

# ISO/TS 16491:2012-12 (E)

## Guidelines for the evaluation of uncertainty of measurement in air conditioner and heat pump cooling and heating capacity tests

---

<b>Contents</b>		<b>Page</b>
Foreword .....		iv
Introduction .....		v
1	Scope .....	1
2	Normative references .....	1
3	Terms and definitions .....	1
4	Symbols .....	3
5	Method of calculation .....	4
5.1	Calibration .....	4
5.2	Correction .....	4
5.3	(Instrumental) drift .....	4
5.4	Stability .....	4
5.5	Uncertainty due to the lack of homogeneity .....	4
6	Explanatory notes useful in laboratory application .....	4
6.1	Uncertainty .....	4
6.2	Confidence level .....	4
6.3	Evaluation of errors .....	5
6.4	Steps in evaluation of uncertainty in measurements .....	5
6.5	Uncertainty of measurements .....	5
7	Evaluation of uncertainty -- Calorimeter room method .....	7
7.1	Cooling capacity test .....	8
7.2	Heating capacity test .....	11
8	Evaluation of uncertainty -- Air enthalpy method .....	14
8.1	Cooling capacity test .....	15
8.2	Heating capacity test .....	16
8.3	Uncertainty of measurement on the air volume flow rate .....	18
Annex A (normative)	Uncertainty budget sheets .....	19
Annex B (informative)	Determination of indirect contribution to uncertainty, U(CI) .....	27
Bibliography .....		28