

Mass, New Zealand, MSL (Measurement Standards Laboratory)

Calibration or Measurement Service			Measurand Level or Range			Measurement Conditions/Independent Variable		Expanded Uncertainty						
Class	Instrument or Artifact	Instrument Type or Method	Minimum value	Maximum value	Units	Parameter	Specifications	Value	Units	Coverage factor	Level of Confidence	Is the expanded uncertainty a relative one?	NMI internal service identifier	Comments
Mass	Mass standard	Comparisons in air	1	100	mg			0.4 to 0.7	µg	2.1	95%	No	1	Approved on 14 April 2005
Mass	Mass standard	Comparisons in air	0.1	1	g			0.7 to 1.6	µg	2.1	95%	No	2	Approved on 14 April 2005
Mass	Mass standard	Comparisons in air	1	10	g			1.6 to 4	µg	2.1	95%	No	3	Approved on 14 April 2005
Mass	Mass standard	Comparisons in air	10	100	g			4 to 8	µg	2.1	95%	No	4	Approved on 14 April 2005
Mass	Mass standard	Comparisons in air	0.1	1	kg			8 to 40	µg	2.1	95%	No	5	Approved on 14 April 2005
Mass	Mass standard	Comparisons in air	1	10	kg			1.1E-07		2.1	95%	Yes	6	Approved on 14 April 2005
Mass	Mass standard	Comparisons in air	10	20	kg			1.6E-07		2.1	95%	Yes	7	Approved on 14 April 2005
Mass	Mass standard	Comparisons in air	20	300	kg			1.5E-06		2.0	95%	Yes	8	Approved on 14 April 2005
Mass	Mass standard	Comparisons in air	300	1000	kg			10 to 16	g	2.1	95%	No	9	Approved on 14 April 2005
Density of solid	Solid density artifact	Comparison in liquid	1400	2500	kg m ⁻³	Mass	400 g to 200 g	1.0E-05		2	95%	Yes	10	Approved on 14 April 2005
						Temperature	17 °C to 23 °C							
Density of solid	Mass standard	Comparison in liquid	7800	8200	kg m ⁻³	Mass	1 kg	1.5E-05		2	95%	Yes	11	Approved on 14 April 2005
						Temperature	17 °C to 23 °C							
Density of liquid	Liquid density artifact	Weighing in liquid	600	2000	kg m ⁻³	Temperature	17 °C to 23 °C	2.0E-05		2	95%	Yes	12	Approved on 14 April 2005

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Absolute pressure, gas medium	Pressure measuring device, standard pressure generator	Direct comparison with standard, crossfloat	2	35	kPa			1.3E-05		2	95%	Yes	13	Approved on 14 April 2005
Absolute pressure, gas medium	Pressure measuring device, standard pressure generator	Direct comparison with standard, crossfloat	35	350	kPa			2.0E-05		2	95%	Yes	14	Approved on 14 April 2005
Absolute pressure, gas medium	Pressure measuring device, standard pressure generator	Direct comparison with standard, crossfloat	350	3500	kPa			6.0E-05		2	95%	Yes	15	Approved on 14 April 2005
Gauge pressure: gas medium	Pressure measuring device, standard pressure generator	Direct comparison with standard, crossfloat	2	350	kPa			2.0E-05		2	95%	Yes	16	Approved on 14 April 2005

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Gauge pressure: gas medium	Pressure measuring device, standard pressure generator	Direct comparison with standard, crossfloat	350	11000	kPa			6.0E-05		2	95%	Yes	17	Approved on 14 April 2005
Gauge pressure: liquid medium	Pressure measuring device, standard pressure generator, p	Direct comparison with standard, crossfloat	0.2	17	MPa			$(1E-04 + 6.6E-05p)$, p in MPa	MPa	2	95%	No	18	Approved on 14 April 2005
Gauge pressure: liquid medium	Pressure measuring device, standard pressure generator, p	Direct comparison with standard, crossfloat	17	280	MPa			$(6.6E-05p + 7E-07p^2)$, p in MPa	MPa	2	95%	No	19	Approved on 14 April 2005
Differential pressure: gas medium	Pressure measuring device p	Direct comparison with standard	1	9000	Pa			$(6E-03 + 4.5E-05p)$, p in Pa	Pa	2	95%	No	20	Approved on 14 April 2005