

# INTERNATIONAL STANDARD

# ISO 11222

First edition  
2002-07-01

---

## **Air quality — Determination of the uncertainty of the time average of air quality measurements**

*Qualité de l'air — Détermination de l'incertitude de mesure de la moyenne  
temporelle de mesurages de la qualité de l'air*



Reference number  
ISO 11222:2002(E)

© ISO 2002

**PDF disclaimer**

This PDF file may contain embedded typefaces. In accordance with Adobe's licensing policy, this file may be printed or viewed but shall not be edited unless the typefaces which are embedded are licensed to and installed on the computer performing the editing. In downloading this file, parties accept therein the responsibility of not infringing Adobe's licensing policy. The ISO Central Secretariat accepts no liability in this area.

Adobe is a trademark of Adobe Systems Incorporated.

Details of the software products used to create this PDF file can be found in the General Info relative to the file; the PDF-creation parameters were optimized for printing. Every care has been taken to ensure that the file is suitable for use by ISO member bodies. In the unlikely event that a problem relating to it is found, please inform the Central Secretariat at the address given below.

© ISO 2002

All rights reserved. Unless otherwise specified, no part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office  
Case postale 56 • CH-1211 Geneva 20  
Tel. +41 22 749 0111  
Fax +41 22 749 0947  
E-mail [copyright@iso.ch](mailto:copyright@iso.ch)  
Web [www.iso.ch](http://www.iso.ch)

Printed in Switzerland

# Contents

Page

Foreword.....	iv
Introduction.....	v
1 Scope.....	1
2 Normative reference.....	1
3 Terms and definitions.....	1
4 Symbols and abbreviated terms.....	4
5 Requirements on the input data.....	5
5.1 General.....	5
5.2 Specific requirements on input data.....	6
6 Procedure.....	8
6.1 General.....	8
6.2 Standard uncertainty induced by the measuring system.....	8
6.3 Standard uncertainty due to incomplete time coverage.....	10
6.4 Combined standard uncertainty.....	11
6.5 Expanded uncertainty.....	11
7 Reporting uncertainty.....	12
Annex A (informative) Example — Quantification of the uncertainty of a monthly average of nitrogen dioxide in ambient air.....	13
A.1 Input.....	13
A.2 Uncertainty estimation of the monthly average.....	17
A.3 Discussion.....	19
Bibliography.....	20