ISO 23322:2021 (E)

Paints and varnishes — Determination of solvents in coating materials containing organic solvents only — Gas-chromatographic method

Contents

Foreword

- 1 Scope
- 2 Normative references
- 3 Terms and definitions
- 4 Units
- 5 Principle
- 6 Apparatus
 - 6.1 Gas chromatograph
 - 6.1.1 General
 - 6.1.2 Sample injection system
 - 6.1.2.1 General
 - 6.1.2.2 Hot-injection system
 - 6.1.2.3 Cold-injection system
 - 6.1.2.4 Headspace injection
 - 6.1.3 Oven
 - 6.1.4 Detector
 - 6.1.4.1 General
 - 6.1.4.2 Mass spectrometer (MS) or other mass-selective detector (MSD)
 - 6.1.4.3 Flame ionization detector
 - 6.1.5 Capillary separation column
 - 6.1.6 Analytical system performance criteria
 - 6.2 Injection syringe
 - 6.3 Data processing
 - 6.4 Sample vial

7 Reagents

- 7.1 General
- 7.2 Internal standard
- 7.3 Gases
- 7.4 Calibration substances
- 7.5 Extraction solvent
- 8 Sampling
- 9 Choice of sample injection system

10 Procedure

- 10.1 Gas chromatographic conditions
- 10.2 Injection volume
- 10.3 Calibration
- 10.3.1 General
- 10.3.2 Preparation of calibration solutions
- 10.3.3 Analysis of the multi-point calibration
- 10.4 Quality assurance
- 10.5 Sample preparation and analysis
- 10.5.1 Direct injection
- 10.5.2 Head space injection

- 10.5.3 Preparation of test samples for analysis without multiple standard additions
- 10.5.4 Data acquisition for sample measurement
- 11 Quantitative determination of compound content with respect to CSRF
- 12 Expression of results
- 13 Precision
 - 13.1 Repeatability
 - 13.2 Reproducibility
- 14 Test report

Annex A (informative) Examples for GC method conditions

- A.1 General
- A.2 Example 1: Gas chromatographic conditions for use with hot injection
- A.3 Example 2: Gas chromatographic conditions for use with cold injection
- A.4 Example 3: Gas chromatographic conditions for use with the headspace injector with sample loop
- A.5 Example 4: Gas chromatographic conditions for use with the headspace injector with equal-pressure application method

Page count: 13