COMMISSION

COMMISSION DECISION

of 14 February 2003

establishing revised ecological criteria for the award of the Community eco-label to laundry detergents and amending Decision 1999/476/EC

(notified under document number C(2003) 143)

(Text with EEA relevance)

(2003/200/EC)

THE COMMISSION OF THE EUROPEAN COMMUNITIES,

Having regard to the Treaty establishing the European Community,

Having regard to Regulation (EC) No 1980/2000 of the European Parliament and of the Council of 17 July 2000 on a revised Community eco-label award scheme [1], and in particular the second subparagraph of Article 6(1) thereof,

Whereas:

(1) Under Regulation (EC) No 1980/2000 the Community eco-label may be awarded to a product possessing characteristics which enable it to contribute significantly to improvements in relation to key environmental aspects.

(2) Regulation (EC) No 1980/2000 provides that specific eco-label criteria are to be established according to product groups.

(3) It also provides that the review of the eco-label criteria, as well as of the assessment and verification requirements related to the criteria, is to take place in due time before the end of the period of validity of the criteria specified for each product group.

(4) It is appropriate to revise the ecological criteria that were established by Commission Decision 1999/476/EC of 10 June 1999 establishing ecological criteria for the award of the Community eco-label to laundry detergents [2] in order to reflect the developments in the market. At the same time, the period of validity of that Decision as extended by Decision 2002/172/EC [3] and the definition of the product group should be modified.

(5) A new Decision should be adopted establishing the specific ecological criteria for this product group, which will be valid for a period of five years.

(6) It is appropriate that, for a limited period of not more than 18 months, both the new criteria and the criteria established by Decision 1999/476/EC should be valid concurrently, in order to allow sufficient time for companies that have been awarded or that have applied for the award of the eco-label for their products prior to the date of application of this Decision to adapt those products to comply with the new criteria.

(7) The measures provided for in this Decision are based on the draft criteria developed by the European Union Eco-labelling Board established under Article 13 of Regulation (EC) No 1980/2000.

(8) The measures provided for in this Decision are in accordance with the opinion of the Committee instituted by Article 17 of Regulation (EC) No 1980/2000,

HAS ADOPTED THIS DECISION:

Article 1

In order to be awarded the Community eco-label under Regulation (EC) No 1980/2000, a laundry detergent must fall within the product group 'laundry detergents' as defined in Article 2, and must comply with the ecological criteria set out in the Annex to this Decision.

[1] OJ L 237, 21.9.2000, p. 1.
[2] OJ L 187, 20.7.1999, p. 52.
[3] OJ L 56, 27.2.2002, p. 32.

Article 2

The product group 'laundry detergents' shall comprise all laundry detergents, in powder, liquid or any other form, for the washing of textiles, and which are intended to be used principally in household machines, but not excluding the use in launderettes and common laundries.

Article 3

For administrative purposes the product group code number assigned to this product group shall be '6'.

Article 4

Article 3 of Decision 1999/476/EC is replaced by the following:

'*Article 3*

The product group definition and the specific ecological criteria for the product group shall be valid until 31 August 2004.'

Article 5

This Decision shall apply from 1 March 2003 until 29 February 2008.

Producers of products falling within the product group 'laundry detergents' which have already been awarded the eco-label before 1 March 2003 may continue to use that label until 31 August 2004.

Producers of products falling within the product group 'laundry detergents' which have already applied for the award of the eco-label before 1 March 2003 may be awarded the eco-label under the terms of Decision 1999/476/EC. In these cases the label may be used until 31 August 2004.

Article 6

This Decision is addressed to the Member States.

Done at Brussels, 14 February 2003.

For the Commission

Margot WALLSTRÖM

Member of the Commission

ANNEX

FRAMEWORK

The aims of the criteria

These criteria aim in particular at promoting:

— savings of transport and energy by favouring compact laundry detergents,

— reduction of water pollution by reducing the volume of total chemicals used in the products and by limiting the use of potentially hazardous ingredients,

— the minimisation of waste production by reducing the amount of primary packaging.

Additionally, the criteria enhance the consumers' environmental awareness. The criteria are set at levels that promote the labelling of laundry detergents that have a low environmental impact.

Assessment and verification requirements

The specific assessment and verification requirements are indicated within each criterion.

Where the applicant is required to provide declarations, documentation, analyses test reports, or other evidence to show compliance with the criteria, it is understood that these may originate from the applicant and/or his supplier(s) and/or their supplier(s), et cetera, as appropriate.

Where possible, the testing should be performed by laboratories that meet the general requirements of EN ISO 17025 or equivalent.

Where appropriate, test methods other than those indicated for each criterion may be used if the Competent Body assessing the application accepts their equivalence.

The concentration of ingredients in the product, which implies a requirement for documentation of compliance with the ecological criteria, is generally defined at ≥ 0,1 % by weight of the preparation. This concentration is defined at ≥ 0,01 % by weight of the preparation for the criterion on dangerous, hazardous or toxic substances or preparations.

Appendix IA. presents the detergent ingredient database (DID list) which contains the most widely used ingredients used in detergent formulations. It shall be used for deriving the data for the calculations of CDV_{tox} and for the assessment of the biodegradability of surfactants.

Where appropriate, the applicant may use subsequent revisions of the detergent ingredient database as they become available.

For ingredients which are not included in the DID list, the applicant shall, under his own responsibility, find the appropriate values for the relevant parameters by using the approach described in Appendix IB.

For ingredients, which are not listed in the DID list, the applicant may use an approach to provide the necessary documentation of anaerobic degradability described in Appendix IC.

Where appropriate, Competent Bodies may require supporting documentation and may carry out independent verifications.

The Competent Bodies are recommended to take into account the implementation of recognised environmental management schemes, such as EMAS or ISO 14001, when assessing applications and monitoring compliance with the criteria (*note*: it is not required to implement such management schemes).

Functional unit and reference dosage

The functional unit is expressed in g/wash (grams per wash). For heavy-duty detergents this is related to the dosage per 4,5 kg load (dry textiles) and for low-duty detergents to the dosage per 2,5 kg load (dry textiles) in the washing machine. The dosage recommended by the manufacturer to consumers for the water hardness of 2,5 mmol $CaCO_3$/l and 'normally soiled' textiles is taken as the reference dosage for the calculation of the ecological criteria, and the test of washing performance. If the water hardness of 2,5 mmol $CaCO_3$/l is not relevant in the Member States in which the detergent is marketed, the applicant shall specify the dosage used as the reference.

CRITERIA

1. **Total chemicals**

Total chemicals are the recommended dosage in g/wash minus the water content.

The amount of total chemicals shall not exceed 100 g/wash.

Assessment and verification: the exact formulation of the product shall be provided to the Competent Body, together with the details of the calculations showing compliance with this criterion.

2. **Insoluble inorganic ingredients**

The total amount of insoluble inorganic ingredients at the recommended dosage shall be less than 30 g/wash.

Assessment and verification: the exact formulation of the product shall be provided to the Competent Body, together with the details of the calculations showing compliance with this criterion.

3. **Toxicity to aquatic organisms**

The critical dilution volume toxicity (CDV_{tox}) is calculated for each ingredient (i) using the following equation:

$$CDV_{tox}\ (\text{ingredient i}) = \frac{\text{weight (i)} \cdot \text{LF (i)}}{\text{LTE (i)}} \cdot 1\,000$$

where weight (i) is the weight of the ingredient per recommended dose, LF is the loading factor and LTE is the long-term toxicity effect concentration of the ingredient.

The values of the LF and LTE parameters shall be as given in the detergent ingredient database list (DID list) in Appendix 1A. If the ingredient in question is not included in the DID list, the applicant shall estimate their values following the approach described in Appendix 1B. The CDV_{tox} is summed for each ingredient, making the CDV_{tox} for the product:

$$CDV_{tox} = \Sigma\ CDV_{tox(\text{ingredient})}$$

The CDV_{tox} of the recommended dosage shall not exceed 4 500 l/wash.

Assessment and verification: the exact formulation of the product shall be provided to the Competent Body, together with the details of the CDV_{tox} calculations showing compliance with this criterion.

4. **Phosphates**

The total amount of phosphates (as sodium tripolyphosphate-STPP) at the recommended dosage shall not exceed 25 g/wash.

Assessment and verification: the exact formulation of the product shall be provided to the Competent Body, together with the details of the calculations showing compliance with this criterion.

5. **Biodegradability of surfactants**

(a) Ready biodegradability (aerobic)

Each surfactant used in the product shall be readily biodegradable.

Assessment and verification: the exact formulation of the product shall be provided to the Competent Body. The DID list (see Appendix IA) indicates whether a specific surfactant is aerobically biodegradable or not (i.e. those that have an entry of 'Y' in the column on aerobic non-biodegradability shall not be used). For surfactants which are not included in the DID list, the relevant information from literature or other sources, or appropriate test results, showing that they are aerobically biodegradable shall be provided. The tests for ready biodegradability shall be as referred to in Council Directive 67/548/EEC of 27 June 1967 on the approximation of laws, regulations and administrative provisions relating to the classification, packaging and labelling of dangerous substances [1], and its subsequent amendments, in particular the methods detailed in Annex V.C4, or their equivalent OECD 301 A-F test methods, or their equivalent ISO tests. The 10 days window principle shall not apply. The pass levels shall be 70 % for the tests referred to in Annex V.C4(A) and C4(B) of Directive 67/548/EEC (and their equivalent OECD 301 A and E tests and ISO equivalents), and shall be 60 % for tests C4-C, D, E and F (and their equivalent OECD 301 B, C, D and F tests and ISO equivalents).

[1] OJ L 196, 16.8.1967, p. 1.

(b) Anaerobic biodegradability

Each surfactant used in the product shall be anaerobically biodegradable.

Assessment and verification: the exact formulation of the product shall be provided. The DID list (see Appendix IA) indicates whether a specific surfactant is anaerobically biodegradable or not (i.e. those that have an entry of 'Y' in the column on anaerobic biodegradability shall not be used). For surfactants which are not included in the DID list, the relevant information from literature or other sources, or appropriate test results, showing that they are anaerobically biodegradable shall be provided. The reference test for anaerobic degradability shall be ISO 11734, ECETOC No 28 (June 1988) or an equivalent test method, with the requirement of 60 % ultimate degradability under anaerobic conditions. Test methods simulating the conditions in a relevant anaerobic environment may also be used to document that 60 % ultimate degradability has been attained under anaerobic conditions (see Appendix IC).

6. **Dangerous, hazardous or toxic substances or preparations**

(a) The following ingredients shall not be included in the product, either as part of the formulation or as part of any preparation included in the formulation:

- alkyl phenol ethoxylates (APEOs) and derivatives thereof,
- nitromusks and polycyclic musks, including for example:
  - musk xylene: 5-tert-butyl-2,4,6-trinitro-m-xylene,
  - musk ambrette: 4-tert–butyl-3-methoxy-2,6-dinitrotoluene,
  - moskene: 1,1,3,3,5-pentamethyl-4,6-dinitroindan,
  - musk tibetine: 1-tert-butyl-3,4,5-trimethyl-2,6-dinitrobenzene,
  - musk ketone: 4'-tert-butyl-2',6'-dimethyl-3',5'-dinitroacetaphenone,
  - HHCB:1,3,4,6,7,8-hexahydro-4,6,6,7,8,8,-hexamethylcyclopenta(g)-2- benzopyran,
  - AHTN: 6-acetyl-1,1,2,4,4,7-hexamethyltetralin,
- EDTA (ethylenediamine tetraacetate),
- NTA (nitrilotriacetate).

Assessment and verification: the applicant shall provide a declaration that the listed substances have not been included in the product.

(b) Quaternary ammonium salts that are not readily biodegradable shall not be used.

Assessment and verification: the applicant shall provide the exact formulation of the product, together with documentation showing the biodegradability of any quaternary ammonium salts used, and a declaration of compliance with this requirement.

(c) The total amount of phosphonates that are not readily biodegradable (aerobically) shall not exceed 0,5 g/wash at the recommended dosage.

Assessment and verification: the applicant shall provide the exact formulation of the product, together with documentation showing the biodegradability of any phosphonates used, and a declaration of compliance with this requirement.

(d) No ingredient shall be included in the product that is classified or may be classified as:

- R40 (limited evidence of a carcinogenic effect),
- R45 (may cause cancer),
- R46 (may cause heritable genetic damage),
- R49 (may cause cancer by inhalation),
- R50-53 (very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment),
- R51-53 (toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment),
- R59 (dangerous to the ozone layer),
- R60 (may impair fertility),
- R61 (may cause harm to the unborn child),
- R62 (possible risk of impaired fertility),
- R63 (possible risk of harm to the unborn child),
- R64 (may cause harm to breastfed babies),
- R68 (possible risks of irreversible effects),

or any combination thereof, according to Directive 67/548/EEC and its subsequent amendments, or according to Directive 1999/45/EC of the European Parliament and of the Council of 31 May 1999 concerning the approximation of the laws, regulations and administrative provisions of the Member States relating to the classification, packaging and labelling of dangerous preparations [1], and its subsequent amendments.

Each substance or ingredient of any preparation used in the formulation that exceeds 0,01 % of the final product shall also meet the above requirements.

No preservatives shall be used that are or may be classified as R50-53, whatever their amount.

Assessment and verification: the exact formulation of the product shall be provided to the Competent Body. Copies of the material safety data sheets shall be provided for all ingredients (whether substances or preparations). A declaration of compliance with this criterion shall be provided by the applicant.

(e) The product shall not be classified as R43 (may cause sensitisation by skin contact) according to Directive 1999/45/EC of the European Parliament and of the Council of 31 May 1999 concerning the approximation of the laws, regulations and administrative provisions of the Member States relating to the classification, packaging and labelling of dangerous preparations.

Assessment and verification: the exact formulation of the product shall be provided to the Competent Body, together with copies of the material safety data sheets of each ingredient which shall indicate the relevant classification or lack thereof of each ingredient, and also a declaration of compliance with this criterion.

(f) Any ingredients added to the product as a fragrance shall have been manufactured and/or handled following the code of practice of the International Fragrance Association.

Assessment and verification: a declaration of compliance shall be provided.

7. **Purity of enzymes**

The enzyme production micro-organism shall be absent from the final enzyme preparation.

Assessment and verification: a test report or certificate from the enzyme producer shall be provided to the Competent Body.

8. **Packaging requirements**

(a) If refills are not provided, the weight of the total primary packaging shall not exceed 3,7 g per wash for tablets and 1,7 g per wash for all other products.

(b) If refills are provided the weight of total primary packaging shall not exceed 7 g per wash and the manufacturer shall provide refills. The weight of refill packaging shall not exceed 1,7 g per wash.

(c) The cardboard packaging shall consist of ≥ 80 % recycled material.

(d) Plastic primary packaging shall be labelled according to ISO 1043.

Assessment and verification: the applicant shall supply a sample of the packaging, together with a declaration indicating compliance with each part of this criterion. A calculation of the weight of primary packaging and a declaration regarding the percentage of recycled material shall be provided to the Competent Body. Primary packaging is as defined in the Directive 94/62/EC of the European Parliament and of the Council of 20 December 1994 on packaging and packaging waste [2].

9. **Washing performance**

The product shall be compared in its washing performance with reference detergents of the same type according to the EU eco-detergents performance test 'Award of the EU eco-label to laundry detergents: performance test of household detergents' (version 4 December 2002 and its subsequent amendments).

Assessment and verification: the applicant shall provide a test report indicating that the product fulfils the minimum requirements defined in this test.

[1] OJ L 200, 30.7.1999, p. 1.
[2] OJ L 365, 31.12.1994, p. 10.

10. **Consumer information**

(a) Information on the packaging

The following text (or equivalent) shall appear on or in all eco-labelled products within the product group:

'ENVIRONMENTALLY SOUND WASHING MEANS:

— pre-sort laundry (for example, by colour, degree of soiling, type of fibre),

— wash with full load,

— avoid using too much detergent, follow dosage instructions,

— choose low-temperature washing cycles.

Using this eco-labelled product and following these instructions will contribute to the reduction of water pollution, waste production and energy consumption. For more information visit the EU eco-label website: http://europa.eu.int/ecolabel.'

More information on the detergent shall be made available on request. For this purpose, a sentence shall appear on the packaging saying that if the consumer wants to know more about the detergent, he or she should contact the consumer department of the company or the retailer.

(b) Dosage instructions

If the number of CPU (clearing performance units) in the washing performance test is higher than 24 the following text (or equivalent) shall be enclosed: 'Difficult stains need special treatment before washing'.

Dosage recommendations shall appear on the product packaging, together with a recommendation to the consumer to contact his water supplier or local authority in order to find out the degree of hardness of his tap water.

The recommended dosages shall be specified for 'normally' and 'heavily' soiled textiles and the various water hardness ranges relevant for the countries concerned and referred as appropriate to the weight of textile. If dosage instructions are given by way of dosage device, the volume of the device (in ml) should also appear clearly on the packaging.

In order to encourage the consumer to avoid using too much detergent and to follow the dosage instruction, a dosage device (cup) showing a scale of at least 10 ml steps shall be available on request if it is not included in the packaging.

The washing efficiency shall be indicated and relate to 'normally soiled' and the various water hardness ranges considered.

The dosage recommendations between water hardness range 1 (soft), 'normally soiled' and the highest water hardness range (3 or 4), 'heavily soiled' may not differ by more than a factor of 2.

The reference dosage used for the washing performance test and for assessment of compliance with the ecological criteria on ingredients shall be the same as the recommended dosage for 'normally soiled' and the water hardness corresponding to 2,5 mmol $CaCO_3$/l in the Member State in which the test has been performed.

If only water hardness lower than 2,5 mmol $CaCO_3$/l are included in the recommendations, the maximum dosage recommended for 'normally soiled' shall be lower than the reference dosage mentioned in the previous paragraph.

(c) Information and labelling of ingredients

Commission recommendation 89/542/EEC of 13 September 1989 concerning the labelling of detergents and cleaning agents [1] shall be applied.

The following groups of ingredients shall be labelled independently from their mass content:

— enzymes: indication of the type of enzymes (e.g. protease, lipase);

— preservation agents: characterisation and labelling according to IUPAC nomenclature;

— disinfectants: characterisation and labelling according to IUPAC nomenclature.

If the product contains perfumes, it shall be indicated on the packaging.

Assessment and verification: a sample of product packaging shall be provided to the Competent Body, together with a declaration of compliance with each part of this criterion.

[1] OJ L 291, 10.10.1989, p. 55.

11. **Information appearing on the eco-label**

Box 2 of the eco-label shall contain the following text:

'* Helps reduce water pollution

* Helps reduce resource consumption'.

Assessment and verification: the applicant shall provide a sample of the product packages showing the label, together with a declaration of compliance with this criterion.

Appendix I.A

DID-LIST

Detergents ingredients database and approach to be followed for ingredients not listed in the database

A. ***The data given below on the most commonly used detergent ingredients shall be used for the calculation of the ecological criteria***

Note: the parameters a NBO, SI II, THOD as well as the CF-factors for an NBO are not used within this product group)

Detergent ingredients database (DID-list; version 29.9.98)

DID No	Ingredients	Toxicity		Loading factor (LF)	Anaerobic non-biodegradable (a NBO)	Aerobic non-biodegradable (a NBO)	Soluble inorganics (SI)	Insoluble inorganics (II)	THOD
		NOEC measured	LTE						
	Anionic surfactants								
1	C 10-13 LAS (Na ø 11.5-11.8, C14 < 1 %)	0,3	0,3	0,05	Y, CF = 0,75	O	O	O	2,3
2	other LAS (C14 > 1 %)	0,12	0,12	0,05	Y, CF = 1,5	O	O	O	2,3
3	C 14/17 Alk. Sulfonate	0,27	0,27	0,03	Y, CF = 0,75	O	O	O	2,5
4	C 8/10 Alkylsulfate	EC50 = 2,9	0,15	0,02	O	O	O	O	1,9
5	C 12-15 AS	0,1	0,1	0,02	O	O	O	O	2,2
6	C 12-18 AS	LC50 = 3	0,15	0,02	O	O	O	O	2,3
7	C 16/18 FAS	0,55	0,55	0,02	O	O	O	O	2,5
8	C 12-15 A 1-3 EO sulphate	0,15	0,15	0,03	O	O	O	O	2,1
9	C 16/18 A 3-4 EO sulphate	no valid data	0,1	0,03	O	O	O	O	2,2
10	C8–Dialkylsulfosuccinate	LC50 = 7,5	0,4	0,5	Y, CF = 1,5	O	O	O	2
11	C 12/14 sulpho-fat.-acid methylester	EC50 = 5	0,25	0,05	Y, CF = 0,75	O	O	O	2,1
12	C 16/18 sulpho-fat.-acid methylester	0,15	0,15	0,05	Y, CF = 0,75	O	O	O	2,3
13	C 14/16 alpha olefine sulphonate	LC50 = 2,5	0,13	0,05	Y, CF = 0,75	O	O	O	2,3
14	C 14-18 alpha olefine sulphonate	LC50 = 1,4	0,07	0,05	Y, CF = 2,0	O	O	O	2,4
15	SOAPS (C12 — 22)	EC0 = 1,6	1,6	0,05	O	O	O	O	2,9
	Nonionic surfactants								
16	C 9/11 A > 3-6 EO lin. or mono br.	EC50 = 3,3	0,7	0,03	O	O	O	O	2,4
17	C 9/11 A > 6-9 EO lin. or mono br.	EC50 = 5,4	1,1	0,03	O	O	O	O	2,2

DID No	Ingredients	Toxicity		Loading factor (LF)	Anaerobic non-biodegradable (a NBO)	Aerobic non-biodegradable (a NBO)	Soluble inorganics (SI)	Insoluble inorganics (II)	THOD
		NOEC measured	LTE						
18	C 12-15 A 2-6 EO lin. or mono br.	0,18	0,18	0,03	O	O	O	O	2,5
19	C 12-15 (Avg. C < 14) A > 6-9 EO lin. or mono br.	0,24	0,24	0,03	O	O	O	O	2,3
20	C 12-15 (Avg. C > 14) A > 6-9 EO	0,17	0,17	0,03	O	O	O	O	2,3
21	C 12-15 A > 9-12 EO	LC50 = 0,8	0,3	0,03	O	O	O	O	2,2
22	C 12-15 A 20-30 EO	EC50 = 13	0,65	0,05	O	O	O	O	2
23	C 12-15 A > 30 EO	LC50 = 130	6,5	0,75	O	Y	O	O	0 (*)
24	C 12/18 A 0-3 EO	no data	0,01	0,03	O	O	O	O	2,9
25	C 12-18 A 9 EO	0,2	0,2	0,03	O	O	O	O	2,4
26	C 16/18 A 2-6 EO	0,03	0,03	0,03	O	O	O	O	2,6
27	C 16/18 A > 9-12 EO	LC50 = 0,5	0,05	0,03	O	O	O	O	2,3
28	C 16/18 A 20-30 EO	EC50 = 18	0,36	0,05	O	O	O	O	2,1
29	C 16/18 A > 30 EO	LC50 = 50	2,5	0,75	O	Y	O	O	0 (*)
30	C 12/14 Glucose Amide	4,3	4,3	0,03	O	O	O	O	2,2
31	C 16/18 Glucose Amide	0,116	0,116	0,03	O	O	O	O	2,5
32	C 12/14 Alkylpolyglucoside	1	1	0,03	O	O	O	O	2,3
	Amphoteric surfactants								
33	C 12-15 Alkyl dimethylbetaine	0,03	0,03	0,05	Y, CF = 2,5	O	O	O	2,9
34	C12-18 Alkyl amidopropylbetaine	0,03	0,03	0,05	Y, CF = 2,5	O	O	O	2,8
	Sud controllers								
35	Silicone	EC0 = 241	4,82	0,4	Y, CF = 0,75	Y	O	O	0,0
36	Paraffin	no data	100	0,4	O	Y	O	O	0 (*)
	Fabric softening								
37	Glycerol	LC50 > 5-10 gl	1 000	0,13	O	O	O	O	1,2
	Builders								
38	Phosphate as Sodium-tri-polyphosphate (STPP)		1 000	0,6	O	O	Y	O	0,0
39	Zeolite A	120	120	0,05	O	O	O	Y	0,0
40	Citrate	EC50 = 85	85	0,07	O	O	O	O	0,6
41	Polycarboxylates and related derivates	124	124	0,4	Y, CF = 0,1	Y	O	O	0 (*)
42	Clay		1 000	0,05	O	O	O	Y	0,0
43	Carbonate/bicarbonate	LC50 = 250	250	0,8	O	O	Y	O	0,0
44	Fatty acid (C ≥ 14)	EC0 = 1,6	1,6	0,05	O	O	O	O	2,9

DID No	Ingredients	Toxicity		Loading factor (LF)	Anaerobic non-biodegradable (a NBO)	Aerobic non-biodegradable (a NBO)	Soluble inorganics (SI)	Insoluble inorganics (II)	THOD
		NOEC measured	LTE						
45	Silicate/disilicate	EC50 > 1 000	1 000	0,8	O	O	Y	O	0,0
46	NTA	19	19	0,13	O	O	O	O	0,6
47	Polyaspartic acid. Na salt	125	12,5	0,13	Y, CF = 0,1	O	O	O	1,2
	Bleaching								
48	Perborate mono (as borate)	1-10	6	1	O	O	Y	O	0,0
49	Perborate tetra (as borate)	1-10	6	1	O	O	Y	O	0,0
50	Percarbonate (see carbonate)	LC50 = 250	250	0,8	O	O	Y	O	0,0
51	TAED	EC0 = 500	EC0 = 500	0,13	O	O	O	O	2,0
	Solvents								
52	C 1- C 4 alcohols	LC50 = 8 000	100	0,13	O	O	O	O	2,3
53	Monoethanolamine	0,78	0,78	0,13	O	O	O	O	2,4
54	Diethanolamine	0,78	0,78	0,13	O	O	O	O	2,3
55	Triethanolamine	0,78	0,78	0,13	O	O	O	O	2
	Miscellaneous								
56	Polyvinylpyrrolidon (PVP/PVNO/PVPVI)	EC50 > 100	100	0,75	Y, CF = 0,1	Y	O	O	0 (*)
57	Phosphonates	7,4	7	0,4	Y, CF = 0,5	Y	O	O	0 (*)
58	EDTA	LOEC = 11	11	1	Y, CF = 0,1	Y	O	O	0 (*)
59	CMC	LC50 > 250	250	0,75	Y, CF = 0,1	Y	O	O	0 (*)
60	Na Sulphate	EC50 = 2 460	1 000	1	O	O	Y	O	0,0
61	Mg Sulphate	EC50 = 788	800	1	O	O	Y	O	0,0
62	Na Chloride	EC50 = 650	650	1	O	O	Y	O	0,0
63	Urea	LC50 > 10 000	100	0,13	O	O	O	O	2,1
64	Maleic acid	LC50 = 106	2,1	0,13	O	O	O	O	0,8
65	Malic acid	LC50 = 106	2,1	0,13	O	O	O	O	0,6
66	Ca formiate		100	0,13	O	O	O	O	2,0
67	Silica		100	0,05	O	O	O	Y	0,0
68	High MW polymers PEG > 4000		100	0,4	O	Y	O	O	0 (*)

DID No	Ingredients	Toxicity		Loading factor (LF)	Anaerobic non-biodegradable (a NBO)	Aerobic non-biodegradable (a NBO)	Soluble inorganics (SI)	Insoluble inorganics (II)	THOD
		NOEC measured	LTE						
69	Low MW polymers PEG < 4000		100	0,13	O	O	O	O	1,1
70	Cumene Sulfonate	LC50 = 66	6,6	0,13	Y, CF = 0,25	O	O	O	1,7
71	Xylene Sulfonate	LC50 = 66	6,6	0,13	Y, CF = 0,25	O	O	O	1,6
72	Toluene Sulfonates	LC50 = 66	6,6	0,13	Y, CF = 0,25	O	O	O	1,4
73	Na-/Mg-/KOH		100	1	O	O	Y	O	0,0
74	Enzymes	LC50 = 25	25	0,13	O	O	O	O	2,0
75	Perfume formulation as used	LC50 = 2-10	0,02	0,1	Y, CF = 3,0	Y	O	O	0 (*)
76	Dyes	LC50 = 10	0,1	0,4	Y, CF = 3,0	Y	O	O	0 (*)
77	Starch	no data	250	0,1	O	O	O	O	0,97
78	Zn Phthalocyanine Sulfonate	0,16	0,016	0,07 (**)	Y, CF = 2,5	Y	O	O	0 (*)
79	Anionic Polyester (Soil release polymer)	EC50 = 310	310	0,4	Y, CF = 0,1	Y	O	O	0 (*)
80	Iminodisuccinate	23	2,3	0,13	Y, CF = 0,25	O	O	O	1,1
	Optical brighteners = FWA								
81	FWA 1 ([1])	LC0 = 10	1,0	0,4	Y,CF = 1,5	Y	O	O	0 (*)
82	FWA 5 ([2])	3,13	3,13	0,4	Y, CF = 0.5	Y	O	O	0 (*)
	Additional ingredients								
83	Alkyl Aminoxides (C12-18)	0,08	0,08	0,05	Y, CF = 2,5	O	O	O	3,2
84	Glycereth (6-17EO) cocoate	EC50 = 32	1,6	0,05	O	O	O	O	2,1
85	Phosphate esters (C12-18)	EC50 = 38	1,9	0,05	Y, CF = 0,25	O	O	O	2,3

([1]) FWA 1 = Disodium 4.4-bis (4-anilino-5-morpholino-1,3,5-triazin-2-yl)amino stilbene-2.2-disulfonate.
([2]) FWA 5 = Disodium 4.4-bis(2-sulfostryryl)biphenyl.
(*) THOD for aerobically non degradable organic substances is set to zero.
(**) rapid photodegradation.

Notes:

Y = yes, criterion applies.
O = no, criterion does not apply.
LTE = long term effect concentration.
NOEC = non observed effect concentration.
CF = correction factor for anaerobic non degradable organic substances.
THOD = theoretical oxygen demand.

Appendix I.B

The following approach applies, as appropriate in the case of ingredients that are not listed on the DID list

Aquatic toxicity

The lowest validated long-term effect (LTE) data on fish, *daphnia magna* or algae should be considered for the calculation of the critical dilution volume criterion (toxicity).

In cases where data on homologues and/or QSARs (quantitative structure activity relationships) are used, a correction could be considered for the finally selected LTE data.

In the absence of LTE data the following procedure has to be applied in order to estimate the LTE data by using the specified uncertainty factor (UF) on the data of the most sensitive species:

Non surfactants

DATA AVAILABLE	UF TO BE USED
At least 2 acute LC_{50} on fish or *daphnia* or algae	100
1 NOEC on fish or *daphnia* or algae	10
2 NOEC on fish or *daphnia* or algae	5
3 NOEC on fish, *daphnia* or algae	1 Take lowest validated NOEC

Deviation from this rule may be admitted if evidence can be provided that lower factors or data can be scientifically justified. NOEC is the no observed effect concentration (in a chronic toxicity test).

Surfactants

DATA AVAILABLE	UF TO BE USED
At least 2 NOECs on fish or *daphnia* or algae	1 (lowest NOEC)
1 NOEC on fish or *daphnia* or algae	1 (NOEC, if species is most sensitive in acute toxicity) 10 (NOEC, if species is not the most sensitive in acute toxicity)
3 LC_{50} on fish or *daphnia* or algae	20 (lowest LC_{50})
At least 1 LC_{50} on fish, *daphnia* or algae	50 (lowest LC_{50}) or 20 in specific cases (see below)

In the last case referred to above, an uncertainty factor of 20 may be used instead of 50 only if 1-2 L(E)C_{50} (LC_{50} in case of fish toxicity, EC_{50} in case of *daphnia* or algal toxicity) data are available and if it can be concluded from the information for other compounds that the most sensitive species have been tested. Such a rule can be applied only within a group of homologues. It should be emphasised that the LTEs (long-term effects) used must be consistent within a group of homologues with respect to the influence of, for example, length of alkyl chain for LAS (linear alkylbenzene sulphonate) or number of EOs (ethoxy groups) for alcohol-ethoxylate if such QSARs can be established.

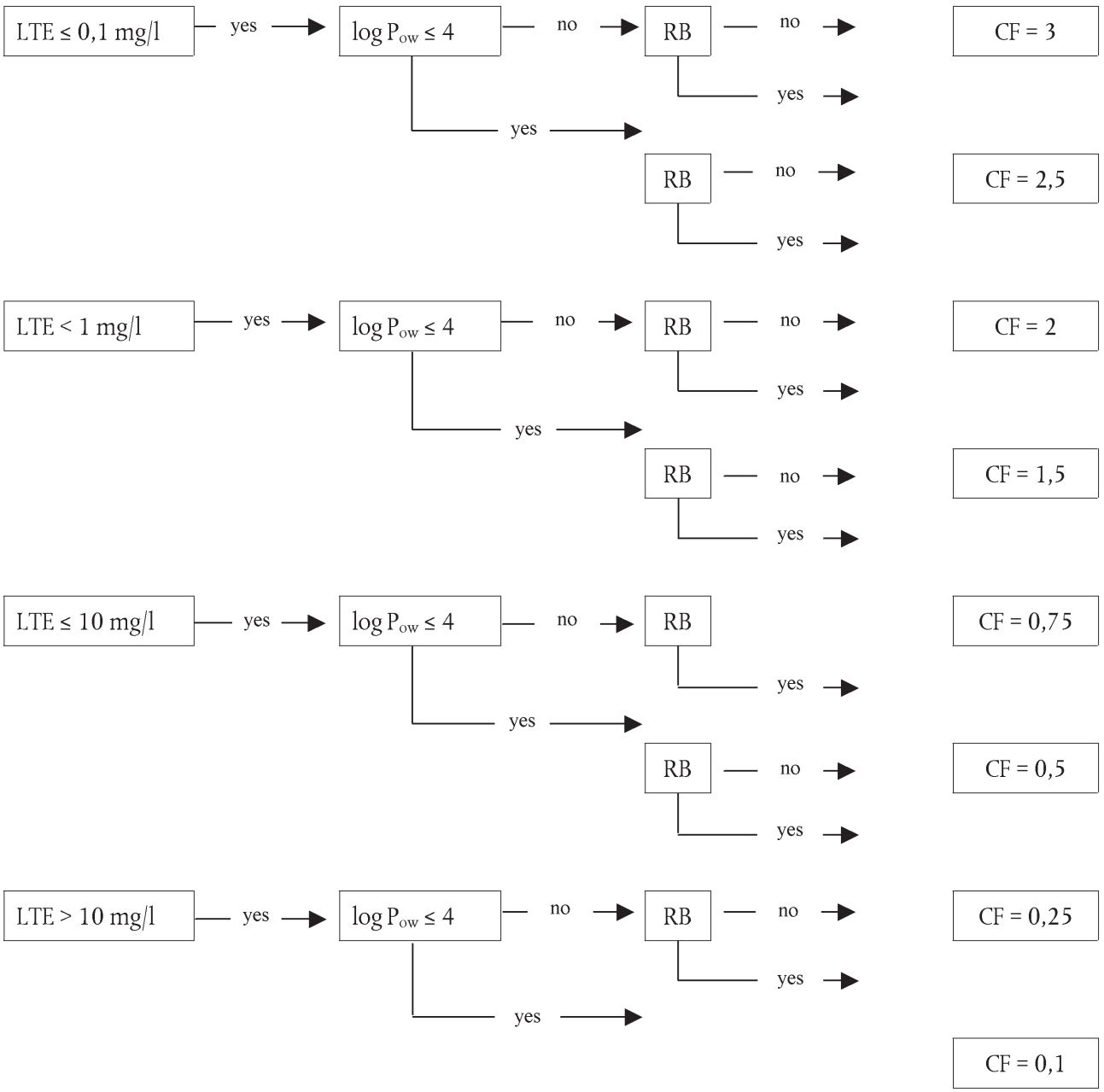
Any deviation from the described scheme has to be well reasoned for the specific chemical.

Loading factors

Loading factors shall be established according to Commission Directive 93/67/EEC of 20 July 1993 laying down the principles for assessment of risk to man and the environment of substances [1] notified in accordance with Council Directive 67/548/EEC and to Council Regulation (EEC) No 793/93 [2].

[1] OJ L 227, 8.9.1993, p. 9.
[2] OJ L 84, 5.4.1993, p. 1.

Non-biodegradable organics (anaerobic): flow diagram to define correction factors (CF) [1]



RB: ready aerobic biodegradability

LTE: long-term effect

CF: correction factor

[1] The correction factors are to be established on the basis of the ingredient properties and applied to the dosage expressed in g/wash.

Appendix I.C

Documentation of anaerobic biodegradability

The following approach may be used to provide the necessary documentation of anaerobic degradability in the case of ingredients that are not listed in the DID list.

1. Apply reasonable extrapolation. Use test results obtained with one raw material to extrapolate the ultimate anaerobic degradability of structurally related surfactants. If anaerobic biodegradability has been confirmed for a surfactant (or a group of homologues) according to the DID list, it can be assumed that a similar type of surfactant is also anaerobically biodegradable (for example, C12-15 A 1-3 EO sulphate (DID No 8) is anaerobically biodegradable, and a similar anaerobic biodegradability may also be assumed for C12-15 A 6 EO sulphate). If anaerobic biodegradability has been confirmed for a surfactant by use of an appropriate test method, it can be assumed that a similar type of surfactant is also anaerobically biodegradable (for example, literature data confirming the anaerobic biodegradability of surfactants belonging to the group alkyl ester ammonium salts may be used as documentation for a similar anaerobic biodegradability of other quaternary ammonium salts containing ester-linkages in the alkyl chain(s)).
2. Perform screening test for anaerobic degradability. If new testing is necessary, perform a screening test by use of ISO 11734, ECETOC No 28 (June 1988) or an equivalent method.
3. Perform low-dosage degradability test. If new testing is necessary, and in the case of experimental problems in the screening test (for example, inhibition due to toxicity of test substance), repeat testing by using a low dosage of surfactant and monitor degradation by 14C measurements or chemical analyses. Testing at low dosages may be performed by use of OECD 308 (August 2000) or an equivalent method.