

ISO 12999-1:2020-04 (E)

Acoustics - Determination and application of measurement uncertainties in building acoustics - Part 1: Sound insulation

Contents		Page
Foreword		iv
Introduction		v
1	Scope	1
2	Normative references	1
3	Terms and definitions	1
4	Detailed uncertainty budget	3
5	Uncertainty determination by inter-laboratory measurements	3
5.1	General	3
5.2	Measurement situations	3
5.3	Measurement conditions	3
5.4	Number of participating laboratories	4
5.5	Stating the test results of inter-laboratory measurements	4
5.6	Choice of test specimen	4
5.6.1	General	4
5.6.2	Use of single test specimen — Same material circulated among participants	4
5.6.3	Use of several test specimens taken from a production lot — Nominally identical material exchangeable among participants	5
5.6.4	Use of several test specimens constructed <i>in-situ</i> — Nominally identical material not exchangeable among participants	5
5.7	Laboratories with outlying measurement results	5
5.8	Verification of laboratory results by results of inter-laboratory tests	5
6	Uncertainties associated with single-number values	6
7	Standard uncertainties for typical measurands	7
7.1	General	7
7.2	Airborne sound insulation	7
7.3	Impact sound insulation	8
7.4	Reduction of transmitted impact noise by floor coverings	9
8	Application of the uncertainties	10
Annex A (informative)	Example of handling uncertainties in building acoustics	12
Annex B (informative)	Example for the calculation of the uncertainty of single number values	14
Annex C (informative)	Detailed uncertainty budget	17
Annex D (informative)	Upper limit for the standard deviation of reproducibility for airborne sound insulation	19
Bibliography		21