

# ISO 14855-1:2012-12 (E)

## Determination of the ultimate aerobic bio degradability of plastic materials under controlled composting conditions - Method by analysis of evolved carbon dioxide - Part 1: General method

---

<b>Contents</b>		<b>Page</b>
Foreword .....		iv
Introduction .....		v
<b>1</b>	<b>Scope .....</b>	<b>1</b>
<b>2</b>	<b>Normative references .....</b>	<b>1</b>
<b>3</b>	<b>Terms and definitions .....</b>	<b>1</b>
<b>4</b>	<b>Principle .....</b>	<b>2</b>
<b>5</b>	<b>Test environment .....</b>	<b>3</b>
<b>6</b>	<b>Reagents .....</b>	<b>3</b>
6.1	TLC (thin-layer chromatography) grade cellulose .....	3
6.2	Vermiculite .....	3
<b>7</b>	<b>Apparatus .....</b>	<b>4</b>
<b>8</b>	<b>Procedure .....</b>	<b>5</b>
8.1	Preparation of the inoculum .....	5
8.2	Preparation of test material and reference material .....	5
8.3	Start-up of the test .....	6
8.4	Incubation period .....	6
8.5	Termination of the test .....	7
8.6	Use of vermiculite .....	7
8.7	Recovery procedure and carbon balance when using vermiculite .....	8
<b>9</b>	<b>Calculation and expression of results .....</b>	<b>9</b>
9.1	Calculation of the theoretical amount of carbon dioxide .....	9
9.2	Calculation of the percentage biodegradation .....	9
9.3	Calculation of loss in mass .....	9
9.4	Expression of results .....	9
<b>10</b>	<b>Validity of results .....</b>	<b>10</b>
<b>11</b>	<b>Test report .....</b>	<b>10</b>
<b>Annex A (informative) Principle of test system .....</b>		<b>11</b>
<b>Annex B (informative) Examples of graphical representation of carbon dioxide evolution and biodegradation curves .....</b>		<b>12</b>
<b>Annex C (informative) Example of mass loss determination .....</b>		<b>14</b>
<b>Annex D (informative) Round-robin testing .....</b>		<b>16</b>
<b>Annex E (informative) Examples of forms .....</b>		<b>17</b>

**Bibliography ..... 20**