

DIN EN ISO 15971:2014-09 (E)

Natural gas - Measurement of properties - Calorific value and Wobbe index (ISO 15971:2008)

Contents		Page
Foreword		3
Introduction		4
1	Scope	5
2	Normative references	5
3	Terms and definitions	5
3.1	Calorific value and Wobbe index	5
3.2	Water content of gas	6
3.3	Performance classification	6
3.4	Terms from metrology	7
4	Principles of measurement	8
4.1	Introduction	8
4.2	Direct combustion calorimetry	9
4.3	Indirect methods	9
4.4	Inferential methods	10
5	Performance assessment and acceptance tests	11
5.1	Performance assessment for instrument selection	11
5.2	Factory and site acceptance tests	24
6	Sampling and installation guidelines	25
6.1	Sampling	25
6.2	Installation guidelines	26
7	Calibration	29
7.1	Calibration procedures	29
7.2	Calibration gases	30
8	Verification	31
8.1	Verification procedures	31
8.2	Verification gases	32
9	Maintenance	33
9.1	Preventive maintenance	33
9.2	Corrective maintenance	33
10	Quality control	33
10.1	General	33
10.2	Environmental parameters and ancillary equipment	35
10.3	Instrumental factors	36
Annex A (normative)	Symbols and units	37
Annex B (informative)	Examples of type-approval and technical specifications	38
Annex C (informative)	Class 0 mass-basis calorimetry	40

Annex D (informative) Direct combustion calorimetry	44
Annex E (informative) Stoichiometric combustion devices	47
Annex F (informative) Effect of non-alkane gases on stoichiometric combustion devices	51
Annex G (informative) Measurement of Wobbe index	52
Bibliography	53