

Framework for testing performance for industrial and institutional laundry detergents

Version 22/06/2016

Content

0. Background

1. Laboratory test

- 1.1 Laboratory requirements to conduct the testing
- 1.2 Testing conditions
- 1.3 Reference product
- 1.4 Reporting information

2. User test

- 2.1 Selection of the test centers
- 2.2 Procedure, dosage and reference product
- 2.3 Method
- 2.4 Evaluation
- 2.5 Reporting information

Annex 1. Example

0. Background

This test protocol serves as a proof to show compliance with the criterion "fitness for use" of the Commission **Decision xxx/EC** establishing EU Ecolabel criteria for Industrial and Institutional Laundry detergents.

The test is for products that fall under the scope of the product group "industrial and institutional laundry detergents", this means laundry detergents designed to be used by specialised personnel in industrial and institutional facilities and multi-component systems constituted of more than one component used to build up a complete detergent or a laundering program for an automatic dosing system.

The performance test can be conducted through a laboratory test or a user test. In addition to the performance test, it is the responsibility of the applicant to ensure that the detergent is safe to use on the intended use. The conditions for both types of test are described in the following sections.

1. Laboratory test

The laboratory test may be conducted by an external or internal laboratory fulfilling the requirements in point 1.1. The test must be conducted with the recommended dosage and at the lowest recommended washing temperature for the corresponding water hardness and the degree of soiling.

1.1. Laboratory requirements to conduct the testing.

The manufacturer's test laboratory can be approved to conduct testing to document effectiveness of industrial and institutional laundry detergents if the following additional requirements are met:

- it must be possible for ecolabel organizations to monitor the performance of testing
- the ecolabel organisation must have access to all data on the product
- the samples must be made anonymous for the test laboratory
- performance of the effectiveness test must be described in the quality control system

1.2. Testing conditions

- The measurements must be performed on unlaundered and laundered test clothes. Evaluation of the test results shall be made by the laboratory and it shall be clearly stated in the report.
- The measurement of secondary effects such as bleaching effect, bleaching/damage factor, ash content, greying and fluidity increase can for instance be made with multi wash test clothes and analysed according to standard ISO 4312¹
- Examples of what may be used as wash test clothes are included in the following:
 - o WFK-PEMS-5S for industrial laundering processes, consisting of 13 different small dirt patches (WFK-cleaning technology research institute, Germany)
 - o EMPA 102 consisting of 15 different fresh spots (Swiss EMPA-Test materials)
 - o wash cloths of DTI (Danish technology institute) for industrial washing processes or equivalent

1.3. Reference product

The reference product may be a product on the market or a generic formulation approved by the competent body. The test product must show efficiency equal to or better than the reference product.

1.4. Reporting information

The applicant shall provide the following information

- type of stains that are representative for the kind of soiled expected for the purpose the products will be marketed
- information on the recommended dosage at the corresponding water hardness and the lowest recommended washing temperature at which the product claims to be effective
- the product's ability to remove soiling from the textiles and the effectiveness of other products the detergent shall be used with (e.g. stain removers, softeners)
- information about the reference product against which the test product has been tested: lowest recommended dosage or dosage used, temperature, date of purchase and date of testing
- documentation confirming the compliance within the laboratory requirements in point 1.1

2. User test

The user test must be conducted in at least 5 test centers randomly selected and must comply with the following points

2.1. Selection of the test centers

Responses must be obtained from at least 5 test centers representing a random selection of customers.

¹ ISO 4312:1989 Surface active agents - Evaluation of certain effects of laundering - Methods of analysis and test for unsoiled cotton control cloth

2.2. Procedure, dosage and reference product

- The procedure and dosage must conform to the manufacturer's recommendations.
- The test period must continue for at least 4 weeks.
- The test product must be tested against a reference product. The reference product may be the product normally used by the user.
- The test product must show efficiency equal to or better than the reference product

2.3. Method

Every test centre must assess the effectiveness of the product or multi-component system, dosability, rinsing and solubility by answering questions related to the following aspects (or similar formulations):

- ability to launder lightly, moderately or heavily soiled articles to be washed
- an assessment of primary laundering effects such as dirt removal, stain removal capacity and bleaching effect must be rated
- assessment of secondary laundering effects such as greying of white washing and colour-fastness and staining of coloured washing
- assessment of the effect of the rinsing agent on drying, ironing or mangling of the articles to be washed
- assessment of the serviceability such as dosing or solubility
- how satisfied the test subject is with customer visiting arrangements

2.4. Evaluation

The response must be rated on a scale comprising at least three levels, for example, 'insufficiently effective', 'sufficiently effective' or 'very effective'. With regard to how satisfied the test centre is with visit reporting arrangements, the categories must be 'not satisfied', 'satisfied' and 'very satisfied'.

At least 5 test centres must submit responses. At least 80 % must rate the product as sufficiently effective or very effective on all points (see 2.3) and be satisfied or very satisfied with customer visiting arrangements.

2.5. Reporting of the information

All raw data from the test must be specified.

The test procedure must be described in detail.

The applicant shall provide the following information:

- The way the test centers were selected
- All raw data from the tests and the test procedure
- All reply forms received from the test centers and the overall result on the washing performance of the user test specified in a table or a form. The response must be rated in accordance with point 2.4
- Information on how satisfied the test centre is with visit reporting arrangements and the categories rated

3.- Annex I

[Link to the excelsheet](#)