

ISO 17091:2013-09 (E)

Workplace air - Determination of lithium hydroxide, sodium hydroxide, potassium hydroxide and calcium dihydroxide - Method by measurement of corresponding cations by suppressed ion chromatography

| Contents | | Page |
|--------------------|---|-------------|
| Foreword | | v |
| Introduction | | vi |
| 1 | Scope | 1 |
| 2 | Normative references | 1 |
| 3 | Terms and definitions | 2 |
| 3.1 | General definitions | 2 |
| 3.2 | Particle size fraction definitions | 3 |
| 3.3 | Sampling definitions | 3 |
| 3.4 | Analytical definitions | 4 |
| 3.5 | Statistical terms | 6 |
| 4 | Principle | 7 |
| 5 | Requirement | 7 |
| 6 | Reagents | 8 |
| 7 | Apparatus | 9 |
| 7.1 | Sampling equipment | 9 |
| 7.2 | Laboratory apparatus | 10 |
| 8 | Occupational exposure assessment | 11 |
| 8.1 | General | 11 |
| 8.2 | Personal sampling | 11 |
| 8.3 | Static sampling | 12 |
| 8.4 | Selection of measurement conditions and measurement pattern | 12 |
| 9 | Sampling | 13 |
| 9.1 | Preliminary considerations | 13 |
| 9.2 | Preparation for sampling | 15 |
| 9.3 | Sampling position | 15 |
| 9.4 | Collection of samples | 16 |
| 9.5 | Transportation | 16 |
| 10 | Analysis | 16 |
| 10.1 | Preparation of test and calibration solutions | 17 |
| 10.2 | Instrumental analysis | 17 |
| 10.3 | Estimation of detection and quantification limits | 18 |
| 10.4 | Quality control | 19 |
| 10.5 | Measurement uncertainty | 20 |
| 11 | Expression of results | 21 |
| 12 | Method performance | 21 |
| 12.1 | Sampling efficiency and sample storage | 21 |

| | | |
|---|---|----|
| 12.2 | Quantification limit | 21 |
| 12.3 | Upper limits of the working range | 21 |
| 12.4 | Bias and precision | 22 |
| 12.5 | Uncertainty of sampling and analysis method | 22 |
| 12.6 | Interferences | 22 |
| 13 | Test report | 22 |
| 13.1 | Test record | 22 |
| 13.2 | Laboratory report | 23 |
| Annex A (informative) Temperature and pressure correction | | 24 |
| Annex B (normative) Filter materials | | 25 |
| Annex C (informative) Sampler wall deposits | | 26 |
| ISO 17091:2013(E) Bibliography | | 27 |