

Radiopurity Database

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Journée Matière Sombre

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Nécessite d'une base de données de radiopureté des matériaux accessible au plus grand nombre ?

-> partage d'expérience sur les matériaux et sur les fournisseurs

*I don't get it. We still
do the wrong things*

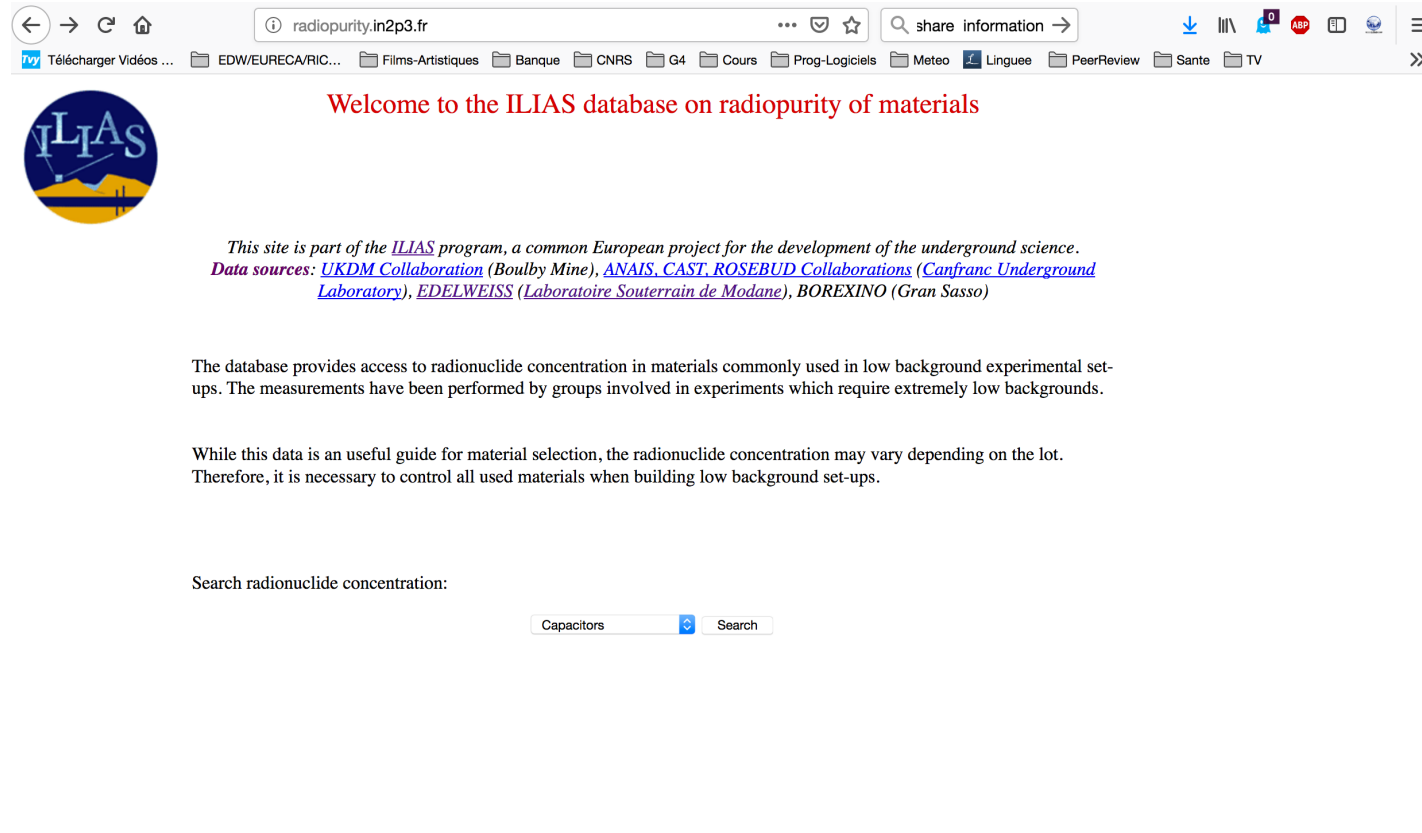
*Yes, but we have learned
to do them very well*



<http://radiopurity.in2p3.fr>

Pia Loaiza

(financement réseau européen ILIAS, ~2006 *Laboratoire Souterrain de Modane, France*)



radiopurity.in2p3.fr

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Welcome to the ILIAS database on radiopurity of materials

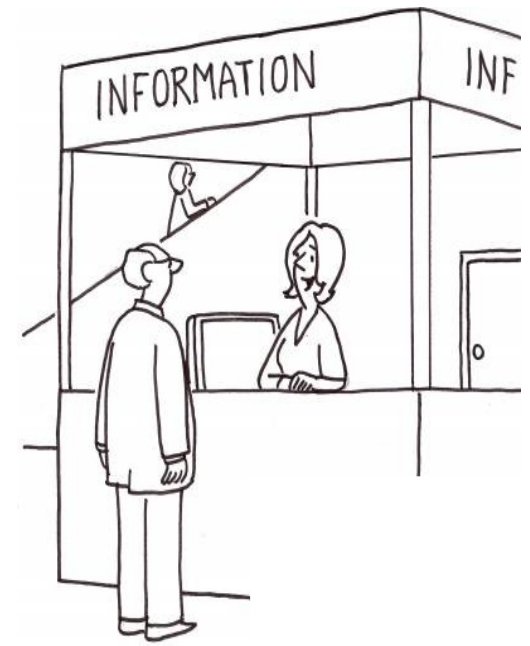
This site is part of the [ILIAS](#) program, a common European project for the development of the underground science.
Data sources: [UKDM Collaboration \(Boulby Mine\)](#), [ANAIS, CAST, ROSEBUD Collaborations \(Canfranc Underground Laboratory\)](#), [EDELWEISS \(Laboratoire Souterrain de Modane\)](#), [BOREXINO \(Gran Sasso\)](#)

The database provides access to radionuclide concentration in materials commonly used in low background experimental set-ups. The measurements have been performed by groups involved in experiments which require extremely low backgrounds.

While this data is an useful guide for material selection, the radionuclide concentration may vary depending on the lot. Therefore, it is necessary to control all used materials when building low background set-ups.

Search radionuclide concentration:

Capacitors Search



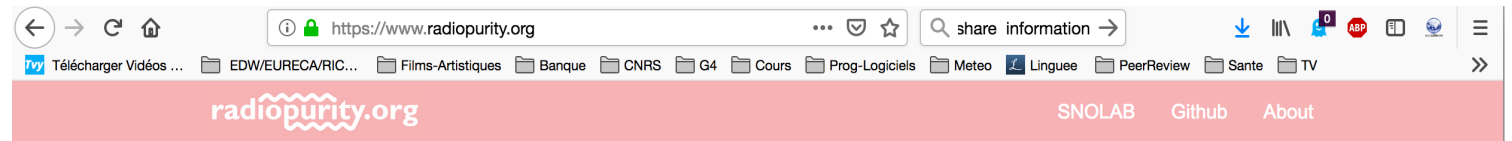
"Have you tried Googling that?"

N'est plus mise à jour, problème technique MySQL, pourrait être réactivée mais ...

<http://www.radiopurity.org>

Crée en ~2015: [James C. Loach](#) (formerly SJTU) [Jodi Cooley](#) (SMU) G. Adam Cox (IBM, formerly KIT), Alan Poon (LBNL)

Reprend toutes les données de <http://radiopurity.in2p3.fr> (label ILIAS xxx)
+ CDMS, MAJORANA, LUX, BOREXINO, EXO, EDELWEISS, CRESST, ... jusqu'en 2016



<https://www.radiopurity.org/rp/rp/design/persephone/index.html?all>

Fonctionne comme un repository centralisé

radiopurity.org

Search Submit Edit Settings Login						
<input style="width: 80%;" type="text" value="all"/> 🔍 ➤						
Total results: 1084						
Grouping	Name	Isotope	Amount	Isotope	Amount	
▶ BetaCage	Noryl frames	Th-232	0.47 mBq/kg	U-238	1.83 mBq/kg ...	✕
▶ BOREXINO (2002)	Aluminum for dynodes structure	Th-232	2.4e-7 g/g	U-238	9.6e-8 g/g ...	✕
▶ BOREXINO (2002)	Amorphous nylon copolymer, Durethan C38F	Th-232	2.6 ppt	U-238	1.2 ppt	✕
▶ BOREXINO (2002)	Amorphous nylon copolymer, Durethan C38F	Th-232	3.9 ppt	U-238	1.7 ppt	✕
▶ BOREXINO (2002)	Base glass	Th-232	1e-7 g/g	U-238	4.2e-8 g/g ...	✕
▶ BOREXINO (2002)	Ceramic plates for dynodes structure	Th-232	8e-8 g/g	U-238	1.4e-8 g/g ...	✕
▶ BOREXINO (2002)	Charcoal for radon absorption	Th-232	1e-7 g/g	U-238	2e-8 g/g ...	✕
▶ BOREXINO (2002)	Complete CRG213 Suhner cable	Th-232	5e-9 g/g	U-238	1.8e-9 g/g ...	✕
▶ BOREXINO (2002)	Complete Jupiter connector	Th-232	6e-9 g/g	U-238	4.5e-9 g/g ...	✕
▶ BOREXINO (2002)	Complete voltage divider	Th-232	7.9e-8 g/g	U-238	5.5e-8 g/g ...	✕
▶ BOREXINO (2002)	Dynodes	Th-232	1.1e-7 g/g	U-238	2.3e-8 g/g ...	✕
▶ BOREXINO (2002)	Engineered resin, Selar PA3426	Th-232	0.65 ppt	U-238	0.22 ppt	✕

Search: copper edelweiss

Total results: 201

Grouping	Name	Isotope	Amount	Isotope	Amount
▼ EDELWEISS (2011)	Copper, Apical, cables				
	Sample	Description Copper, Apical, cables			
	Measurement	Results			
		Ra-226	26 (15)		mBq/kg
		Th-228	< 50		mBq/kg
		Pb-210	346 (110)		mBq/kg
		K-40	167 (126)		mBq/kg
		Co-60	< 25		mBq/kg
▼ ILIAS Edelweiss	Copper, Cuc2 Plate, CARLIER				
	Sample	Description Copper, Cuc2 Plate, CARLIER			
	Measurement	Results			
		Th-234	< 20		mBq/kg
		Pb-214	< 1.5		mBq/kg
		Tl-208	< 1		mBq/kg
		Pb-210	200 (100)		mBq/kg
		Cs-137	< 0.6		mBq/kg
		K-40	< 13		mBq/kg
		Co-60	0.7 (0.4)		mBq/kg
▶ EDELWEISS (2011)	Copper, screens, support				...
▶ EDELWEISS (2011)	Copper, CuC2, detector casings			U-238	1.4 mBq/kg ...



radiopurity.org

About

This is the world's largest public database of material radio-purity measurements. These measurements are used by members of the low-background particle/nuclear physics community to build experiments that search for neutrinos, neutrinoless double-beta decay, WIMP dark matter, and other exciting physics.

The project is maintained by an international collaboration of scientists from North America, Europe, and China, who are responsible for developing the database application ([Persephone](#)), defining the material assay data format (MADF), and helping people contribute their data.

The project originated at [LBNL](#) but has only grown through the generous support of the wider low-background community. Special thanks go to the [AARM collaboration](#) and to [SNOLAB](#), which hosts the site.

Get in touch if you'd like to help the project. In particular, **we'd love to include your data.**

Contact [James Loach](#) or [Jodi Cooley](#) for more information.

Discussion avec Jodi Cooley et Alan Poon:

- Les expériences peuvent utiliser l'application Persephone pour leur propre database de manière privée et faire ensuite un *release* partiel ou total vers le repository central qu'est radiopurity.org quand cela leur semble opportun.
- Suggère l'organisation d'un mini-workshop pendant la conférence LRT2019 qui se tiendra à Jaca (Espagne) fin mai 2019

<https://indico.cern.ch/event/716552/>

Registration opening: 10 February, 2019

Registration deadline: 30 April, 2019

Low Radioactivity Techniques 2019

19-23 mai 2019
Fuseau horaire Europe/Madrid

Rechercher...

Vue d'ensemble

Scientific Advisory
Committee (SAC)

Local Organizing
Committee (LOC)

Topics

Ordre du jour

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Liste des participants

LRT 2019 Secretariat

✉ info@isc-canfranc.es

☎ +34-974-373-474

LRT 2019, hosted by the Laboratorio Subterráneo de Canfranc (LSC), Spain.

The Low Radioactivity Techniques (LRT) workshop series examines topics in low radioactivity materials and techniques, a fundamental aspect of rare event searches.

Topics include global radioactivity measurement and screening facilities, low background counting techniques, purification and contamination control, Rn control, cosmogenic activation of materials, and backgrounds and simulations for rare event experiments related to dark matter, solar neutrinos, double-beta decay and long half-life phenomena. This conference's wide scope includes all aspects of the development of low background detectors and techniques.

The goal of this workshop series is to bring together experts in this field for presentations and discussion covering broadly the issues of low radioactivity techniques. The intention is to foster and continue the collaboration and resource sharing required for new generations of detectors to be developed at underground facilities.

Historique LRT :

- [LRT2017](#) hosted by the Institute for Basic Science (IBS) Center for Underground Physics (CUP) and by Ewha Womans University.
- [LRT2015](#) hosted jointly by PNNL and the University of Washington in Seattle, USA
- [LRT2013](#) at LNGS in Assergi, Italy
- [LRT2010](#) at SNOLAB in Sudbury, Canada
- [LRT2006](#) hosted by LSM in Aussois, France
- [LRT2004](#) inaugural meeting, hosted at Laurentian University in Sudbury, Canada.