

A review of low cost radiation products

Kent Gregory - SA Radiation Pty Ltd

Aim:

- ▶ Are the best things in life really free?
- ▶ Is there such a thing as cheap and cheerful?

Method:

- ▶ Purchase 4 items
- ▶ Each item not to exceed \$100
- ▶ Test performance
- ▶ Test ease of use
- ▶ Assign a rating

Item 1: Alpha radioscope

- ▶ Purchase cost = USD\$30 (+\$7 postage)



Item 1: Alpha radioscope

- ▶ Works, but eyes need to adjust to dark for 15 minutes
- ▶ Don't use alpha/gamma sources



What's worse than being down on your luck?



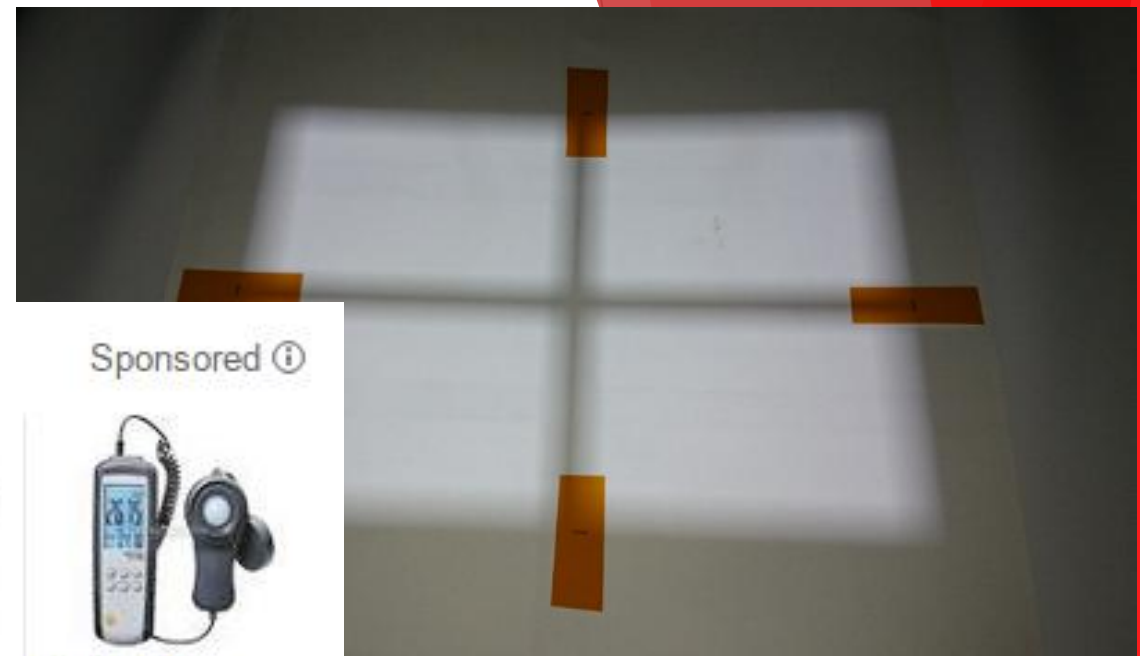
Item 2: Lux meter

► Purchase



Shop for lux meter on Google

 LX101 - Digital LUX Meter ... \$149.00 Instrument C...	 Y12095LX - Lux Ligh... \$299.00 Instrument C...	 LX100 - Kimo Lux Meter \$979.00 Instrument C...	 Light Meter LUX, Side ... \$99.55 Gastools
 Digital Lux Meter to ... \$39.95 Steplight	 Digital Light Meter displays \$39.95 Gastools	 Smartsensor Digital Lux ... \$70.00 CPL Office an...	 LX-1010B Digital LUX ... \$25.00 DX.com



Item 2: Lux meter

- ▶ Calibration result was excellent (\$135)

Report No.: 19840-1
Calibration Date: 02 AUG 2014

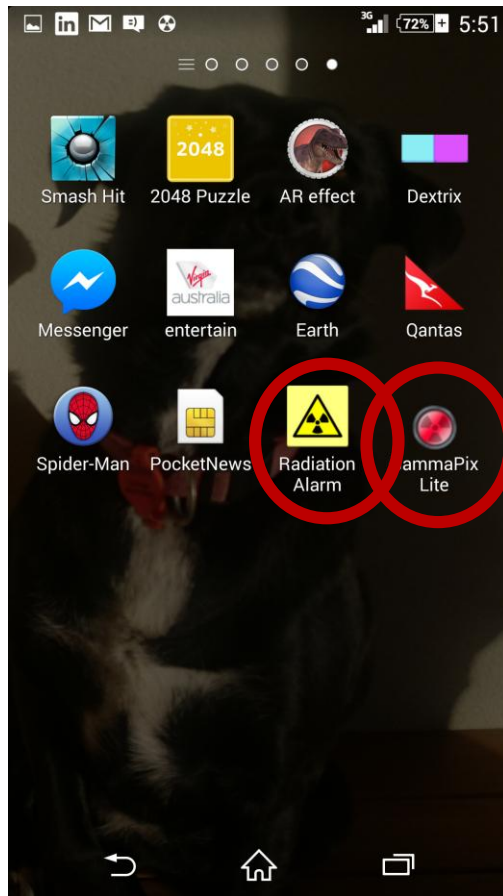
Equipment S/N.:

FUNCTION: LUX

RANGE	STIMULUS LUX	U.U.T. READING LUX	U.U.T. ERROR
20	5.00	5.8	0.8
	15.00	15.2	0.2
200	50.0	50.2	0.2
	154.0	153.0	-1.0
2000	508	504	-4
	1500	1509	9
20K	5.00 k	4.98 k	-0.02
	15.00 k	14.96 k	-0.04

Item 3: Smartphone gamma detectors

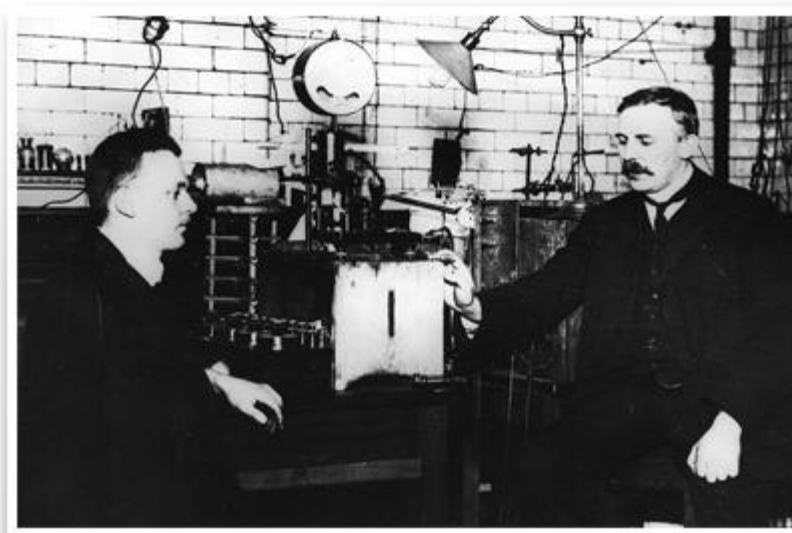
► Free (trial versions)



Item 3: Smartphone gamma detectors

- ▶ Did not detect 90uSv/h contact gamma dose rate





Item 4: Po210 demonstration source

- ▶ Purchase cost = USD\$58 (+ post = \$USD65)



Item 4: Po210 demonstration source

- ▶ A bit of a circus trying to get it into Australia
- ▶ Works very well as an alpha demonstration source



Ratings

▶ Alpha Radioscope



▶ Lux meter



▶ Smartphone Apps



▶ Po210 demo source



Product suppliers:

Item 1: Alpha Radioscope

United Nuclear Scientific

16429 S. Upton Rd.

Suite # 1

East Lansing, MI. 48823

WEB: www.unitednuclear.com

Email: customerservice@unitednuclear.com

Item 2: Lux meter

Ebay Australia

befdimall (China)

Item 3: Smartphone radiation detector

Image Insight, Inc.

87 Church Street

East Hartford, CT 06108

WEB: www.gammapix.com/sites

Email: info@imageinsightinc.com

Item 4: Po210 source

SPECTRUM TECHNIQUES, LLC

106 Union Valley Road

Oak Ridge, TN 37830

PH: (865) 482-9937

FX: (865) 483-0473

WEB: www.spectrumtechniques.com

Email: sales@spectrumtechniques.com