

Member State Associate of the CGPM International organization

Country	AUV	L	TF	T	PR	M	EM	EM Matrices	RI(I)	RI(II)	RI(III)
Albania											
Argentina	9	4		17	3	73	118	Yes		38	
Australia	23	6	21	26	17	29	108	Yes	15	32	2
Austria	23	26	17	13	4	60	49	Yes	52	100	
Bangladesh											
Belarus	8	13	31	27	3	2	12	No	21	30	
Belgium		17	6	12		15	58	Yes			
Bolivia											
Bosnia and Herzegovina											
Brazil	37	19	13	11	11	87	131	Yes	8	96	2
Bulgaria	30	9	16	24	8	24	69	Yes	7		
Canada	28	19	7	63	63	52	236	No	10		1
CARICOM											
Chile		1		10		33					
China	53	14	28	23	27	55	216	Yes	17	176	2
Chinese Taipei	39	39	8	20	33	50	140	Yes	7	78	4
Costa Rica						24	54	Yes			
Croatia		12		29		10					
Cuba						12			13	63	
Czech Republic	8	79	17	40	20	39	176	Yes	7	104	12
Denmark	31	8		18	8	66	62	Yes			
Ecuador						20					
Egypt		2	4			22					
Estonia											
Finland	17	58	11	39	53	31	195	Yes	30		
France	60	27	11	83	29	119	310	Yes	63	166	15
Georgia											
Germany	76	91	25	93	76	209	263	Yes	88	158	20
Ghana											
Greece		4		44		24	62	No	35		
Hong Kong, China	15	10	29	27		34	200	Yes			
Hungary	6	19	5	34	57	60	85	Yes	26	84	
IAEA									13		
India	34	47	11	4	14	51	84	Yes			
Indonesia	15	5		8		27	49	No			
Ireland	4	6	7	28		7	170	Yes			
IRMM										110	
Israel											
Italy	42	42	14	59	23	108	209	Yes	76	13	9
Jamaica											
Japan	8	33	27	29	49	106	133	Yes	18	217	13
Kazakhstan		3	4			6					
Kenya											

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Country	AUV	L	TF	T	PR	M	EM	EM Matrices	RI(I)	RI(II)	RI(III)	
Korea	41	28	23	51	41	47	141	Yes	14	189	11	
Latvia		6				7	46	Yes				
Lithuania		9	16	12		21	33	No				
Malaysia	21	7	4	6	8	15	79	Yes	15			
Malta												
Mauritius												
Mexico	40	22	9	15	22	112	98	Yes				
Moldova												
Montenegro												
Netherlands, The	6	76	26	56	13	89	238	Yes	21	57		
New-Zealand		21	11	14	29	20	104	Yes				
Norway		10		27	3	22	74	Yes	22			
Pakistan												
Panama			10			20	4	No				
Paraguay						23						
Peru						20	6	No				
Philippines												
Poland	48	44	30	51	12	74	153	Yes	4	68		
Portugal	2	15		39		36	27	Yes	43			
Romania	8	18	9	37	15	30	98	Yes		34		
Russia	72	20	36	137	44	59	325	Yes	161	124	44	
Saudi Arabia												
Serbia		9	12	29	11	10	95	Yes				
Seychelles												
Singapore		37	13	65	40	25	149	Yes				
Slovakia	6	22	16	75	11	53	79	Yes	30	37	9	
Slovenia		24	11	45		16	197	Yes				
South Africa	44	7	8	33	55	47	112	No	1	36		
Spain	20	35	19	54	47	52	97	Yes	52	97		
Sri Lanka												
Sweden	33	41	19	48	29	80	220	Yes	23			
Switzerland	24	62	12	38	28	50	145	Yes	3	21		
Thailand		34	6	11	5	30	313	No				
The FYR Macedonia												
Tunisia												
Turkey	25	51	20	50	10	86	188	Yes				
Ukraine	23	25	17	24		4	53	Yes		1		
United Kingdom	42	47	12	48	129	81	338	Yes	36	116	42	
United States	32	49	11	81	134	121	329	Yes	35	497	8	
Uruguay				27		45	132	No				
Viet Nam		9	5			13						
WMO												
Zambia												
Zimbabwe												
<b>Total by Metrology Area</b>	<b>1053</b>	<b>1341</b>	<b>667</b>	<b>1854</b>	<b>1184</b>	<b>2763</b>	<b>7062</b>		<b>966</b>	<b>2742</b>	<b>194</b>	
	<b>15924</b>									<b>3902</b>		
	<b>Total General Physics</b>									<b>Total RI</b>		

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Country	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 by country for all metrology areas
Albania																0
Argentina		5	6		2						4		9			288
Australia	25		1	11	4					2	8		6			336
Austria				1												345
Bangladesh																0
Belarus				10		1										158
Belgium																108
Bolivia																0
Bosnia and Herzegovina																0
Brazil	2			19	2	6	5					4				453
Bulgaria						5										192
Canada					39					30			35			583
CARICOM																0
Chile		6			1	1				1	5					58
China	159	52	82	96		4	2		4	12	41	8			1	1072
Chinese Taipei				3												421
Costa Rica																78
Croatia																51
Cuba																88
Czech Republic				13		2	3			14						534
Denmark						3	3									199
Ecuador																20
Egypt																28
Estonia																0
Finland				5												439
France		24	22	36	8	3			4		24		10			1014
Georgia																0
Germany	25	29	16	87	16	7	4	153	43	27	15	3	65	20	2	1611
Ghana																0
Greece																169
Hong Kong, China	2					1				3	4		5			330
Hungary				16		1	4									397
IAEA																13
India																245
Indonesia																104
Ireland																222
IRMM	30	9	10		15				9	17	14	3	30			247
Israel																0
Italy				3			2	3		2						605
Jamaica																0
Japan	44	20	11	145	21	6			12	5	43		56			996
Kazakhstan																13
Kenya																0

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Country	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 by country for all metrology areas
Korea	2	21	50	300					4	18	30		4			1015
Latvia																59
Lithuania																91
Malaysia																155
Malta																0
Mauritius																0
Mexico	53	33	66	23	10	6	2	15	5	4	7		75			617
Moldova																0
Montenegro																0
Netherlands, The	17			235	2						1		4			841
New-Zealand																199
Norway																158
Pakistan																0
Panama																34
Paraguay																23
Peru																26
Philippines																0
Poland				16		6	2									508
Portugal				21												183
Romania		1			1			1								252
Russia	10	15	25	361	1	4	2	14	4		5		9			1472
Saudi Arabia																0
Serbia																166
Seychelles																0
Singapore																329
Slovakia	7	33		27		5	2									412
Slovenia					2			1								296
South Africa			2	10				4			2		3		1	365
Spain				23												496
Sri Lanka																0
Sweden																493
Switzerland				9												392
Thailand				2		3										404
The FYR Macedonia																0
Tunisia																0
Turkey					3					3	2					438
Ukraine				12		6	3									168
United Kingdom	22	40	6	294	12				6	15	16	1	11			1314
United States	10	73	146	134	21	9	3		9	208	117	35	205	14		2281
Uruguay																204
Viet Nam																27
WMO																0
Zambia																0
Zimbabwe																0
<b>Total by Metrology Area</b>	<b>408</b>	<b>361</b>	<b>443</b>	<b>1912</b>	<b>160</b>	<b>79</b>	<b>37</b>	<b>191</b>	<b>100</b>	<b>361</b>	<b>338</b>	<b>54</b>	<b>527</b>	<b>34</b>	<b>4</b>	<b>Grand total</b>
<b>5009</b>																<b>24835</b>
<b>Total Chemistry</b>																

Distribution of CMCs that are temporarily removed ("greyed-out") from the KCDB

M	PR	EM	T	RI	L	AUV	QM	TF	Total
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APMP

NZ		5							5
KR							5		5

Total APMP: 10

AFRIMETS

ZA	5								5
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Total AFRIMETS: 5

EURAMET

BG					1				1
FR	3								3
GR						8			8

Total EURAMET: 12

SIM

MX	3	1		46			6		56
AR				66					66
JM	22								22
CA	9				11				20

Total SIM: 164

**Total: 191  
CMCs deleted**

Status as on 11 April 2012

The BIPM key comparison database, KCDB

**Legend:**

AUV	Acoustics, Ultrasound and Vibration
EM	Electricity and Magnetism
EM Matrices	Usage of the presentation in tables of uncertainty ranges
L	Length
M	Mass and Related Quantities
PR	Photometry and Radiometry
QM / 1	Chemistry; High purity chemicals
QM / 2	Chemistry; Inorganic solutions
QM / 3	Chemistry; Organic solutions
QM / 4	Chemistry; Gases
QM / 5	Chemistry; Water
QM / 6	Chemistry; pH
QM / 7	Chemistry; Electrolytic conductivity
QM / 8	Chemistry; Metal and metal alloys
QM / 9	Chemistry; Advanced materials
QM / 10	Chemistry; Biological fluids and materials
QM / 11	Chemistry; Food
QM / 12	Chemistry; Fuels
QM / 13	Chemistry; Sediments, soils, ores, and particulates
QM / 14	Chemistry; Other materials
QM / 15	Chemistry; Surfaces, films, and engineered nanomaterials
RI(I)	Ionizing radiation; Dosimetry
RI(II)	Ionizing radiation; Radioactivity
RI(III)	Ionizing radiation; Neutron measurements
T	Thermometry
TF	Time and Frequency

**Note that one Chemical 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.**