Lurisia 2014

Instructions

1. All your radon passive devices (dosemeters) must be identified with the labels you received;

2.The devices should be divided into two groups. The entire set (20 devices) should be packed into two separate radon proof bags (10 devices each).
The two envelopes must be identified by the corresponding Set ID code as follows:

- Group 1 : Set ID code XX, dosemeters n°1,2,…10 (low exposure)
- Group 2 : Set ID code XX, dosemeters n°11,12,…20 (high exposure)

For the Electret systems it is possible to send two different chamber/electret configurations.

After the exposures, the devices will be sent back to you. They will be re-packed in the same manner. Please send us additional envelopes/bags if you think that the bags used for the delivering couldn't be re-used.

3. The dosemeters along with this questionnaire have to be sent to the following address (open to public from Monday to Friday from 9.00 a. m. to 4.00 p. m.)

ARPA Piemonte – Dipartimento Radiazioni Ionizzanti
LABORATORIO RADON
Via Jervis 30
10015 Ivrea (TO) - Italy
tel: +39 (0) 0125 645328

Please include also a label with the Affiliation and the Address of your Laboratory where the dosemeters will be sent back to you after the exposures.

<u>The non EU countries should have enclosed the appropriate custom declaration of “no commercial value” and should mark the field “temporary” in the type of export.</u>

<u>If necessary on the parcel write “CAUTION DO NOT EXPOSE TO X RAY”</u>

4. All the devices will be transported and stored under the same conditions. They will be unpacked all together at the same time, just before the beginning of the exposures.

5. The devices will be exposed in the Lurisia cave for a convenient period. The radon level during the exposure will be continuously measured by means of radon monitors calibrated by the ENEA INMRI Laboratoty (Italian National Metrological Radiation Institute). After the end of exposure, the devices will be stored in a low radon level “storage room”.

6. The transit devices over the entire period of the interlaboratory comparison will be stored in a low radon level “storage room”.

7. All the relevant informations regarding the environmental parameters of the exposures (time of exposure, humidity, gamma dose rate, average temperature, etc.) will be provided.

8. A “Measurement Results Form” to be filled with your results will be available for download at our site www.airp-asso.it.

Schedule of the intercomparison

Submission of the devices	**from 15th to 30th June 2014**
Exposure period (approximately)	**July – August 2014**
Return of devices to the participants	**September 2014**
Return of the Measurement Results Form to: radon@airp-asso.it	**by 30th November 2014**
Results of the exposures	**by 31th January 2015**
Dissemination event	**March-April 2015**

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Questionnaire

Laboratory:

Set ID code :

Contact names:	
Telephone:	
Fax:	
Email:	

accreditation		
O NO		
O YES	Accreditation standard	
	Accreditation body	
	Range (kBq h m^{-3})	

radon passive device applications	
used for	O dwellings
	O workplaces
	O mines/caves
	O outdoor
	O soil
	O research
	O personnel monitoring
typical exposure range (kBq h m^{-3})	
normal exposure duration (days)	

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calibration						
calibration method						
number of exposures						
exposure duration (days)						
exposure range (kBq h m^{-3})						
uncertainty % in this range (95% CL)						
typical exposures (kBq h m^{-3})						

Etched track detectors

device characteristics	
name of the device	
holder design	
holder antistatic measures	O YES O NO
diffusion barrier material (closed detector)	O YES O NO
diffusion time (minutes)	
ON/OFF system	O YES O NO
humidity protection	O YES humidity barrier:..... O NO
typical uncertainty % (95%CL)	

detector characteristics	
detector material	
detector thickness (mm)	
detector size (mm^{-2})	
detector antistatic measures	O YES O NO
sensitivity (tracks/cm^2/kBq h m^{-3})	
typical background (kBq h m^{-3})	
SD on background (kBq h m^{-3})	
saturation (kBq h m^{-3})	

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analysis		
etching	Time (minutes)	
	solution	
	strength (%)	
	temperature (°C)	
optical track counting	O automatic	O manual
	area mm^{-2}	
	autofocus	O YES O NO
electronic track counting	O automatic	O manual
	area mm^{-2}	
	voltage	
corrections	ageing / fading	O YES O NO
	for non linearity	
	for saturation (overlapping of the tracks)	

Electret detectors

devices characteristics		
holder design		
group 1 (devices from 1 to 10)	chamber	
	electret	
group 2 (devices from 11 to 20)	chamber	
	electret	
humidity protection	O YES humidity barrier:..... O NO	
altitude correction	O YES O NO	
gamma correction	O YES O NO	
	If yes: O calculated O measured	

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List of the devices

Detector number	Laboratory detector code
Set ID code :.....	
1	
2	
3	
4	
5	
6	
7	
8	
9	
10	
11	
12	
13	
14	
15	
16	
17	
18	
19	
20	

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Additional instructions for placement of the dosemeters

Place, date	Signature
……..	……