# ISO 4802-1:2016-06 (E)

## Glassware - Hydrolytic resistance of the interior surfaces of glass containers - Part 1: Determination by titration method and classification

## Contents

Page


Foreword ..... iv

Introduction ..... v

1 Scope ..... 1

2 Normative references ..... 1

3 Terms and definitions ..... 1

4 Principle ..... 4

5 Reagents ..... 4

6 Apparatus ..... 5

7 Sample preparation ..... 6
7.1 Sample size ..... 6
7.2 Determination of the filling volume ..... 6
7.2.1 Flat-bottomed containers 20 mm outer flange diameter (except ampoules, syringes and cartridges) ..... 6
7.2.2 Flat-bottomed containers >20 mm outer flange diameter ..... 6
7.2.3 Round-bottomed containers ..... 7
7.2.4 Lipped containers ..... 7
7.2.5 Ampoules ..... 7
7.2.6 Syringes and cartridges ..... 7

8 Procedure ..... 8
8.1 General ..... 8
8.2 Cleaning of samples ..... 8
8.3 Filling and heating ..... 8
8.4 Analysis of the extraction solutions ..... 9
8.5 Test to determine whether the containers have been surface treated ..... 10

9 Expression of results ..... 10
9.1 Determination ..... 10
9.2 Classification ..... 10
9.3 Distinction between containers of hydrolytic resistance container class HCT 1 and hydrolytic resistance container class HCT 2 ..... 10
9.4 Designation ..... 11

10 Test report ..... 11

11 Reproducibility ..... 12

Bibliography ..... 13