101.1 - Plain Carbon Steels (chip form)

These SRMs are intended for checking chemical methods of analysis. They consist of steel alloys selected to provide a wide range of analytical values for elements. They are furnished in 150-g units (unless otherwise noted) as chips usually sized between 0.4 mm to 1.2 mm, prepared from selected portions of commercial ingots.

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 >>	8k Bessemer Steel (Simulated) 0.1 % Carbon (chip form)	12h Basic Open-Hearth Steel, 0.4% Carbon	13g 0.6% Carbon Steel	14g Carbon Steel (AISI 1078)	16f Basic Open-Hearth Steel, 1% Carbon (chip form)	19h Basic Electric Steel, 0.2% Carbon	20g AISI 1045 Steel (chip form)	152a Basic Open-Hearth Steel 0.5% Carbon (Tin Bearing)	178 0.4C Basic Oxygen Furnace Steel	368 Carbon Steel (AISI 1211) (chip form)
Unit of Issue >>	**150 g**	**150 g**	**150 g**	**150 g**	**150 g**	**150 g**	**150 g**	**150 g**	**150 g**	**150 g**
Element Composition (mass fraction, in %)										
Aluminum (total)		(0.038)	0.048	0.025		0.002	0.040			
Carbon	*0.0806*	0.407	0.613	0.735	0.97	0.215	0.462	0.486	0.395	*0.090*
Chromium	0.0467	0.074	0.050	0.081	0.020	0.173	0.036	0.046	0.016	0.0295
Cobalt					0.003					
Copper	0.0200	0.073	0.066	0.047	0.006	0.466	0.034	0.023	0.032	0.00984
Manganese	0.5040	0.842	0.853	0.456	0.404	0.393	0.665	0.717	0.824	0.8238
Molybdenum	*0.0397*	0.006		0.011	0.003	0.038	0.008	0.036	0.003	0.00311
Nickel	*0.1174*	0.032	0.061	0.030	0.008	0.248	0.034	0.056	0.010	0.00783
Nitrogen		0.006								0.01030
Phosphorus	*0.0956*	0.018	0.006	0.006	0.014	0.016	0.012	0.012	0.012	0.0827
Silicon	*0.0576*	0.235	0.355	0.232	0.214	0.211	0.305	0.202	0.163	0.0067
Sulfur	*0.0775*	0.027	0.031	0.019	0.026	0.022	0.028	0.030	0.014	*0.1324*
Tin								0.032		
Vanadium	0.0145	0.003	0.001	0.0008	0.002	0.003	0.002	0.001	0.001	*0.0013*

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