



## CALIBRATION CERTIFICATE

Type: **BDKG-23**Date of calibration: 19.02.2021.S/N: 222

Measurement limits:

**BDKG-23:  $\gamma$  0.1  $\mu$ Gv /h – 100 Gv/h:**

Measurement error:

**BDKG-23:  $\pm 20\%$** 

Operating conditions:

- Air temperature +21,0 °C
- Atmospheric pressure 98,5 kPa
- Relative humidity 74,0 %
- Gamma radiation background 94,0 nGy/h

The instrument is calibrated on AT-130 standard dosimetry facility, No. 015, error  $\pm 4\%$  (Certificate of Compliance No. 210-1427/18 as of 23.10.2018 issued by FGUP «D.I.Mendeleyev VNIIM», St. Petersburg, Russia); the instrument is calibrated on AT-110 standard dosimetry facility, No.013, error  $\pm 5\%$  (Certificate of Compliance No.210-1426/18 as of 22.10.2018 issued by FGUP «D.I.Mendeleyev VNIIM», St.Petersburg, Russia)

### Calibration data

#### BDKG-23 ( $\gamma$ ) sn: 222

Kerma rate at check point $H_o(10)$	Radiation source number	Distance to source, $R, cm$	Kerma rate measurement at check point,					Relative gamma radiation dose rate measurement error $\theta_{np}, \%$	Confidence limit of the intrinsic relative error $\Delta, \%$ during calibration	Limits of intrinsic relative error, % not above
			Back-ground, $nGy/h$	Measured value $H_i^*(10)$			Average value, $H_i(10)$			
				$H_1$	$H_2$	$H_3$				
0,7 $\mu$ Gy/h	0HA	211.9	94,0	0,73	0,72	0,70	0,72	2,86	6,41	$\pm 20$
7 $\mu$ Gy /h	0HA	68,0	—	7,16	7,10	6,74	7,00	0,00	5,50	
70 $\mu$ Gy /h	9XK	147.2	—	68,3	68,0	73,6	70,0	0,00	5,50	
0.7 mGy /h	9XK	47.2	—	0,69	0,72	0,69	0,70	0,00	5,50	
7,0 mGy /h	9TH	52.9	—	7,54	7,62	7,04	7,40	5,71	7,93	
70 mGy /h	043	102.2	—	69,9	70,2	69,9	70,0	0,00	4,40	
0,7 Gy/h	163	211,0	—	0,72	0,69	0,72	0,71	1,43	4,54	
7 Gy/h	163	67.9	—	6,94	6,95	7,11	7,00	0,00	4,40	
40 Gy/h	163	44315,0	—	39,8	38,8	41,4	40,0	0,00	4,40	

Calibrated by:

V. Pisarenko

Technical control:

N. Kurbatova