

DIN ISO 16000-23:2019-03 (E)

Indoor air - Part 23: Performance test for evaluating the reduction of formaldehyde and other carbonyl compounds concentrations by sorptive building materials (ISO 16000-23:2018)

Contents	Page
National foreword	4
Foreword	6
Introduction	7
1 Scope	8
2 Normative references	8
3 Terms and definitions	8
4 Symbols	11
5 Principle	11
6 Apparatus and materials	12
7 Test conditions	13
7.1 General.....	13
7.2 Test conditions to determine concentration reduction performance.....	13
7.2.1 Temperature and relative humidity.....	13
7.2.2 Supply air quality and background concentration.....	13
7.2.3 Mass transfer coefficient.....	14
7.2.4 Air change rate.....	14
7.2.5 Supply air concentration.....	14
7.3 Factors affecting the concentration reduction performance.....	14
7.3.1 General.....	14
7.3.2 Temperature and humidity.....	14
7.3.3 Concentration of target compound(s) in supply air.....	14
7.3.4 Interfering gases.....	15
8 Verification of test conditions	15
8.1 Monitoring of test conditions.....	15
8.2 Airtightness of test chamber.....	15
8.3 Air change rate in test chamber.....	15
8.4 Efficiency of the internal test chamber air mixing.....	15
8.5 Recovery.....	15
9 Preparation of test chamber	16
10 Preparation of test specimens	16
11 Test method	16
11.1 Background concentration and spiked supply air.....	16
11.2 Placing the test specimen in the test chamber.....	16
11.3 Time intervals for measurement of test chamber concentration.....	16
11.3.1 Test for target compound concentration reduction.....	16
11.3.2 Test for long-term reduction performance.....	17
11.3.3 Factors affecting the reduction performance.....	17
11.4 Air sampling.....	17
12 Determination of target compound(s)	17

13	Expression of results	17
13.1	Calculation of area-specific reduction rate.....	17
13.2	Calculation of equivalent ventilation rate per area.....	18
13.3	Calculation of total mass per area of sorption and saturation mass per area.....	18
14	Test report	18
Annex A (normative) Sample tube test for long-term reduction performance		20
Annex B (normative) System for quality assurance and quality control		24
Annex C (informative) Example measurements of construction materials		26
Annex D (informative) Example procedure for long-term reduction performance		31
Bibliography		34