

ISO/TR 9769:2018-12 (E)

Steel and iron - Review of available methods of analysis

| Contents | | Page |
|------------------------------|---|-------------|
| Foreword | | iv |
| 1 | Scope | 1 |
| 2 | Normative references | 1 |
| 3 | Terms and definitions | 1 |
| 4 | International Standards for determining the chemical composition of steel and iron, their range of application and principles of the methods | 1 |
| 4.1 | Mono-elemental methods | 1 |
| 4.1.1 | Aluminium, Al | 1 |
| 4.1.2 | Antimony, Sb | 2 |
| 4.1.3 | Arsenic, As | 2 |
| 4.1.4 | Boron, B | 2 |
| 4.1.5 | Calcium, Ca | 3 |
| 4.1.6 | Carbon, C | 4 |
| 4.1.7 | Chromium, Cr | 5 |
| 4.1.8 | Cobalt, Co | 6 |
| 4.1.9 | Copper, Cu | 7 |
| 4.1.10 | Manganese, Mn | 8 |
| 4.1.11 | Molybdenum, Mo | 9 |
| 4.1.12 | Nickel, Ni | 10 |
| 4.1.13 | Niobium, Nb | 12 |
| 4.1.14 | Nitrogen, N | 13 |
| 4.1.15 | Oxygen, O | 14 |
| 4.1.16 | Phosphorus, P | 14 |
| 4.1.17 | Sulfur, S | 15 |
| 4.1.18 | Silicon, Si | 17 |
| 4.1.19 | Tin, Sn | 18 |
| 4.1.20 | Titanium, Ti | 18 |
| 4.1.21 | Tungsten, W | 19 |
| 4.1.22 | Vanadium, V | 19 |
| 4.2 | Multi-elemental methods | 20 |
| 4.2.1 | Calcium, Ca; Magnesium, Mg | 20 |
| 4.2.2 | Carbon, C; Sulfur, S | 21 |
| 4.2.3 | Tin, Sn; Antimony, Sb; Cerium, Ce; Lead, Pb; Bismuth, Bi | 21 |
| 4.2.4 | Chromium, Cr; Cobalt, Co; Copper, Cu; Manganese, Mn; Molybdenum, Mo; Nickel, Ni; Niobium, Nb; Phosphorus, P; Silicon, Si; Titanium, Ti; Vanadium, V | 21 |
| 4.2.5 | Zinc, Zn; Aluminium, Al; Nickel, Ni; Iron, Fe; Silicon, Si; Lead, Pb | 22 |
| 4.2.6 | Carbon, C; Silicon, Si; Manganese, Mn; Phosphorus, P; Sulfur, S; Chromium, Cr; Nickel, Ni; Aluminium, Al; Titanium, Ti; Copper, Cu: | 23 |
| 4.3 | General documents | 24 |
| Annex A (informative) | Graphical representation of precision data for the methods presented in this document | 25 |
| Annex B (informative) | Summary of the International Standards presented in this document | 77 |
| Bibliography | | 82 |