



BSI Standards Publication

Liquid petroleum products — Determination of the total volatile sulfur content in liquefied petroleum gases by ultraviolet fluorescence spectroscopy

National foreword

This British Standard is the UK implementation of EN 17178:2019.

The UK participation in its preparation was entrusted to Technical Committee PTI/15, Natural Gas and Gas Analysis.

A list of organizations represented on this committee can be obtained on request to its secretary.

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

© The British Standards Institution 2019
Published by BSI Standards Limited 2019

ISBN 978 0 580 99360 2

ICS 75.160.20

Compliance with a British Standard cannot confer immunity from legal obligations.

This British Standard was published under the authority of the Standards Policy and Strategy Committee on 30 September 2019.

Amendments/corrigenda issued since publication

Date	Text affected
------	---------------

English Version

**Liquid petroleum products - Determination of the total
volatile sulfur content in liquefied petroleum gases by
ultraviolet fluorescence spectroscopy**

Produits pétroliers liquides - Détermination de la
teneur en soufre volatil dans les gaz de pétrole
liquéfiés par spectroscopie de fluorescence ultra-
violette

Flüssige Mineralölerzeugnisse - Bestimmung des
Gesamtgehaltes an flüchtigem Schwefel in Flüssiggas
(LPG) durch Ultraviolettfluoreszenz-Spektroskopie

This European Standard was approved by CEN on 20 June 2019.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the CEN-CENELEC Management Centre or to any CEN member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the CEN-CENELEC Management Centre has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and United Kingdom.



EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

Contents

Page

European foreword	3
Introduction	4
1 Scope.....	5
2 Normative references.....	5
3 Terms and definitions	5
4 Principle	5
5 Reagents and materials	6
6 Apparatus	6
7 Sampling.....	7
8 Calibration.....	7
8.1 Calibration range	7
8.2 Calibration techniques allowed.....	8
8.2.1 Multi-point calibration	8
8.2.2 One-point calibration	8
9 Quality control	8
10 Apparatus preparation	9
11 Procedure	9
12 Calculation.....	10
13 Expression of results	11
14 Precision	11
14.1 General.....	11
14.2 Repeatability	11
14.3 Reproducibility.....	11
15 Test report.....	12
Annex A (informative) Quality control monitoring.....	13
Bibliography	14

European foreword

This document (EN 17178:2019) has been prepared by Technical Committee CEN/TC 19 “Gaseous and liquid fuels, lubricants and related products of petroleum, synthetic and biological origin”, the secretariat of which is held by NEN.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by March 2020 and conflicting national standards shall be withdrawn at the latest by March 2020.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN not be held responsible for identifying any or all such patent rights.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

Introduction

The sulfur content of LPG used for fuel purposes contributes to SO_x emissions and can lead to corrosion in engine and exhaust systems. Sulfur also acts as catalyst poison, blocking and damaging catalysts like catalytic converters in cars and process catalysts in the chemical industry where LPG is used as feedstock.

Due to the need for lower sulfur limits, this document was developed in order to solve precision issues with existing test methods [3, 4].