



Presentation of the CETAMA working group 21

M. Tribet, L. Aufore, C. Rigaux, D. Roudil

► To cite this version:

M. Tribet, L. Aufore, C. Rigaux, D. Roudil. Presentation of the CETAMA working group 21. 12th EMAS Regional Workshop on Electron Probe Microanalysis of Materials today - Practical Aspects, May 2016, Bagnols Sur Ceze, France. hal-02442251

HAL Id: hal-02442251

<https://cea.hal.science/hal-02442251>

Submitted on 16 Jan 2020

HAL is a multi-disciplinary open access archive for the deposit and dissemination of scientific research documents, whether they are published or not. The documents may come from teaching and research institutions in France or abroad, or from public or private research centers.

L'archive ouverte pluridisciplinaire **HAL**, est destinée au dépôt et à la diffusion de documents scientifiques de niveau recherche, publiés ou non, émanant des établissements d'enseignement et de recherche français ou étrangers, des laboratoires publics ou privés.

PRESENTATION OF THE CETAMA WORKING GROUP 21

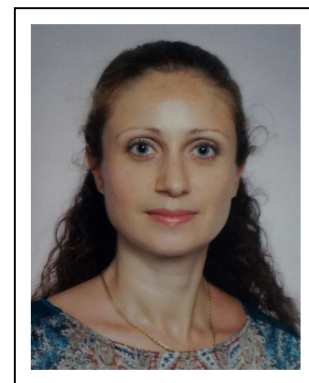
M. Tribet*¹, L. Aufore², C. Rigaux³ and D. Roudil³

¹CEA, Nuclear Energy Division, DTCD, SECM, LMPA, Marcoule Research Center, BP17171, F-30207 Bagnols-sur-Cèze, France

²CEA, Nuclear Energy Division, DTN, SMTA, Cadarache Research Center, F-13108 Saint Paul-lez-Durance, France

³CEA, Nuclear Energy Division, DRCP, CETAMA, Marcoule Research Center, BP17171, F-30207 Bagnols-sur-Cèze, France

* e-mail: magaly.tribet@cea.fr



Measurement quality is crucial for the safety of nuclear facilities and is a primary requirement for the characterization of nuclear materials and for the monitoring of fissile materials.

In the nuclear field, the improvement of analysis and measurement results quality is a major mission of the Commission for the Establishment of Analysis Methods (CETAMA) from the French Atomic Energy Agency (CEA). Suitable scientific and technical developments, in particular preparation and certification of reference materials, are proposed. These materials are used either as analytical standards or as reference samples for interlaboratory comparisons organized by CETAMA.

CETAMA network is organized in 13 thematic working groups. The working group number 21 is dedicated to Electron Probe Micro Analysis (EPMA). Its main mission is to listen to participant needs about EPMA practical issues and to propose tools in order to improve the quality of measurement and analysis results.

An instrumentation notebook have been written collectively with the aim to share our analytical experience and to improve the analytical practices concerning EPMA characterizations. Specific training courses have also been organized, devoted to EPMA uncertainties determination and virtual standard methods. Moreover, several round robin tests on nuclear materials like Pu-doped ceramic analysis, and on more common materials like steel or silicon carbide have led to improvements of users' methodologies and to laboratories' validation practices. Furthermore, to answer to the lack of actinides standard, the fabrication of a dedicated plutonium oxide reference material has been launched. This PuO₂ material will then be certified as a reference material by interlaboratory EPMA comparisons.

The participation in this working group is opened to European industrial, academic and R&D laboratories.