



Guide on Hot Water Bath Testing and Its Alternatives

Third Edition: September 2017

**© FEA 2017
*All Right Reserved***

FEA aisbl – Boulevard du Souverain 165 – 1160 Brussels – Belgium
Tel: + 32 (0)2 679 62 80 - Fax: + 32 (0)2 679 62 83 - info@aerosol.org - www.aerosol.org
V.A.T.: BE 0422.796.670



Disclaimer:

The information in these guidelines is given in good faith, but does not imply the acceptance of any legal liability or responsibility whatsoever by the FEA and the contributors for any inaccuracies and for the consequences of its use or misuse in any particular circumstances.



Contents



<u>1 INTRODUCTION</u>	<u>5</u>
<u>2 THE HOT WATER BATH TEST</u>	<u>7</u>
2.1. THE HOT WATER BATH TEST REGIME	7
2.1.1 THE TEST CONDITIONS	7
2.1.2 HEAT SENSITIVE AEROSOLS	8
2.1.3 AEROSOLS CONTAINING NON-FLAMMABLE COMPRESSED GAS PROPELLANTS	9
2.2. WATER BATH SAFETY	9
2.2.1 DESIGN OF THE WATER BATH	9
2.2.2 CONTROL OF WATER TEMPERATURE	9
2.2.3 BREAKDOWN PROCEDURES	10
2.2.4 REJECTED AEROSOLS	10
2.3. WASTE WATER	10
2.4. RECORD OF TESTING	11
<u>3 ‘ALTERNATIVE TEST METHODS’</u>	<u>12</u>
3.1. THE CRITERIA TO ESTABLISH AN ALTERNATIVE TEST METHOD BASED ON THE UN MODEL REGULATIONS	12
3.1.1 KEY ELEMENTS	13
3.1.2 REJECTED AEROSOLS	13
3.2. VERIFICATION OF AN ALTERNATIVE TEST METHOD	14
3.3. ‘ALTERNATIVES’ AND AEROSOL DISPENSERS DIRECTIVE	15
<u>4 EXEMPTIONS FROM WATER BATHING</u>	<u>16</u>
<u>5 ENFORCEMENT</u>	<u>17</u>
<u>ANNEX A EXTRACT FROM ADR</u>	<u>18</u>
<u>ANNEX B EXTRACT FROM THE ANNEX TO AEROSOL DISPENSERS DIRECTIVE 75/324/EEC</u>	<u>22</u>
<u>ANNEX C EXAMPLE FOR THE PRACTICAL IMPLEMENTATION OF AN ALTERNATIVE TO THE HOT WATER BATH TEST AS DEVELOPED BY FEA</u>	<u>24</u>
QUALITY ASSURANCE SYSTEM	24
TESTING OF AEROSOLS	25
THE DOSSIER OF EVIDENCE	26

