

# DIN EN ISO 12782-5:2012-09 (E)

## Soil quality - Parameters for geochemical modelling of leaching and speciation of constituents in soils and materials - Part 5: Extraction of humic substances from aqueous samples (ISO 12782-5:2012)

---

| <b>Contents</b>  |  | <b>Page</b> |
|--|--|-------------|
| Foreword .....   |  | 3           |
| Introduction .....   |  | 4           |
| <b>1</b>   | <b>Scope .....</b>   | <b>6</b>    |
| <b>2</b>   | <b>Normative references .....</b>  | <b>6</b>    |
| <b>3</b>   | <b>Terms and definitions .....</b>   | <b>6</b>    |
| <b>4</b>   | <b>Principle .....</b>   | <b>8</b>    |
| <b>5</b>   | <b>Apparatus .....</b>   | <b>8</b>    |
| <b>6</b>   | <b>Reagents .....</b>  | <b>8</b>    |
| <b>7</b>   | <b>Sampling .....</b>  | <b>9</b>    |
| 7.1  | Laboratory sample .....  | 9           |
| 7.2  | Test sample .....  | 9           |
| 7.3  | Test portion .....   | 9           |
| <b>8</b>   | <b>Procedure .....</b>   | <b>9</b>    |
| 8.1  | Preparation of DAX-8 resin .....   | 9           |
| 8.2  | Determination of total humic acid (HA), fulvic acid (FA) and hydrophilic organic carbon (Hy) content in aqueous samples .....  | 10          |
| <b>9</b>   | <b>Eluate treatment and storage .....</b>  | <b>10</b>   |
| <b>10</b>  | <b>Analytical determination .....</b>  | <b>10</b>   |
| <b>11</b>  | <b>Blank test .....</b>  | <b>10</b>   |
| <b>12</b>  | <b>Calculation .....</b>   | <b>11</b>   |
| 12.1   | General correction factors for the calculation of humic acid (HA), fulvic acid (FA), hydrophilic organic carbon (Hy) and hydrophobic neutral organic carbon (HON) in aqueous samples ..... | 11          |
| 12.2   | Concentration of total humic acid (HA), fulvic acid (FA), hydrophilic organic carbon (Hy) and hydrophobic neutral organic carbon (HON) concentrations in aqueous samples .....             | 12          |
| <b>13</b>  | <b>Expression of results .....</b>   | <b>13</b>   |
| <b>14</b>  | <b>Test report .....</b>   | <b>13</b>   |
| <b>15</b>  | <b>Performance characteristics .....</b>   | <b>13</b>   |
| <b>Annex A (informative) Schematic representation of the fractionation procedure .....</b> |  | <b>14</b>   |
| <b>Annex B (informative) Validation of procedure .....</b>                                 |  | <b>16</b>   |

|  |           |
|--|-----------|
| <b>Annex C (informative) Conditions regarding centrifugation .....</b> | <b>21</b> |
| <b>Bibliography .....</b>  | <b>24</b> |