ISO/TR 9686:2017-05 (E)

Direct reduced iron - Determination of carbon and/or sulfur - High-frequency combustion method with infrared measurement

Contents

Page

Foreword iv

1 Scope 1

2 Normative references 1

3 Termsanddefinitions 1

4 Principle 1

5 Reagents 1

6 Apparatus 2

7 Sampling and samples 3
7.1 Laboratory sample 3
7.2 Preparation of predried test samples 3

8 Procedure 3
8.1 General operating instructions 3
8.2 Test portion 3
8.3 Blank test 3
8.4 Calibration 4
8.4.1 Crucible preparation 4
8.4.2 Combustion 5
8.5 Determination 5

9 Expression of results 5
9.1 Calculation of mass fraction of carbon or sulfur 5
9.2 General treatment of results 5
9.2.1 Repeatability and permissible tolerance 5
9.2.2 Determination of analytical result 6
9.2.3 Between-laboratories precision 6
9.2.4 Check for trueness 7
9.2.5 Calculation of final result 8

10 Test report 8

Annex A (informative) Crucible loading sequence 9

Annex B (informative) Flowsheet of the procedure for the acceptance of analytical values for test samples 10

Annex C (informative) Features of commercial HF combustion/infrared sulfur analysers 11

Annex D (informative) Derivation of repeatability and permissible tolerance formulae 12

Annex E (informative) Precision data obtained by international analytical trials 13

Bibliography 15