

TEST REPORT

Report No. : EMRAL-TR-101347-1

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Measurement Results

Sample No.	Sample Identification	Nuclide	Radioactivity	Counting Uncertainty (1 σ)	UNIT
10112SX022	The glow in dark LUMI LONG cloth with green/blue light stripes.	Th-series	<MDA (0.0079)	-----	Bq/g
		U-series	<MDA (0.0060)	-----	Bq/g
		Nd-147	<MDA (0.0075)	-----	Bq/g
		Dy-157	<MDA (0.0022)	-----	Bq/g
		Dy-165	<MDA (0.6881)	-----	Bq/g
		Dy-166	<MDA (0.0527)	-----	Bq/g
		Eu-152	<MDA (0.0042)	-----	Bq/g
		Eu-155	<MDA (0.0066)	-----	Bq/g
		Eu-156	<MDA (0.0144)	-----	Bq/g

Remarks :

- 1.The sample was sampled by the customer and sent to the laboratory for analysis.The laboratory is not responsible for the sample representation.
- 2.MDA stands for the minimum detectable activity; values <MDA mean that no activity was detected for the sample in the specific test item.
- 3.Th-series were derived from Ac-228(911.2 keV); U-series were derived from Bi-214(609.3 keV).
- 4.IAEA-ND5-205 was adopted for gamma radionuclides analyses.
- 5.No artificial radionuclide is detectable in the samples.

Statement of Test

Sample Identification : The glow in dark LUMI LONG cloth with green/blue light stripes.

Sampling location : Tucheng Dist.

Sampling Date : December 17, 2012

Counting Date : December 18, 2012

Number of Sample(s) : 1

Counting Instrument(s) : INTER WINNER6.0

Instrument No. : Input # 2(Calibration Date : January 06, 2012)

Counting Time : 30000 sec

Counting Efficiency : Rel. Eff: 30%

Test Procedures : Gamma Spectrum Counting System Operational Procedures (EMRAL-EO-011)



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Measurement Results

<u>Sample No.</u>	<u>Sample Identification</u>	<u>Nuclide</u>	<u>Radioactivity</u>	<u>Counting Uncertainty (1σ)</u>	<u>UNIT</u>
10112SX022	The glow in dark LUMI LONG cloth with green/blue light stripes.	Sr-90	<MDA(0.129)	-----	Bq/g

Remarks :

- 1.The sample was sampled by the customer and sent to the laboratory for analysis.The laboratory is not responsible for the sample representation.
- 2.MDA stands for the minimum detectable activity; values <MDA mean that no activity was detected for the sample in the specific test item.

Statement of Test

Sample Identification : The glow in dark LUMI LONG cloth with green/blue light stripes.

Sampling location : Tucheng Dist.

Sampling Date : December 17, 2012

Counting Date : December 25, 2012

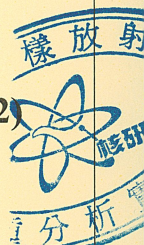
Number of Sample(s) : 1

Counting Instrument(s) : wallac 1220 Quantulus (Calibration Date : April 30, 2012)

Counting Time : 3600 sec

Counting Efficiency : 98.75%

Test Procedures : Radionuclide Analysis Standard Operational Procedures(EMRAL-EO-005)



TEST REPORT**Measurement Results**

<u>Sample No.</u>	<u>Sample Identification</u>	<u>Nuclide</u>	<u>Radioactivity</u>	<u>Counting Uncertainty (1σ)</u>	<u>UNIT</u>
10112SX022	The glow in dark LUMI LONG cloth with green/blue light stripes.	Gross α	<MDA(0.04)	-----	Bq/g
		Gross β	<MDA(0.07)	-----	Bq/g

Remarks :

- 1.The sample was sampled by the customer and sent to the laboratory for analysis.The laboratory is not responsible for the sample representation.
- 2.MDA stands for the minimum detectable activity; values <MDA mean that no activity was detected for the sample in the specific test item.

Statement of Test

Sample Identification : The glow in dark LUMI LONG cloth with green/blue light stripes.

Sampling location : Tucheng Dist.

Sampling Date : December 17, 2012

Counting Date : December 20, 2012

Number of Sample(s) : 1

Counting Instrument(s) : XLB(Calibration Date : October 19, 2012)

Counting Time : 3600 sec

Counting Efficiency : 28.7% (Gross α) ; 40.9% (Gross β)

Test Procedures : Environmental Gross α/β Analysis Standard Operation Procedure Manual

Approval Signatory	Lee Hsiu Wenz.	Date	2013.01.03.
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