

ISO 13909-7:2016-07 (E)

Hard coal and coke - Mechanical sampling - Part 7: Methods for determining the precision of sampling, sample preparation and test ing

Contents		Page
Foreword		iv
Introduction		v
1	Scope	1
2	Normative references	1
3	Terms and definitions	1
4	General	1
5	Formulae relating to factors affecting precision	2
5.1	General	2
5.2	Sampling	3
6	Estimation of primary increment variance	4
6.1	Direct determination of individual primary increments	4
6.2	Determination using the estimate of precision	5
7	Methods for estimating precision	5
7.1	General	5
7.2	Duplicate sampling with twice the number of increments	5
7.3	Duplicate sampling during routine sampling	8
7.4	Alternatives to duplicate sampling	9
7.5	Precision adjustment procedure	9
8	Calculation of precision	10
8.1	Replicate sampling	10
8.2	Normal sampling scheme	11
9	Methods of checking sample preparation and testing errors	12
9.1	General	12
9.2	Target value for variance of sample preparation and analysis	12
9.2.1	General	12
9.2.2	Off-line preparation	13
9.2.3	On-line preparation	13
9.3	Checking procedure as a whole	13
9.4	Checking stages separately	14
9.4.1	General	14
9.4.2	Procedure 1	15
9.4.3	Procedure 2	18
9.4.4	Interpretation of results	21
9.5	Procedure for obtaining two samples at each stage	22
9.5.1	With a riffle	22
9.5.2	With a mechanical sample divider	22
9.6	Example	22
Annex A (informative)	Variogram method for determining variance	26
Annex B (informative)	Grubbs' estimators method for determining sampling precision	34
Bibliography		43