

Member State
Associate of the CGPM
International organization

**State as on 27 August 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	22	27	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	18	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	19	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	155	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	

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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	
Hungary	6			6	8	14	16	8			5		8	59	3	15	18	57	46	5	85	5
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	9	20	10
Iran																						
Iraq																						
Ireland	4			4	7									7		13	13		35	7	30	22
Israel																						
Italy	23	2	17	42	9	7	8	7		0	15	1	16	63	7	36	43	20	100	12	115	53
Jamaica					22									22								
Japan	4		4	8	12	7	11	3	3	28	3		32	99	7	27	34	49	44	29	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		0						8	15		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													0	0		0	0		0			
Morocco																						
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									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																						

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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
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
Saudi Arabia																						
Serbia	12			12	10								9	19	3	12	15	11	37	12	40	20
Seychelles																						
Singapore					25		12	4			3		4	48	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	91	31
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	8	9	11	6					14	48	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					6									6						13		
	734	47	463	1244	866	223	472	208	35	369	125	5	525	2828	187	1468	1655	1361	2691	799		4395
<b>14973</b>	<b>1244</b>				<b>2828</b>										<b>1655</b>			<b>1361</b>	<b>2691</b>	<b>799</b>	<b>4395</b>	
<b>Total General Physics</b>	<b>Total AUV</b>				<b>Total M</b>										<b>Total L</b>			<b>Total PR</b>	<b>Total T</b>	<b>Total TF</b>	<b>Total EM</b>	

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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
Australia	15	32	2	49	69		4	11	18					14	11		4				131
Austria	52	100		152				9													9
Azerbaijan																					
Bangladesh																					1
Belarus	21	30		51				16		2	1										19
Belgium																					
Bolivia									2												2
Bosnia and Herzegovina											1										1
Botswana																					
Brazil	8	115	15	138	7	3	22	36	19	5	4			9	6	0					111
Bulgaria	7	16		23						5											5
Canada	11	6	1	18	27	1			39					32	35		36		9		179
CARICOM																					
Chile																					
China	17	176	2	195	236	68	103	203	6	4	3	11	18	45	151	9	20	3	6		886
Chinese Taipei	7	78	4	89				7													7
Colombia										1	3										4
Costa Rica																					
Croatia	2			2																	
Cuba	13	63		76																	
Czechia	7	104	12	123				23		6	3			0							32
Denmark	7			7						4	5										9
Ecuador																					
Egypt	2			2			1											1			2
ESA																					
Estonia																					
Ethiopia																					
Finland	30			30				6	1												7
France	82	206	9	297	1	13	22	41	13	4	2		4	10	18		7				135
Georgia		2		2																	
Germany	88	155	20	263	25	34	17	82	27	7	6	159	43	38	20	3	41	22	7		531
Ghana																					
Greece	35			35	1				7					2	9						19
Hong Kong, China					5	3			7	1				1	14	22	2	13	2		70

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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	
Hungary	26	78		104				19		3	4									26	406	
IAEA	26			26																	26	236
India							1													1	137	
Indonesia										1					3					4	0	
Iran																					0	
Iraq																					0	
Ireland																					96	
Israel																					0	
Italy	0	0	0	0			2			0	3	2	0	2						9	404	
Jamaica																					22	
Japan	29	217	13	259	86	49	12	153	22	6	1	3	13	10	115	9	71			550	1127	
JRC		0		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																					73	
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																					0	
Morocco																					0	
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	42			42				21													21	175
Qatar																					0	

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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
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
Saudi Arabia																					0
Serbia							1													1	147
Seychelles																					0
Singapore					12				9					16	20			3		60	352
Slovakia	30	37	9	76	7	35		38		5	2									87	378
Slovenia	9	5		14					0			1		5	7		4	2		19	241
South Africa	1	36		37		1	2	82				4			20		8		1	118	533
Spain	52	105		157				31												31	548
Sri Lanka																					0
Sudan																					0
Sweden	23			23							2									2	412
Switzerland	3	21		24				14												14	403
Syrian Arab Republic																					0
Tanzania																					0
Thailand					2			4	8	4			7	7	30	2		3		67	257
Tunisia																					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
United Kingdom	22	116	42	180	30	26	8	328	13			1	6	25	18	1	3			459	1131
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
Viet Nam																					31
WMO								3												3	3
Zambia																					11
Zimbabwe																					19
	942	2724	192	3858	664	416	490	2401	274	100	56	226	149	436	707	71	334	61	25	6410	Grand total
14973	3858			6410																25241	
Total General Physics	Total RI			Total Chemistry																	

### Acronyms used in this document

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

<b>L</b>	<b>Length</b>
L Laser	Length; <b>Laser</b>
L DimMet	Length; <b>Dimensional Metrology</b>

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

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

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

<b>T</b>	<b>Thermometry</b>
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<b>TF</b>	<b>Time and Frequency</b>
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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.