

DIN EN 17093:2018-10 (E)

Domestic appliances used for drinking water treatment not connected to water supply - Jug water filter systems - Safety and performance requirements, labeling and information to be supplied

| Contents | | Page |
|-----------------|--|-------------|
| | European foreword | 4 |
| | Introduction | 5 |
| 1 | Scope | 6 |
| 2 | Normative references | 6 |
| 3 | Terms and definitions | 8 |
| 4 | Design requirements | 9 |
| 4.1 | Jug water filter system components | 9 |
| 4.2 | Jug water filter system constituent materials | 9 |
| 5 | Chemical and microbiological safety requirements | 9 |
| 5.1 | Filtered water quality | 9 |
| 5.2 | Packaging | 9 |
| 5.3 | Release of silver | 9 |
| 5.4 | Microbiological contamination | 10 |
| 5.4.1 | Condition of the new cartridge | 10 |
| 5.4.2 | Potential for colonisation of the jug water filter system | 10 |
| 6 | Performance requirements | 10 |
| 6.1 | General | 10 |
| 6.2 | Chemical requirements | 11 |
| 6.2.1 | Reduction of metal contents | 11 |
| 6.2.2 | Reduction of scale, free chlorine and nitrate contents | 11 |
| 6.2.3 | Improvement of organoleptic characteristics | 12 |
| 6.2.4 | THMs reduction | 13 |
| 7 | Tests | 13 |
| 7.1 | General | 13 |
| 7.2 | Chemical tests | 13 |
| 7.2.1 | Materials | 13 |
| 7.2.2 | Challenge water storage tank and water filter system preparation | 14 |
| 7.2.3 | Filtration regime | 14 |
| 7.2.4 | Filtration procedure | 14 |
| 7.2.5 | Sampling plan for each jug water filter system | 15 |
| 7.2.6 | Test report | 16 |
| 7.3 | Microbiological tests | 17 |
| 7.3.1 | General | 17 |
| 7.3.2 | Test procedure to determine the microbiological condition of a new filter cartridge | 17 |
| 7.3.3 | Test for the potential for colonisation of the jug water filter system with bacterial indicators | 17 |
| 8 | Manufacturer's instructions for use | 20 |
| 9 | Marking and labelling | 20 |

| | |
|--|-----------|
| Annex A (normative) Preparation of solutions | 21 |
| A.1 Basic water | 21 |
| A.2 Calcium | 21 |
| A.3 Magnesium | 21 |
| A.4 Hydrogen carbonate | 21 |
| A.5 Nitrate | 21 |
| A.6 Metals | 21 |
| A.7 Organoleptic compounds | 22 |
| A.7.1 2,4,6-trichlorophenol stock solution | 22 |
| A.7.2 2,4,6-trichlorophenol working solution | 22 |
| A.7.3 Geosmin stock solution | 22 |
| A.7.4 Geosmin working solution | 22 |
| Annex B (normative) Preparation of challenge water | 23 |
| B.1 General | 23 |
| B.2 Challenge water W1 for metal reduction | 23 |
| B.3 Challenge water W2 for scale, nitrate and chlorine reduction | 23 |
| B.4 Challenge water W3 for the improvement of organoleptic characteristics | 24 |
| B.5 Challenge water for microbiological challenge | 25 |
| B.5.1 Sterile tap water | 25 |
| B.5.2 Preparation of E.coli media | 25 |
| B.5.3 Preparation of challenge water inoculated with test bacteria | 25 |
| Annex C (informative) Examples of filtration and sampling schedule for chemical tests | 26 |
| Annex D (informative) Examples of the microbiological test procedure | 27 |
| Annex E (normative) Scale reduction by boiling test | 28 |
| E.1 General | 28 |
| E.2 Test equipment | 28 |
| E.3 Test procedure | 28 |
| E.4 Acceptance criteria | 28 |
| Annex F (normative) Synopsis of test procedures and analytical methods | 29 |
| Annex G (informative) Examples of test report for each jug | 30 |
| Annex H (normative) Substance-specific reduction claims | 31 |
| Annex I (informative) Conversion table | 32 |
| Annex J (normative) Seal verification test | 33 |
| J.1 Mechanical tests | 33 |
| J.2 Method for low cartridge leakage | 33 |
| J.3 Method for high cartridge leakage | 33 |
| J.4 Control contact time | 34 |
| Bibliography | 35 |