DIN EN 1622:2006-10 (E)

Water quality - Determination of the threshold odour number (TON) and threshold flavour number (TFN)

Contents

Page

Foreword 4

Introduction 5

1 Scope 6

2 Normative references 6

3 Terms and definitions 6

4 Principle 8

5 Hazards 8

6 Test environment 8

7 Apparatus and reagents 8

8 Sampling and sample preservation 9

9 Test panel and selected assessors 9

10 Procedure for unforced choice 10
10.1 General 10
10.2 Type of test 10
10.2.1 The triangle test 10
10.2.2 The paired test 10
10.3 Type of method 10
10.3.1 Short method 10
10.3.2 Full method 11

11 Expression of results 13
11.1 The short method 13
11.2 The full method 13

12 Test report 13

Annex A (normative) Chlorinated water 15

A.1 General 15
A.2 Dechlorination by addition of sodium thiosulfate 15
A.2.1 Preparation of reagent 15
A.2.2 Procedure 15
A.3 Dechlorination by addition of ascorbic acid 15
A.3.1 Preparation of reagent 15
A.3.2 Procedure 15

Annex B (normative) Forced choice test method 16

B.1 General 16
B.2 Determination of TON and TFN 16

B.3 Expression of results 17
B.3.1 The short method 17
B.3.2 The full method 17
B.3.3 Test report 17

Annex C (normative) Qualitative simplified procedure 18

Annex D (informative) Method for the preparation of reference water) 19

D.1 Apparatus and reagents 19
D.2 Procedure 19

Annex E (informative) Selection of the test panel 20

E.1 General 20
E.2 Self-evaluation 20
E.3 Screening test 20

Annex F (informative) Preparation of dilutions 23

Annex G (informative) Interlaboratory test by forced choice methodology 24

Bibliography 27

Figures Figure G.1 -- Graphical presentation of threshold flavour number; calculated threshold flavour number is 13,5 25

Tables Table 1 -- Threshold numbers 13

Table E.1 -- Long term constraints form 21

Table E.2 -- Test report form for individual candidates 22

Table F.1 --Examples of successive dilutions, x p (10.3. 2.2) 23

Table G.1 -- Statistical evaluation by forced choice triangle test (TFN), concerning the measurements obtained by 10 selected assessors, for assessment of drinking water (x=2) 24

Table G.2 -- Measurements on odour and flavour on geosmin solutions (forced choice, triangle test)25 Table G.3 -- Measurements on odour and flavour on geosmin solutions (forced choice, paired test) 26