

102.5 - Copper "Benchmark" (block, chip and rod forms)

SRMs with a "C" prefix are chill-cast blocks approximately 32 mm square and 19 mm thick.

PLEASE NOTE: The tables are presented to facilitate comparisons among a family of materials to help customers select the best SRM for their needs. For specific values and uncertainties, the certificate is the only official source.

Description >> Unit of Issue >>	399	454	457	494	495	498	500	C1251a	C1252a	C1253a
	Unalloyed Copper - Cu VI 50 g	Unalloyed Copper XI (chips) 35 g	Unalloyed Copper IV (solid) rod	Unalloyed Copper I (solid) rod	Unalloyed Copper II (solid) rod	Unalloyed Copper V (solid) rod	Unalloyed Copper - Cu VII rod	Phosphorus Deoxidized Copper - Cu VIII block	Phosphorus Deoxidized p;Copper -Cu IX block	Phosphorus Deoxidized Copper - Cu X block
Concentration are expressed as mass fraction, in mg/kg (unless noted by an asterisk * for %).										
Aluminum	<2)			<2)	<2)	<2)	<2)	<20)	<20)	176
Antimony	30	24	0.214	4.5	8.0	7.4	102	14.9	42	139
Arsenic	47	46	<2)	2.6	1.6	25	140	16	118	436
Bismuth	10.5	19	0.22	0.35	0.50	2.0	24.5	3.7	(19)	(56)
Cadmium	<1)		<1)	(0.5)	(0.4)	<22)	<1)	<3)	16.9	70
Chromium	(0.5)		<2)	2.0	6.0	(0.3)	(0.5)	(3)	19	260
Cobalt	0.5	(4)	0.227	0.5		2.7	0.6	13.2	87	454
Copper (Cu)	99.79*	99.84*	99.97*	99.908*	99.944*	99.98*	99.70*	99.89*	99.87*	99.46*
Gold	(4)	7.5	<0.05)	(0.07)	(0.13)	(0.1)	(10)	15.5	33.9	72
Iron	20.0	(50)	2.4	147	96	11	41	285	72	290
Lead	114	66	0.512	26.5	3.25	10	128	23.5	60	243
Magnesium	<1)		<1)	<1)	<1)	<1)	<1)	<20)	<20)	(150)
Manganese	(0.3)		<0.1)	3.7	5.3	(0.3)	(0.2)	4.6	43	357
Nickel	506	(150)	0.67	11.7	5.4	7.0	603	23.6	128	491
Oxygen			367							
Palladium		(0.1)								
Phosphorus								420	125	561
Selenium	95	479	4.05	2.00	0.63	17.5	214	11	56	136
Silicon	<2)		<1)	<2)	<2)	<2)	<2)	<50)	<100)	(580)
Silver	117	286	8.086	50.5	12.2	20.1	181	80	158	494
Sulfur	(10)		4	15	13	(11)	(9)	(35)	(70)	(50)
Tellurium	50	27	0.296	0.58	0.32	10.1	153	16	54.6	168
Tin	(~90)	2.2	<0.1)	70	1.5	5	(~200)	16	120	499
Titanium			<1)							
Zinc	45	7	<3)	405	12.2	25	114	24	69.4	329

- Certified values are normal font
 - Non-certified or reference values are italicized
 - Non-certified values in parentheses are for information only
- * Mass fraction in %