

DIN EN 16847:2016-05 (E)

Fertilizers - Determination of complexing agents in fertilizers - Identification of heptagluconic acid by chromatography

| Contents | | Page |
|---|---|-------------|
| European foreword | | 3 |
| 1 | Scope | 4 |
| 2 | Normative references | 4 |
| 3 | Terms and definitions | 4 |
| 4 | Principle | 4 |
| 5 | Interferences | 4 |
| 6 | Apparatus | 5 |
| 7 | Reagents | 5 |
| 7.1 | Water, | 6 |
| 7.2 | Sample preparation solvent | 6 |
| 7.3 | HGA stock solution, | 6 |
| 7.4 | Eluent A: ortho-phosphoric acid, | 6 |
| 7.5 | Eluent B: acetonitrile (HPLC-grade) | 6 |
| 8 | Procedure | 6 |
| 8.1 | Preparation of the HGA-metal complex sample solution | 6 |
| 8.2 | Preparation of the calibration solutions | 7 |
| 8.3 | Chromatographic analysis | 7 |
| 9 | Calculation of the heptagluconic acid content and expression of the results | 8 |
| 10 | Precision | 8 |
| 10.1 | Inter-laboratory test | 8 |
| 10.2 | Repeatability | 8 |
| 10.3 | Reproducibility | 8 |
| 11 | Test report | 9 |
| Annex A (informative) Chromatograms of the standard and a typical sample solution | | 10 |
| Annex B (informative) Absorption spectra of the HGA | | 12 |
| Annex C (informative) Calculation of the molar ratio HGA:Metal | | 13 |
| Annex D (informative) Statistical results of the inter-laboratory test | | 14 |
| D.1 | Inter-laboratory test | 14 |
| D.2 | Test Samples | 14 |
| D.3 | Inter-laboratory test procedure | 14 |
| D.4 | Results and statistical interpretation | 14 |
| Annex E (informative) Complete names of chelating agents | | 16 |
| Bibliography | | 17 |