

DE LA RECHERCHE À L'INDUSTRIE

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CETAMA



CETAMA

2015-2016 News

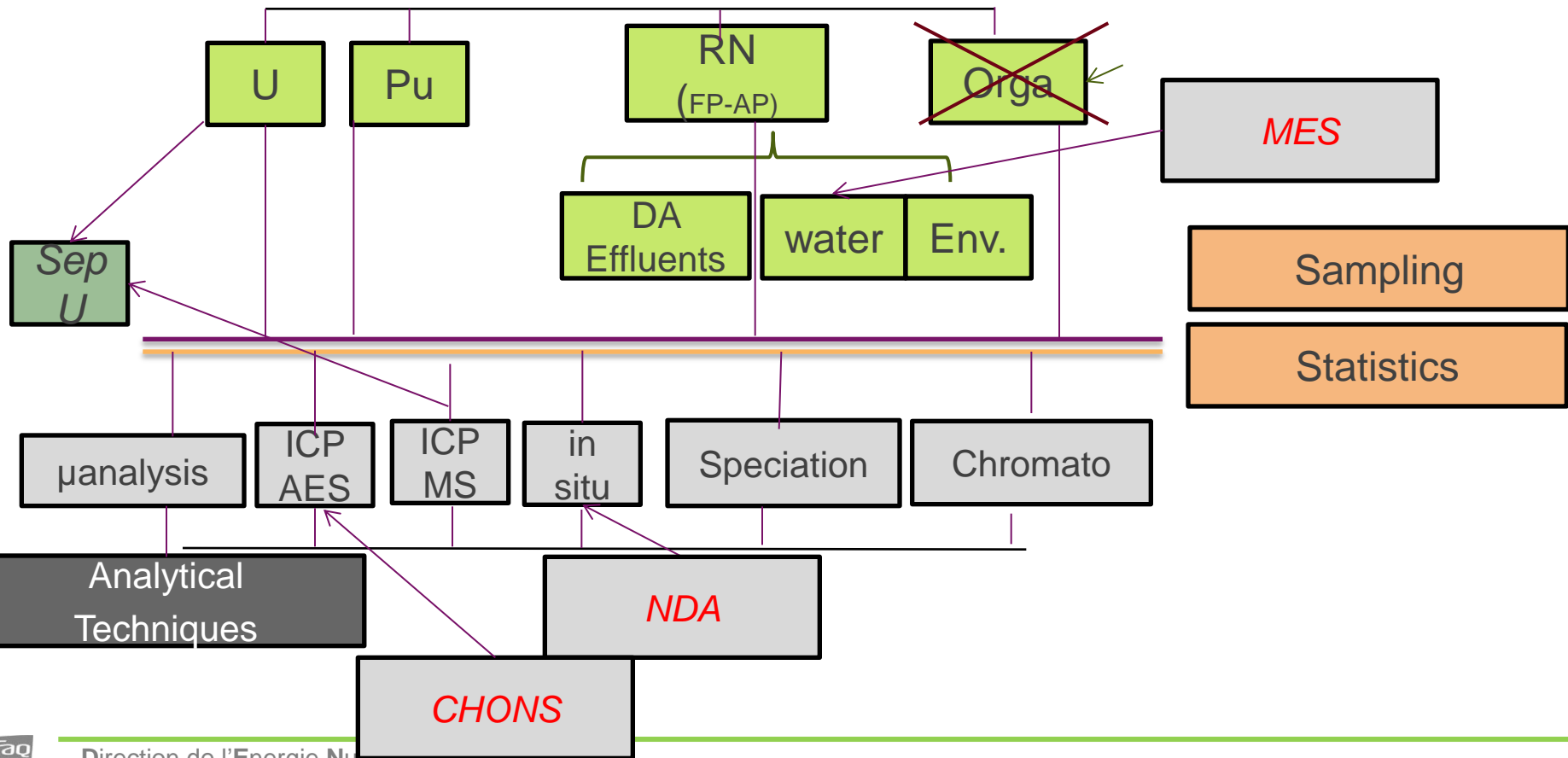
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Département RadioChimie et Procédés
Commission d'ETAbblissement des Méthodes d'Analyse*



13 WG CETAMA

& 17 sub-WG

Elementary, isotopic
molecular Analyses



Now available

- Uranium Ore concentrated FELPSPATH



- UOx glass 25 oxides

- U metal renewing "Floralies" :



Elément	Unité	Concentration	Incertitudes (k=2)
U	g/kg UOC dried	746,5	4,1
Fe	mg/kg U	42,7	3,1
Mo	mg/kg U	30,3	2,1
Mg	mg/kg U	25,0	1,1
Ca	mg/kg U	128,5	3,0
Zr	mg/kg U	68,2	6,1
V	mg/kg U	< 0,35	

Element	REE (mg/kg U)	
	Content	Expanded uncertainties (k=2)
La	0,0083	0,0047
Ce	0,0178	0,0065
Pr	0,0052	0,0036
Nd	0,022	0,021
Sm	0,0041	0,0012
Eu	0,0068	0,0032
Gd	0,0045	0,0023
Tb	0,0054	0,0018
Dy	0,00262	0,00066
Ho	0,00049	0,00012
Er	0,00129	0,00039
Tm	0,00031	0,00030
Yb	0,00126	0,00053
Lu	0,00020	0,00011



ECHANTILLONS	ELEMENTS													
	Ag	Al	B	Co	Cr	Cu	Fe	Mn	Mo	Ni	Pb	Si	Sn	Zr
Bleuet	<0,5	40	≤0,2	4	5	12	70	6	7	24	1,5	70	≤2	25
Capucine	0,5	40	0,55	4	32	55	140	25	20	190	5	22	4	55
Dahlia	0,6	90	0,8	8	140	72	450	32	30	290	2	40	7	70
Eglantine	1,2	120	0,25	15	15	7	38	4	50	50	15	13	20	110
Fuschia	1,3	150	0,35	26	17	23	200	60	95	110	25	110	20	150
Géranium	10	210	2,15	55	115	100	480	120	210	320	23	230	50	240

In progress

- **MP4**: Renewing of MP2 Pu high chemical purity standard
 - Certification planned in the period 2018-2020 (ILC)
- **²⁴³Am spike** : IRMM- CETAMA collaboration (ILC)

ILC In Progress	Informations
<i>PTS exercices</i>	
EQRAIN Pu 13 (2 vials)	First vial result- Last one in December
EQRAIN traces 21 <i>Zr, Fe, Sn, Ru, Gd, Be, Co, Ta, Si, Ni, B, Li, U, Mo, Al</i>	Vial distribution May-June
EQRAIN U15	Announcement in June/July
^{243}Am	Annoucement June : PTS and confirmation of ref. Value (IRMM)
EQRAIN U+Pu in <u>2017</u>	1 vial Pu and 1 vial U/Pu =100
<i>Methods</i>	
^{63}Ni	For analytical method validation (update of existing standard)
SM	Alpha and beta radioactivity in suspended material



Interest to group ILC for certification and PTS

ILC closed	results
<i>PTS exercices</i>	
EQRAIN ions 2 (anions +cations)	Synthesis in September
Feldspath	Synthesis Note in June
UOX Glass 25	Results are available and published
EQRAIN traces 20	Synthesis Note in October
<i>Methods</i>	
OBT	Synthesis Note in September

2015

- ANASOR 16-A (CETAMA organic compound compilation): Monoamide analysis by GC-FID (WG 24)
- CEA-R 6142 MEASUREMENT SUM - THEORY AND APPLICATION :Application to low level measurements (WG 11)

2016

- *ICP AES validation guide*: book to be published (WG 06)
- Norme ISO 18557 : DIS vote in progress (WG 10)
- *Instrumentation guide on LIBS* (end 2016) (WG 29)

2015

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6 oral sessions

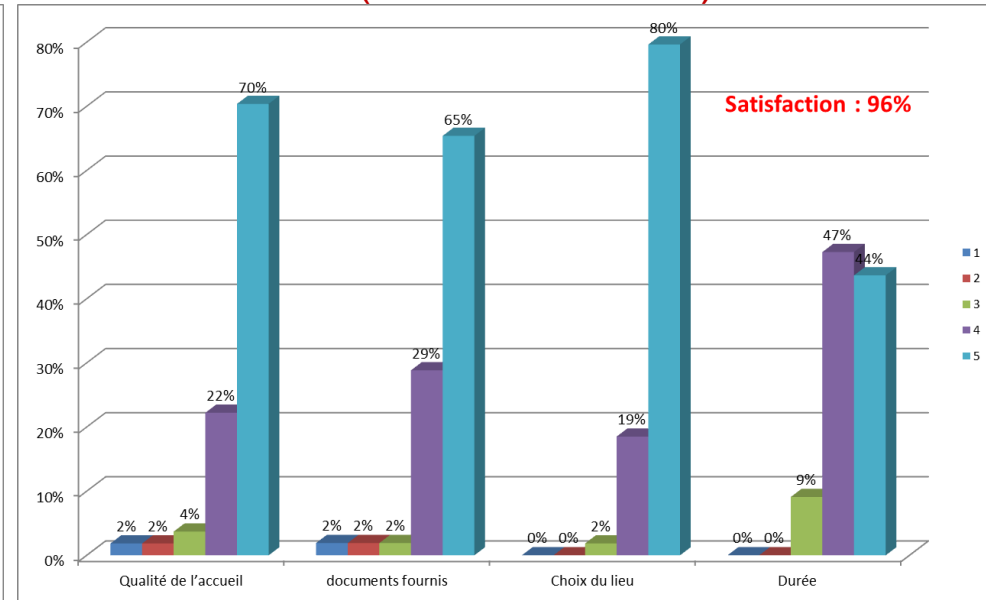
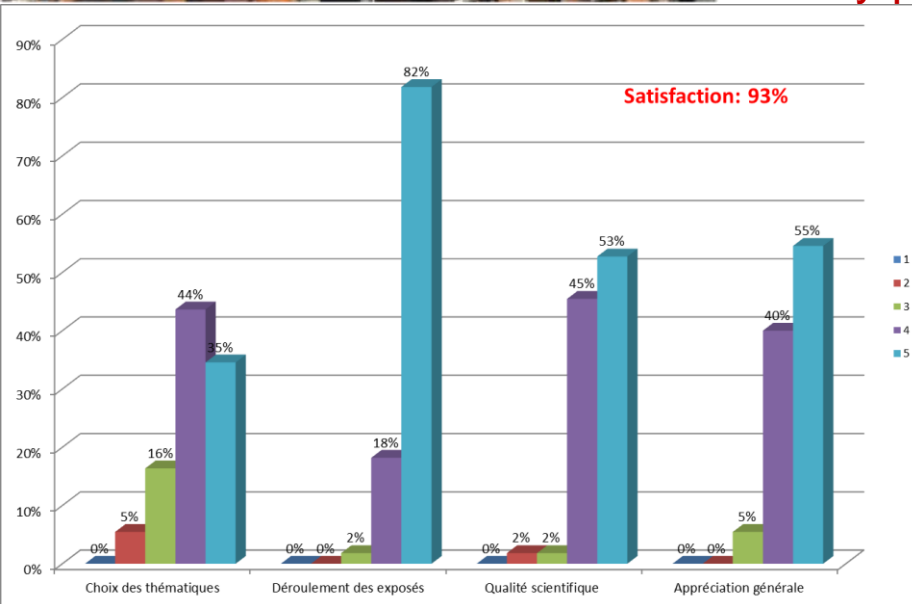
Poster Session (22)

Kartotrak (software) technical session :

Oral presentations:

IAEA, OCDE, AREVA, EDF, ANDRA, IRSN & CEA
120 participants

Very positive feedback (50 % of answer)



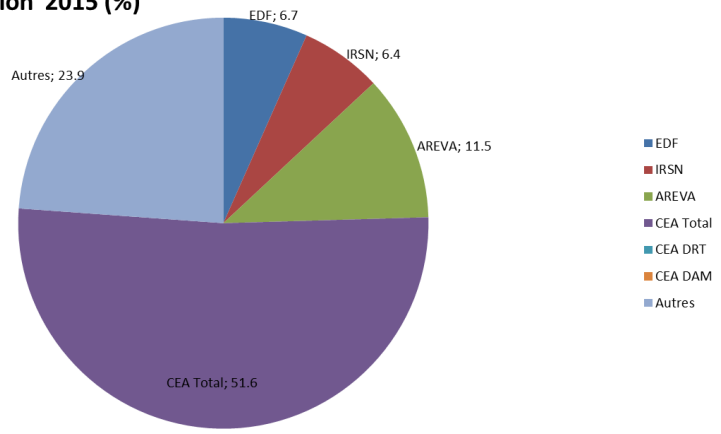
Publications 2016: Spectra Analyse (2) et EPJ-N (2)

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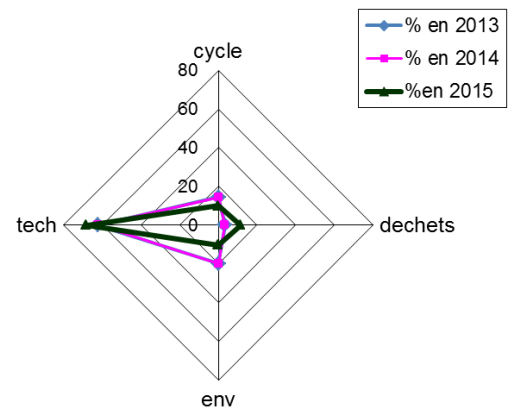


CREDIT : D. Sarraute/CEA

Bilan participation 2015 (%)



Répartition par domaines



Evolution de la participation aux GT (2012-2015)

