0.05 ... 6.0 (0.05 ... 1.25; $\pm 25\%$)
Recording resolution of dose accumulation history in the nonvolatile memory	minutes	5 ... 255
Time of data storage in the nonvolatile memory	years	not less than 10
Data exchange rate through infrared port	bit/s	38 400
Positive data exchange distance between the dosimeter and the infrared port adapter	m	not more than 0.3
Lithium battery (CR2450) life*	hours	2 200
Operating temperature range	$^{\circ}\text{C}$	-10 ... +50
Weight	kg	0.08
Dimensions	mm	90 x 55 x 10

* under gamma background not more than 0.3 $\mu\text{Sv/h}$, switched off alarm system

Features

- Stand-alone use or use within automated system of personal dosimetry control.
- Storage of dose accumulation history in the nonvolatile memory with real time reference.
- Transfer of dose accumulation history through the infrared port to the computer.
- Blocking the mode of power supply switch off until the data reading procedure finished.
- DER and DE threshold levels programming of gamma and X-ray radiation with the help of the computer or manually with control keys.
- Blocking certain indication modes in response to the computer command.
- Light and audio alarms when programmed threshold levels exceeded on DER and DE of gamma and X-ray radiation.

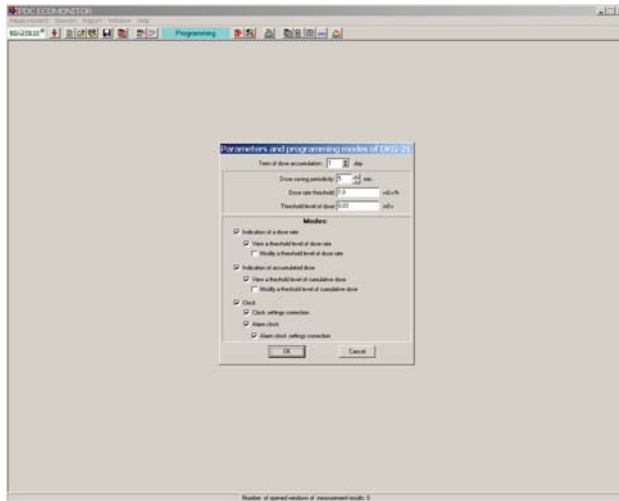
Features (continued)

- Display automatic switch off if current gamma background is lower than the preset threshold level with instant switching on at:
 - pressing any control key;
 - gamma background increase above the preset threshold level;
 - alarm clock ringing.
- Periodic self-testing of batteries and detector.
- Energy-compensated Geiger-Muller counter.

Delivery Kit

- DKG-21 "EcotestCARD" dosimeter;
- operating manual;
- case with a clip;
- packing box.





Purpose of Use

- Automated noncontact programming of the operating modes of DKG-21 “EcotestCARD” dosimeter.
- Automated noncontact reading of dosimetric measurement results of DKG-21 “EcotestCARD”, MKS-U and MKS-07 ”POSHUK” dosimeters.

Application

The program can be used by companies and institutions, as well as by individual users to program DKG-21 “EcotestCARD” dosimeters and also for reading and computer processing of dosimetric measurement results of DKG-21 “EcotestCARD”, MKS-U and MKS-07 “POSHUK” dosimeters.

Specifications

- “PDC ECOMONITOR” allows to:
- program parameters and operating modes of DKG-21 “EcotestCARD” dosimeters;
 - read dosimetric measurement results of DKG-21 “EcotestCARD”, MKS-07 “POSHUK”, and MKS-U dosimeters;
 - save the readout measurement results to files;
 - load and process previously saved dosimetric measurement results;
 - view and print the dosimetric information as reports;
 - save the information as reports or text files for further processing by other word processors;
 - export the readout information to Microsoft Excel for further processing in Excel.

Operating Conditions

The "PDC ECOMONITOR" program operates on the computers running Windows XP Professional or Windows 7 Professional, and connected infrared port adapter (included in the delivery kit).

The screenshot shows the 'PDC ECOMONITOR - [0805987 - dosimeter measurement results]' window. It features a menu bar (Measurement, Session, Report, Window, Help) and a toolbar. Below the toolbar, there are input fields for 'Dosimeter number: 0805987', 'Dosimeter type: DKG-21', and 'Name: Bob Swart'. The main area contains a table with the following data:

Record No.	Object number	Channel	Measuring time	Value	Unit
1		Dose	15.12.2010 11:32:03	0,0	mSv
2		Dose	15.12.2010 11:37:03	0,003	mSv
3		Dose	15.12.2010 11:42:03	0,004	mSv
4		Dose	15.12.2010 11:47:03	0,005	mSv
5		Dose	15.12.2010 11:52:03	0,006	mSv
6		Dose	15.12.2010 11:57:03	0,006	mSv
7		Dose	15.12.2010 12:02:03	0,007	mSv
8		Dose	15.12.2010 12:07:03	0,008	mSv
9		Dose	15.12.2010 12:12:03	0,008	mSv
10		Dose	15.12.2010 12:17:03	0,009	mSv
11		Dose	15.12.2010 12:22:03	0,009	mSv
12		Dose	15.12.2010 12:27:03	0,01	mSv
13		Dose	15.12.2010 12:32:03	0,011	mSv
14		Dose	15.12.2010 12:37:03	0,011	mSv
15		Dose	15.12.2010 12:42:03	0,012	mSv

At the bottom right of the window, it says 'Number of opened windows of measurement results: 1'.

The screenshot shows the 'Measurement results report' window. It displays a report for '1' measurement results. The report includes the following information:

Measurement results
Date: 5/29/2006 10:12:51 AM

Dosimeter number: 0805123 Dosimeter type: JNF-21 Name: Bob Swart

Record No.	Object number	Channel	Measuring time	Value	Unit
1		Dose	2/15/2006 5:46:29 PM	0,0	mSv
2		Dose	2/15/2006 5:51:29 PM	0,014	mSv
3		Dose	2/15/2006 5:56:29 PM	0,031	mSv
4		Dose	2/15/2006 6:01:29 PM	0,047	mSv
5		Dose	2/15/2006 6:06:29 PM	0,062	mSv
6		Dose	2/15/2006 6:11:29 PM	0,079	mSv

At the bottom left, it says '0% Page 1 of 11'.