PROCORAD

Radiotoxicological Intercomparison exercices

Annual Meeting Program

June 19-21 2024

BORDEAUX – France

Reception of participants: Wednesday June 19 2:00 PM Hôtel Mercure Château Chartrons Bordeaux
33000 BORDEAUX (FRANCE)
Simultaneous translation: English-French and French-English

Wednesday 19th june 2024

2:00 PM	Welcome drink - Distribution of badges and working documents
2:30 PM - 3:15 PM	**Reception of participants welcome speech** *Michel TRICOTTI, President of PROCORAD* *M. Jean LAJZEROWICZ DAM CESTA MEGAJOULE Laser presentation*
3:15 PM - 3:30 PM	**Information on the meeting progress** **Balance sheet of participation** *Claude GUICHET, Secretary of PROCORAD*
3:30 PM - 3:45 PM	**Statistical exploitation of EQA results PROCORAD** *Philippe CORREZE, AREVA NC/La Hague/LABM (France)*
3:45 PM - 4:15 PM	**Uranium in urine** *Géraldine LECOIX, CEA/DEN/MAR/LABM (France)*
4:15 PM - 5:00 PM	**Presentation 1 « PROCORAD Intercomparison on uranium analysis in urine: a precious database? »** *Céline BOUVIER CAPELY and Raphaelle ESCOUBE, IRSN (France)*
5:00 PM - 5:30 PM	**Gamma-X emetters in urine** *Alexandra FAUSSART, CEA/DEN/Cadarache/LABM (France)*
5:30 PM – 6:00 PM	**Alpha emitters on nasal samples** *Stephan COHEN BACRIE, CEA/Valduc /LABM (France)*
6:00 PM	**End of session**
7:00 PM	**Departure for the Le Radisson Blu Hotel 63 rue Lucien FAURE Dock G6 Bordeaux**

Thursday 20th june 2024

8:30 AM - 9:15 AM	**Carbon 14, Sulfur 35 and Phosporus 32 in Urine** *Véronique CHAMEL, CEA/Grenoble/LABM (France)*
9:15 AM - 10:00 AM	**Presentation 2: « Environmental monitoring of the radionuclide Tritium»** *Yvan LOSSET CEA (France)*
10:00 AM - 10:30 AM	**Coffee break**
10:30 AM - 11:00 AM	**Actinides in Urine** *Géraldine LECOIX, CEA/DEN/MAR/LABM (France)*
11:00 AM - 11:45 AM	**Presentation 3 : « Monitoring of discharges and the environment around nuclear installations in France : regulatory framework and reporting»** *Nathalie REYNAL ASN (France)*
12:00 PM - 2:00 PM	**Lunch**
2:00 PM - 2:45 PM	**Ordinary General Meeting PROCORAD** • Moral report *: Claude GUICHET, secretary* • Financial report : *Philippe CORREZE, treasurer* • Website : *Véronique CHAMEL, webmaster* • Quality Management: *Géraldine LECOIX quality manager* • Miscellaneous questions • Vote, signature of the summons list
2:45 PM - 3:30 PM	**Actinides in fecal ashes** *Philippe CORREZE, AREVA NC/La Hague/LABM (France)*
3 :30 PM - 4:00 PM	**Coffee break**
4:00 PM - 4:30 PM	**Actinides-DTPA in urine** *Géraldine LECOIX, CEA/DEN/MAR/LABM (France)*
4:30 PM - 5:00 PM	**Press Review and international calendar** *Nicolas BAGLAN, coordinator of scientific council PROCORAD*
5:00 PM	**End of session**
5:45 PM	GALA DINNER

Friday 21st june 2024

9:00 AM - 9:45 AM	**Sr-90 in urine** *Xavier MILLOT, CEA/Saclay/LBM (France)*
9:45 AM - 10:00 AM	**Tritium in Urine** *Stephan COHEN BACRIE, CEA/DAM/Valduc/LABM (France)*
10:00 AM - 10:30 AM	**Coffee break**
10:30 AM - 11:00 AM	**Po-210 in urines** *Xavier MILLOT, CEA/Saclay /LBM (France*
11:00 AM - 11:45 AM	**Presentation 4 : « Speciation of actinides by capillary electrophoresis: applications to environmental sciences and biology »** *Jean AUPIAIS, CEA (France)*
11:45 AM - 12:15 PM	**General Discussion - 2025 Comparison Exercices : Date, venue, technical specifications** *Claude GUICHET, secretary of PROCORAD*
12:15 PM	**End of the meeting - Lunch**

Presentation		Title	Abstract
1	Céline Bouvier et Raphaelle Escoube	PROCORAD Intercomparison on uranium analysis in urine: a precious database?	Since 1995, Procorad has organized an intercomparison on urinary uranium analysis. Each year, accuracy and precision are evaluated from the results of participating laboratories (up to 30 laboratories) compared to assigned value for each urine sample. In this project, we volunteer to capitalize on all this experience accumulated by Procorad based on a retrospective analysis of these intercomparison data by means of a database concatenation. This database will be used to trace the accuracy, precision, and limit of detection evolution of uranium measurements over the years, depending on the analytical techniques and different protocols used. It will also allow to compare results between both intercomparison exercises, mass and activity analyses of uranium.
2	Yvan Losset	Environmental monitoring of the radionuclide Tritium..	Tritium is a naturally occurring and artificially occurring radionuclide from the testing of nuclear weapons and the nuclear industry. Present in the various compartments of the environment, it plays an important role as a biological marker. As part of the environmental monitoring and facilities likely to produce this radionuclide (CNPE, fuel reprocessing facilities, others), regulatory controls are established in accordance with release orders and decisions of the nuclear safety authority. This presentation illustrates the different means (from sampling to measurement) put in place to map this radionuclide in different media such as air, water and various environmental matrix.
3	Nathalie Reynal	Monitoring of discharges and the environment around nuclear installations in France : regulatory framework and reporting	According to the French regulation, the operator of a nuclear facility has to monitor his liquid and gaseous discharges into the environment, as well as the environment around the facility. The aim of this monitoring is to control compliance with the requirements and discharge limits set by the regulation, and to ensure that the impact remains low and consistent with the hypotheses of the environmental impact assessment. Results of this monitoring are monthly reported to the French nuclear safety authority (ASN), and the results of the measures carried out in the environment are published on the website of the national network for environmental radioactivity measurements (RNM) www.mesure-radioactivite.fr. An annual reporting is also made to the international instances, such as the European commission, IAEA and the Radioactive Substance Committee of Ospar Convention.
4	Jean Aupiais	Speciation of actinides by capillary electrophoresis: applications to environmental sciences and biology	The speciation of radioactive elements, and in particular actinides, at the ultra-trace scale level (< 10^{-8} M) is an analytical challenge. Although it is currently impossible to approach speciation in environmental levels for plutonium (< 10^{-15} M), we have developed a chemical speciation analysis technique that allows us to study chemical systems up to 10^{-11} M. The performance of this technique called CE-ICPMS (capillary electrophoresis coupled to a mass spectrometer) will be illustrated through 3 characteristic examples; the speciation of PuO_2^+ in the oceans (main species), the storage of Pu^{4+} in the liver and bones after contamination explained by the affinity of transferrin and fetuin, and finally the formation of ternary complexes whose (bio)chemistry in the environment is still little known.