

Member State

Associate of the CGPM

International organization

State as on 24 May 2019*Acronyms are listed in the last page of this document.*

Country	AUV				Mass and Related Quantities										Length			PR	T	TF	EM		
	A	W	V	Total	Mass 1	Dens 2	Pres 3	F 4	Torq 5	Visc 6	H 7	Grav 8	FF 9	Total	Laser	Dim Met	Total	Total	Total	Total	Total	Matrices	
Albania					7									7									
Argentina	5		4	9	29	16	13	11					4	73	1	11	12	4	17	9	78	21	
Australia	13		10	23	7	2	4	5						18		27	27	17	26	21	80	27	
Austria	17		6	23	9	2	7	4		7	4	1	25	59	5	24	29	4	23	17	44	10	
Azerbaijan										1				1									
Bangladesh																							
Belarus	31			31	6		1			2	1			10	2	14	16	11	37	31	42	6	
Belgium					10		0							10	3	12	15		20	4	7	3	
Bolivia					17									17									
Bosnia and Herzegovina					8		2							10					15	15	26	23	
Botswana																			3				
Brazil	57		31	88	27	15	11	5	1	22			4	85	8	19	27	11	11	13	66	29	
Bulgaria	12		18	30	8		15			1				24	3	15	18	7	44	16	58	33	
Canada	20	3	9	32	32	8	9						3	52	10	9	19	76	64	7	73	22	
CARICOM																							
Chile					24			9						33		1	1		10		26	13	
China	22	3	31	56	12	4	8	3	1	15	14		12	69	2	77	79	27	50	34	180	81	
Chinese Taipei	21		18	39	9		12	4			3		24	52	3	55	58	45	42	9	49	20	
Colombia						1		2						3		1	1		37	12			
Costa Rica					24								8	32					8	11	16	14	
Croatia							10							10	3	19	22		32		21	12	
Cuba													12	12					8		17		
Czechia	4		4	8	10		11	4	1				21	47	15	66	81	40	73	17	87	58	
Denmark	29		12	41	7		14	4					37	62		14	14	8	27		51	8	
Ecuador					20									20									
Egypt					7		6	4	1	5				23	2		2			4	6	5	
ESA																							
Estonia					8									8		4	4		4		18	16	
Ethiopia																							
Finland	17		13	30	9	2	14	3	3			1	4	36	11	49	60	53	42	11	100	39	
France	57		6	63	10	12	19	8	5	31			19	104	5	22	27	30	102	11	135	65	
Georgia					5									5					9		16	2	
Germany	8	3	41	52	10	22	23	11	4	67	14		43	194	4	93	97	85	117	25	156	60	
Ghana																							
Greece					9								15	24	2	2	4		54		41	13	
Hong Kong, China	15			15	9	6	6	4	3		6			34	2	13	15		30	29	66	43	
Hungary	6			6	8	14	16	8			5		8	59	3	15	18	57	46	5	85	5	

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	A	W	V	Total	Mass 1	Dens 2	Pres 3	F 4	Torq 5	Visc 6	H 7	Grav 8	FF 9	Total	Laser	Dim Met	Total	Total	Total	Total	Matrices	
IAEA																						
India	23		11	34	16	2	17	6	1	6	3		3	54	2	42	44	14	4	11	74	32
Indonesia	15		12	27	24		3							27		5	5		45		20	10
Iran																						
Iraq																						
Ireland	4			4	7									7		13	13		35	7	30	22
Israel																						
Italy	23	2	17	42	9	7	7	7		0	15	1	16	62	7	36	43	20	100	12	115	53
Jamaica					22									22								
Japan	4		4	8	12	7	11	3	3	28	3		28	95	7	27	34	49	44	31	55	41
JRC																						
Kazakhstan					6					3	8			17	3	3	6		9	25	5	3
Kenya	3		12	15																		
Korea	33	4	19	56	9	8	11	5	2		8		7	50	6	34	40	41	71	29	90	36
Kuwait																						
Latvia					7									7		6	6				16	2
Lithuania					7		5						8	20		9	9		17	16	16	6
Luxembourg																						
North Macedonia					7								8	15					8			
Malaysia	8		13	21	7		8							15	4	3	7	8	15	4	33	10
Malta																						
Mauritius																						
Mexico	23	1	16	40	28	20	18	15	4	11			15	111	2	32	34		15	9	150	54
Moldova																1	1		40			
Mongolia																						
Montenegro													4	4		1	1		18			
Namibia					7									7								
Netherlands, The					7	2	5	0		40			31	85	9	63	72	29	70	26	206	48
New-Zealand					9	3	8							20	3	19	22	30	14	11	80	16
Norway					9								13	22	4	9	13	3	46		28	16
Oman																						
Pakistan																						
Panama					20									20						10	7	5
Paraguay					23		1							24								
Peru					19	1	2	1					7	30		1	1		43	5	12	5
Philippines					21									21					10			
Poland	15		33	48	8	5	8	4		31	4		11	71	7	43	50	15	69	30	48	30
Portugal			2	2	6	1	7	2		7			11	34	4	11	15	2	47		12	6
Qatar																						
Romania	8			8	9		7	3		7	4		2	32	1	20	21	17	44	9	39	20
Russia	35	7	30	72	8	2	15	18	1	11	9		6	70	1	22	23	115	143	36	326	10

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Country	AUV				Mass and Related Quantities										Length			PR	T	TF	EM		
	A	W	V	Total	Mass 1	Dens 2	Pres 3	F 4	Torq 5	Visc 6	H 7	Grav 8	FF 9	Total	Laser	Dim Met	Total	Total	Total	Total	Total	Matrices	
Saudi Arabia																							
Serbia	12			12	10								9	19	3	12	15	11	37	12	40	20	
Seychelles																							
Singapore					6		8	4			3		4	25	2	44	46	40	95	16	47	33	
Slovakia					7		5			25			10	47	3	15	18	11	82	16	41	13	
Slovenia					7		9						5	21	3	21	24		61	11	88	29	
South Africa	56		29	85	24		9	10					5	48	1	30	31	60	34	8	112		
Spain	18		22	40	10	7	25	4	3				3	52	3	40	43	59	69	19	78	28	
Sri Lanka																							
Sudan																							
Sweden	20		13	33	11	8	14	4					23	60	3	38	41	29	56	19	149	27	
Switzerland	21		3	24	10	16	9	4	2			1	12	54	3	79	82	63	23	12	107	46	
Syrian Arab Republic																							
Tanzania																							
Thailand	18	9		27	8		11				3			22	2	33	35	5	72	8	21	16	
Tunisia																				10	4	4	
Turkey	16	3	8	27	8	3	12	6		47			10	86	5	71	76	9	53	20	122	61	
Ukraine	30			30	5			2		2	1	1	3	14	2	25	27	6	63	30	57	11	
United Arab Emirates																							
United Kingdom	0	11		11	9	9	11	6					14	49	10	45	55	136	62	12	168	55	
United States	15	1	16	32	38	7	22	15			17		9	108	1	48	49	114	89	11	321	13	
Uruguay					35	11							5	51		1	1		27			132	
Uzbekistan																							
Viet Nam					6		3						4	13	2	7	9		4	5			
WMO																							
Zambia																			11				
Zimbabwe																			13				
	734	47	463	1244	842	223	472	208	35	369	125	5	525	2804	187	1471	1658	1361	2709	781	4393		
14950	1244				2804											1658			1361	2709	781	4393	
Total General Physics	Total AUV				Total M											Total L			Total PR	Total T	Total TF	Total EM	

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Country	Ionizing Radiation				Chemistry (QM)															Total by country for all metrology areas		
	RI(I) 1	RI(II) 2	RI(III) 3	Total	QM / 1	QM / 2	QM / 3	QM / 4	QM / 5	QM / 6	QM / 7	QM / 8	QM / 9	QM / 10	QM / 11	QM / 12	QM / 13	QM / 14	QM / 15		Total	
Albania																					7	
Argentina		48		48		5	6		3			3	3		8		15				43	293
Australia	15	32	2	49	69		4	11	18					14	11		4				131	392
Austria	52	100		152				9													9	360
Azerbaijan																						1
Bangladesh																						0
Belarus	21	30		51				16		2	1										19	248
Belgium																						56
Bolivia										2											2	19
Bosnia and Herzegovina												1									1	67
Botswana																						3
Brazil	8	115	15	138	7	3	22	36	19	5	4			9	6	0					111	550
Bulgaria	7	16		23						5											5	225
Canada	11	6	1	18	27	1			39					32	35		36			9	179	520
CARICOM																						0
Chile																						70
China	17	176	2	195	236	68	103	203	6	4	3	11	18	45	151	9	20	3	6		886	1576
Chinese Taipei	7	78	4	89				7													7	390
Colombia										1	3										4	57
Costa Rica																						67
Croatia	2			2																		87
Cuba	13	63		76																		113
Czechia	7	104	12	123				23		6	3			0							32	508
Denmark	7			7						4	5										9	219
Ecuador																						20
Egypt	2			2			1											1			2	39
ESA																						0
Estonia																						34
Ethiopia																						0
Finland	30			30			6	1													7	369
France	82	206	9	297	1	13	22	41	13	4	2		4	10	18		7				135	904
Georgia																						30
Germany	88	155	20	263	25	34	17	82	27	7	6	159	43	38	20	3	41	22	7		531	1520
Ghana																						0
Greece	35			35	1			7						2	9						19	177
Hong Kong, China					5	3		7	1					1	14	22	2	13	2		70	259
Hungary	26	78		104				19		3	4										26	406

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Country	Ionizing Radiation				Chemistry (QM)															Total by country for all metrology areas			
	RI(I) 1	RI(II) 2	RI(III) 3	Total	QM / 1	QM / 2	QM / 3	QM / 4	QM / 5	QM / 6	QM / 7	QM / 8	QM / 9	QM / 10	QM / 11	QM / 12	QM / 13	QM / 14	QM / 15		Total		
IAEA	26			26																	26		
India								1													1	236	
Indonesia										1					3						4	128	
Iran																						0	
Iraq																						0	
Ireland																						96	
Israel																						0	
Italy	0	0	0	0				2			0	3	2	0	2							9	403
Jamaica																						22	
Japan	29	217	13	259	86	49	12	153	22	6	1	3	13	10	115	9	71				550	1125	
JRC		0		0	0	0	0		0				0	0	0	0	0					0	
Kazakhstan								6		1												7	69
Kenya															2							2	17
Korea	14	189	11	214	5	35	50	359						18	20	124		0	5	2	618	1209	
Kuwait																						0	
Latvia																						29	
Lithuania																						78	
Luxembourg																						0	
North Macedonia																						23	
Malaysia	15			15																		118	
Malta																						0	
Mauritius																						0	
Mexico	10	45		55	62	37	66	26	12	6	2	15	5	4	16		78				329	743	
Moldova	2			2																		43	
Mongolia																						0	
Montenegro																						23	
Namibia																						7	
Netherlands, The	21	0		21	17		4	223	2						1		0				247	756	
New-Zealand																						177	
Norway	22			22																		134	
Oman																						0	
Pakistan																						0	
Panama																						37	
Paraguay																						24	
Peru						9			1	4	3				3		2				22	113	
Philippines																						31	
Poland	4	68		72	1			23		6	2										32	435	
Portugal	43			43				21													21	176	
Qatar																						0	
Romania		37		37		7			7			4		3	2		4				27	234	
Russia	161	124	44	329	35	15	24	467	12	6	4	14	20	4	8		21	3			633	1747	

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Country	Ionizing Radiation				Chemistry (QM)															Total by country for all metrology areas						
	RI(I) 1	RI(II) 2	RI(III) 3	Total	QM / 1	QM / 2	QM / 3	QM / 4	QM / 5	QM / 6	QM / 7	QM / 8	QM / 9	QM / 10	QM / 11	QM / 12	QM / 13	QM / 14	QM / 15		Total					
Saudi Arabia																						0				
Serbia								1														1	147			
Seychelles																						0	0			
Singapore					12				9					16	20				3			60	329			
Slovakia	30	37	9	76	7	35		38		5	2											87	378			
Slovenia	9	5		14					2					5	7			4	2			21	240			
South Africa	1	36		37		1	2	82					4		20		8			1		118	533			
Spain	52	105		157				31														31	548			
Sri Lanka																							0	0		
Sudan																							0	0		
Sweden	23			23							2											2	412			
Switzerland	3	21		24				14														14	403			
Syrian Arab Republic																							0	0		
Tanzania																							0	0		
Thailand					2			4	8	4			7	7	30	2			3			67	257			
Tunisia																							14	14		
Turkey		3		3	25	2		9	16			7		27	32	6	6	3				133	529			
Ukraine		15		15	1			22		6	4											33	275			
United Arab Emirates																							0	0		
United Kingdom	22	116	42	180	30	26	8	328	13			1	6	25	18	1	3					459	1132			
United States	26	497	8	531	10	73	149	135	21	9	3		9	160	19	33	1	14				636	1891			
Uruguay									11	2	2				2							17	228			
Uzbekistan																							0	0		
Viet Nam																							31	31		
WMO								3														3	3	3		
Zambia																							11	11		
Zimbabwe																							13	13		
	943	2722	192	3857	664	416	490	2401	276	100	56	226	149	436	707	71	334	61	25		6412					
14950		3857										6412														
Total General Physics		Total RI										Total Chemistry														
																									Grand total	25219

Acronyms used in this document

AUV	Acoustics, Ultrasound and Vibration
AUV A	Acoustics, Ultrasound and Vibration; Sound in air
AUV W	Acoustics, Ultrasound and Vibration; Sound in water
AUV V	Acoustics, Ultrasound and Vibration; Vibration
EM	Electricity and Magnetism
EM Matrices	Usage of the presentation in tables of uncertainty ranges

L	Length
L Laser	Length; Laser
L DimMet	Length; Dimensional Metrology

M	Mass and Related Quantities
M Mass 1	Mass and Related Quantities; Mass Standards (Service Category No 1)
M Dens 2	Mass and Related Quantities; Density (Service Category No 2)
M Pres 3	Mass and Related Quantities; Pressure (Service Category No 3)
M F 4	Mass and Related Quantities; Force (Service Category No 4)
M Torq 5	Mass and Related Quantities; Torque (Service Category No 5)
M Visc 6	Mass and Related Quantities; Viscosity (Service Category No 6)
M H 7	Mass and Related Quantities; Hardness (Service Category No 7)
M Grav 8	Mass and Related Quantities; Gravity (Service Category No 8)
M FF 9	Mass and Related Quantities; Fluid Flow (Service Category No 9)

PR	Photometry and Radiometry
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Czechia	Chemistry
QM / 1	Chemistry; High purity chemicals (Service Category No 1)
QM / 2	Chemistry; Inorganic solutions (Service Category No 2)
QM / 3	Chemistry; Organic solutions (Service Category No 3)
QM / 4	Chemistry; Gases (Service Category No 4)
QM / 5	Chemistry; Water (Service Category No 5)
QM / 6	Chemistry; pH (Service Category No 6)
QM / 7	Chemistry; Electrolytic conductivity (Service Category No 7)
QM / 8	Chemistry; Metal and metal alloys (Service Category No 8)
QM / 9	Chemistry; Advanced materials (Service Category No 9)
QM / 10	Chemistry; Biological fluids and materials (Service Category No 10)
QM / 11	Chemistry; Food (Service Category No 11)
QM / 12	Chemistry; Fuels (Service Category No 12)
QM / 13	Chemistry; Sediments, soils, ores, and particulates (Service Category No 13)
QM / 14	Chemistry; Other materials (Service Category No 14)
QM / 15	Chemistry; Surfaces, films, and engineered nanomaterials (Service Category No 15)

RI	Ionizing radiation
RI(I) 1	Ionizing radiation; Dosimetry (Service Category No 1)
RI(II) 2	Ionizing radiation; Radioactivity (Service Category No 2)
RI(III) 3	Ionizing radiation; Neutron measurements (Service Category No 3)

T	Thermometry
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TF	Time and Frequency
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Note that one CMC involving n analytes measured in one matrix (multi-component CMC) is counted as n CMCs in the Tables above. The reason for this is that n values of uncertainties are given for this n -component CMC.