

# ISO 15901-1:2016-04 (E)

## Evaluation of pore size distribution and porosity of solid materials by mercury porosimetry and gas adsorption - Part 1: Mercury porosimetry

---

<b>Contents</b>	<b>Page</b>
Foreword .....	iv
Introduction .....	v
1 Scope .....	1
2 Normative references .....	1
3 Terms and definitions .....	1
4 Symbols and abbreviated terms .....	4
5 Principles .....	5
6 Apparatus and material .....	6
6.1 Sample holder .....	6
6.2 Porosimeter .....	7
6.3 Mercury .....	7
7 Procedures for calibration and performance .....	7
7.1 General .....	7
7.2 Pressure signal calibration .....	7
7.3 Volume signal calibration .....	7
7.4 Vacuum transducer calibration .....	7
7.5 Verification of porosimeter performance .....	8
8 Procedures .....	8
8.1 Sampling .....	8
8.1.1 Obtaining a test sample .....	8
8.1.2 Quantity of sample .....	8
8.2 Method .....	9
8.2.1 Sample pre-treatment .....	9
8.2.2 Filling of the sample holder and evacuation .....	9
8.2.3 Filling the sample holder with mercury .....	9
8.2.4 Measurement .....	10
8.2.5 Completion of test .....	10
8.2.6 Blank and sample compression correction .....	10
9 Evaluation .....	11
9.1 Determination of the pore size distribution .....	11
9.2 Determination of the specific pore volume .....	11
9.3 Determination of the specific surface area .....	12
9.4 Determination of the bulk and skeleton densities .....	12
9.5 Determination of the porosity .....	13
10 Reporting .....	13
Annex A (informative) Mercury porosimetry analysis results .....	14
Annex B (informative) Recommendations for the safe handling of mercury .....	17
Bibliography .....	19