

IAWG KC/PS scheduling and 5 year plan

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Next CCQM KC and PS schedules

From sample dispatch to report deadline

[illegible]

IAWG Measurement space

Analyte groups	Matrix challenges						Calibration materials and solutions
	Water/aqueous	High Silica content (e.g. Soils, sediments, plants, ...)	High salts content (e.g. Seawater, urine, ...)	High organics content (e.g. high carbon) (e.g. Food, blood/serum, cosmetics, ...)	Metals, alloys, and difficult to dissolve metals (Autocatalysts, ...)	High volatile matrices (e.g. solvents, fuels, ...)	
Group I and II: Alkali and Alkaline earth (Li, Na, K, Rb, Cs, Be, Mg, Ca, Sr, Ba)	K124			K145; K158			
	SIM.QM-S7			K107; K125; K139; K158; SIM.QM-S10; APMP.QM-S10	K144; EURAMET.QM-S16	K123	
Transition elements (Sc, Ti, V, Cr, Mn, Fe, Co, Ni, Cu, Zn, Y, Zr, Nb, Mo, Tc, Ag, Cd, Ta, W, Au, Hg, Al, Ga, In, Tl, Pb, Po)	K124; SIM.QM-S7; SIM.QM-S12; EURAMET.QM-S11			K145			
		K127	K155	K106; K107; K108; K125; K128; K139; K145; K158; SIM.QM-S10; APMP.QM-S17; APMP.QM-S10; APMP.QM-S19	EURAMET.QM-S16		K143
Platinum Group elements (Ru, Rh, Pd, Os, Ir, Pt)							
					K160		
Metalloids / Semi-metals (B, Si, Ge, As, Sb, Te, Se)	K124; SIM.QM-S12; EURAMET.QM-S11			K145			
		K127	K155	K106; K108; K128; K139; K158; SIM.QM-S10; APMP.QM-S17; APMP.QM-S19	K144		
Non-metals (P, S, C, N, O)							
				K139; K145		K123	
Halogens (F, Cl, Br, I)							
				K125; K139			
Rare Earth Elements (Lanthanides, Actinides)							
		K178					
Inorganic species (elemental, anions, cations)							
			K161	K158			
Small organo-metallics							
			K155				
Proteins							
				K162			
Nanoparticles							
							K166

Some existing CMCs

High purity chemicals (142 CMC)

Year	N. of CMCs
2001	2
2005	6
2006	2
2011	18
2014	33
2016	18
2017	7
2018	4
2019	16
2020	12
2021	9
2022	10
2023	3
2024	2

1. **High purity chemicals**
- 1.1 Inorganic compounds
 - 1.2 Organic compounds
 - 1.3 Metals
 - 1.4 Isotopics
 - 1.5 Other

Metals and metal alloys (193 CMC)

Year	N. of CMCs
2007	4
2010	5
2011	140
2012	10
2013	4
2014	6
2015	14
2016	9
2021	1

8. **Metal and metal alloys**
- 8.1 Ferrous metals
 - 8.2 Non-ferrous metals
 - 8.3 Precious metals
 - 8.4 Other

K191 Non-metallic and metallic impurities scheduled
Metals/alloys analysis comparison under discussion

Existing CMCs in some categories

Fuel (69 CMCs)	
Year	N. of CMCs
2013	45
2014	2
2016	5
2017	12
2020	3
2021	2

12. Fuels

- 12.1 Coal and coke
- 12.2 Petroleum products
- 12.3 Bio-mass
- 12.4 Other

Advanced materials (82 CMC) Polymers (74 CMC)	
Year	N. of CMCs
2001	4
2005	3
2009	2
2011	21
2012	14
2013	9
2014	29

9. Advanced materials

- 9.1 Semiconductors
- 9.2 Superconductors
- 9.3 Polymers and plastics
- 9.4 Ceramics
- 9.5 Other

Other materials (76 CMC)	
Year	N. of CMCs
2005	14
2015	11
2016	16
2019	18
2022	5
2023	12

14. Other materials

- 14.1 Cements
- 14.2 Paints
- 14.3 Textiles
- 14.4 Glasses
- 14.5 Thin films
- 14.6 Coatings
- 14.7 Insulating materials
- 14.8 Rubber
- 14.9 Adhesives
- 14.10 Other

No comparisons under discussion on these categories

Period	Model 1 Comparisons			Model 2
	Core key comparisons Core Capabilities model – KC/Sample matrix – CMC cat.	Specialised key comparisons	Pilot studies	
2024	High silica content K178/REEs, uranium, and thorium in soil [13]	Calibration materials & solutions K166 / Number conc NPs [9]		
2025	High organics content K187/Elements in pork [11]	High silica content K188/Elements in urban particulate matter [13]	Water measurements in selected matrices	
2026	Calibration materials / Metals K191/Non-metallic impurities [8] & [1]	High organics content Arsenic species in seafood [10]		Solid sample analysis by LA-ICP-MS
2027	Metals Metals analysis [8]	High silica content Elements in marine sediments [13]		Preparation of calibration solutions
2028	High volatile matrices Fuels [12]	??? Advanced materials /Polymers [9]		
2029	Water [5]			
2030	High organics content [10] or [11]			

No proposals so far