

# ISO 20637:2015-11 (E)

## Infant formula and adult nutritionals - Determination of myo-inositol by liquid chromatography and pulsed amperometry

---

| <b>Contents</b>       |  | <b>Page</b> |
|-----------------------|--|-------------|
| Foreword .....        |  | iv          |
| 1                     | Scope .....  | 1           |
| 2                     | Terms and definitions .....  | 1           |
| 3                     | Principle .....  | 1           |
| 4                     | Reagents and materials .....   | 1           |
| 5                     | Apparatus .....  | 3           |
| 6                     | Procedure .....  | 4           |
| 6.1                   | Free myo-inositol .....  | 4           |
| 6.1.1                 | Sample preparation .....   | 4           |
| 6.1.2                 | Extraction .....   | 5           |
| 6.2                   | Myo-inositol bound as phosphatidylinositol .....                     | 5           |
| 6.2.1                 | Sample preparation .....   | 5           |
| 6.2.2                 | Extraction .....   | 5           |
| 6.2.3                 | Cleanup .....  | 6           |
| 6.2.4                 | Hydrolysis .....   | 6           |
| 6.3                   | HPLC analysis .....  | 6           |
| 6.3.1                 | Instrument operating conditions .....                                | 6           |
| 6.3.2                 | PAD settings with gold electrode .....                               | 8           |
| 6.3.3                 | Instrument startup .....   | 8           |
| 6.3.4                 | Standard and sample analysis .....                                   | 8           |
| 6.3.5                 | System shutdown .....  | 8           |
| 7                     | Calculations .....   | 8           |
| 7.1                   | General .....  | 8           |
| 7.2                   | Concentration of calibration standards .....                         | 9           |
| 7.3                   | Preparation of standard curve .....                                  | 9           |
| 7.4                   | Calculation of free or free plus bound myo-inositol in samples ..... | 9           |
| 7.4.1                 | Calculation of free myo-inositol .....                               | 9           |
| 7.4.2                 | Calculation of bound myo-inositol .....                              | 10          |
| 7.4.3                 | Calculation of free plus bound myo-inositol .....                    | 10          |
| Annex A (informative) | Examples of chromatograms .....                                      | 11          |
| Annex B (informative) | Precision data .....   | 12          |
| Bibliography .....    |  | 15          |