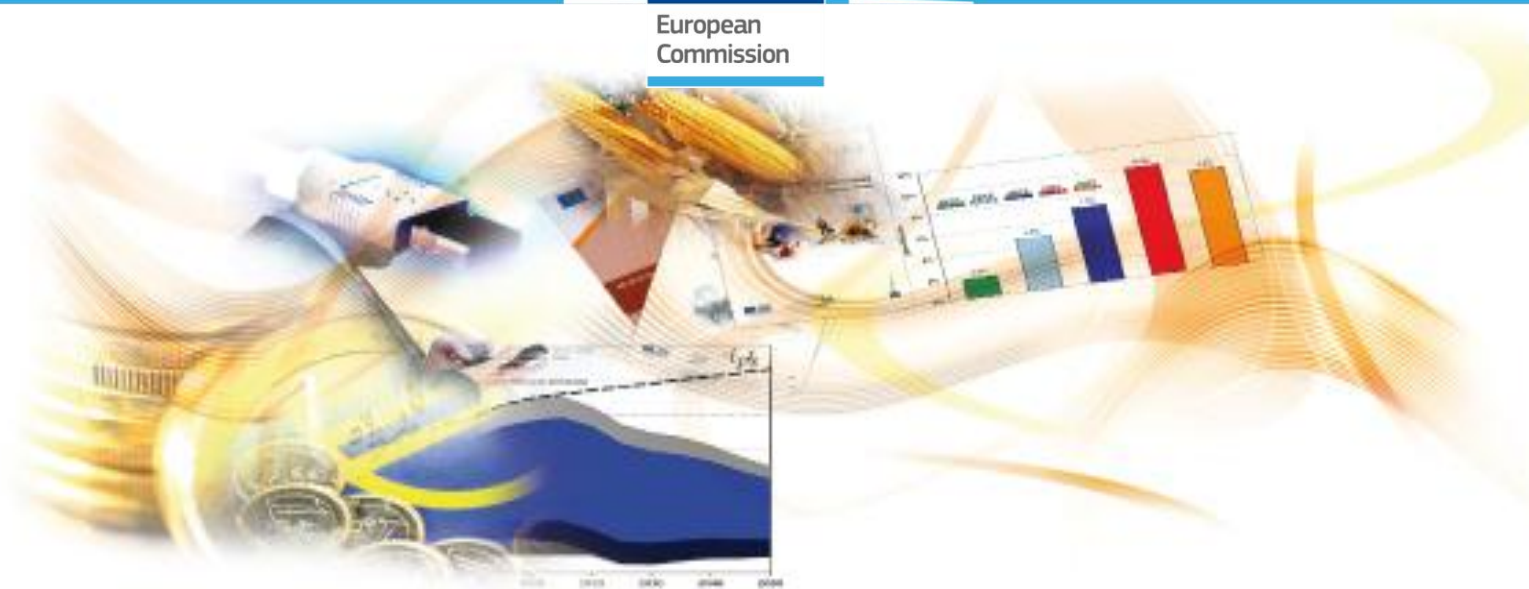




European
Commission



J R C T E C H N I C A L R E P O R T S

Revision of European Ecolabel Criteria for laundry detergents

Technical report and draft criteria proposal (TASK 5)
For the 1st AHWG meeting
(Draft)

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1 INTRODUCTION

The following Technical Report presents a proposal of revised EU Ecolabel criteria for the product group of "laundry detergents" (LD). The study has been carried out by the Joint Research Centre's Institute for Prospective Technological Studies (JRC-IPTS) with technical support from Oakdene Hollins and PRé Consultants. The work is being developed for the European Commission's Directorate General for the Environment.

The recommendations for the revision of the current criteria are based on technical analysis, including a Life Cycle Assessment (LCA) assessing the environmental impacts of products covered by the scope of the product group and other scientific sources, and input received from stakeholders.

This document is complemented by the Preliminary Report¹ on the revision of the European Ecolabel criteria for laundry detergents: domestic and industrial and institutional and a Technical Annexe. The Preliminary Report covers in detail areas such as: scope and legislative analysis (Task 1), market analysis (Task 2), technical analysis (Task 3) and improvement potential (Task 4). The Technical Annexe is common to all detergent product groups as they share common issues and the revisions of their EU Ecolabel criteria are being done at the same time in order to facilitate harmonisation between criteria, where appropriate.

In all, there are six sets of EU Ecolabel criteria in the detergent product groups. These are:

- laundry detergents (LD),
- industrial and institutional laundry detergents (IILD),
- detergents for dishwashers (DD),
- industrial and institutional automatic dishwasher detergents (IIDD),
- hand dishwashing detergents (HDD),
- all-purpose cleaners and sanitary cleaners (APC).

The present document is specific to the set of criteria related to the EU Ecolabel for laundry detergents. Its main purpose is to summarise the proposed criteria changes as well as provide a brief overview of background information related to each criterion and the rationale behind the proposal. Where these are common for different EU Ecolabel product groups and/or are due to harmonisation efforts, reference is made to a section of the Technical Annexe. Both documents, as well as the Preliminary Report, should be consulted to gain a full understanding of this revision process.

It should be noted that the EU Ecolabel criteria for industrial and institutional laundry detergents (IILDD) are being revised in parallel. Due to the similarities in criteria, chemical constituents of the products involved and the overlap of stakeholders, a common Preliminary Report has been written. However, a separate Technical Report has been produced for each EU Ecolabel under revision. Nevertheless, as harmonisation of criteria across product groups is within the scope of this work, the rationale and commentary of the Technical Reports frequently compares and contrasts current criteria corresponding to the other detergent products being revised.

A revision of the criteria must ensure that, based on impacts of the products covered by the EU Ecolabel for "laundry detergents" at all life-cycle stages:

- The existing criteria are still relevant and that appropriately challenging targets, thresholds or usage information are established based on the latest knowledge of market norms, user behaviours, life-cycle impacts and hazards.
- Any new candidates for criteria suggested by either the LCA or the stakeholder survey are adequately considered and evaluation criteria justified.
- Opportunities to rationalise criteria, i.e. remove, simplify and combine (within the group) or harmonise (between product groups), are examined and justified.

¹ <http://susproc.jrc.ec.europa.eu/detergents/stakeholders.html>

The main criteria changes proposed in this report are as follows:

- A change of the name of the EU Ecolabel to "consumer laundry detergents" in order to bring harmonization among the terms used in the definitions included in the revised EU Ecolabel criteria for detergent product groups and those included in relevant regulations.
- An update of several criteria with revised values and new values for categories of products that are not covered in the current criteria.

2 PRELIMINARY REPORT – SUMMARY AND LINKS TO THE EU ECOLABEL CRITERIA REVISION AND DEVELOPMENT

The Preliminary Report presents the research carried out, through stakeholder surveys, market analysis, legal review and an environmental performance investigation, on areas related to the product groups covered by the EU Ecolabel on laundry detergents. The preliminary report is a document that provides the background information and underpins the new criteria proposal for two product groups: laundry detergents and industrial and institutional laundry detergents, due to their multiple overlaps.

The main findings of the Preliminary Report are:

-The *legal review* revealed that the 2012 Revision to the EU Detergents Regulation (EU/259/2012)² will impact on the consumer laundry detergents on the market. The revision limits the use of phosphates and phosphorus compounds and lays down requirements for dosage information. The revision of the EU Ecolabel criteria shall take into account these changes to the Detergents Regulation.

-The *market analysis* revealed that the laundry detergent market in Europe is dominated by a few well-known brands, including Procter & Gamble, Henkel and Unilever. Laundry detergents are available in a range of formats, but liquid laundry detergents account for the largest market share in Europe, closely followed by powder laundry detergents. Market trends show that sustainability is of growing importance to consumers of laundry detergents, with an increase in concentrated/compact products, use of plant-based ingredients and minimisation of packaging.

-The *technical analysis* revealed that the key environmental impacts associated with the product group can be summarised as follows:

- The life cycle stage with the largest contribution to the environmental impact profile of laundry detergents is the use phase, particularly the energy needed to heat the water for the wash cycle. For some impact categories, the sourcing of raw materials is also important.
- Based on the normalisation assessment, the most significant impact categories for laundry detergents in Europe are Freshwater Eutrophication, Human Toxicity, Freshwater Ecotoxicity, Marine Ecotoxicity, and Natural Land Transformation.

The results of the LCA for a powder laundry detergent conducted as part of the technical analysis are shown in Figure 1.

² EC Regulation 648/2004 of The European Parliament and of The Council of 31 March 2004 on detergents. Available from: http://ec.europa.eu/enterprise/sectors/chemicals/documents/specific-chemicals/detergents/index_en.htm

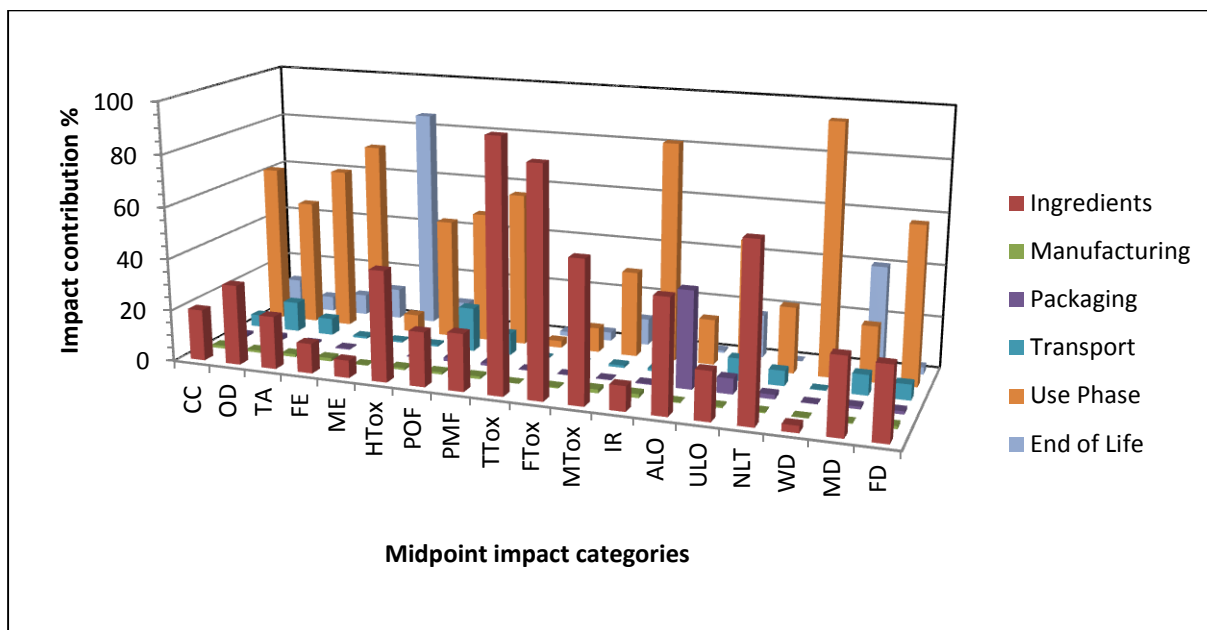


Figure 1: Impact contribution of different life cycle stages of a laundry detergent

These impacts are strongly correlated to each other via the energy use in the use phase (with the exception of natural land transformation). The use phase dominates the impact categories freshwater eutrophication, human toxicity, and marine ecotoxicity, and ingredients sourcing dominates the freshwater ecotoxicity and natural land transformation.

The key environmental performance indicators (KPIs), i.e. those variables that mainly drive the results for laundry detergents in Europe, based on the results of this study are (not ranked):

- Wash temperature,
- Amount of product used per application,
- Choice of and amount of surfactant (although there are trade-offs between impact categories),
- Energy source used to heat the water,
- Emissions to water.

Apart from the LCA analysis, a revision of other scientific evidences, current national schemes and legislation have been performed. These sources of information pointed out the potential presence of hazardous substances in the product that can have environmental and health impacts, and these are addressed according to Articles 6.6 and 6.7 of the Regulation EC/66/2010 on the EU Ecolabel³.

This document shows the process and the evidences to draft the EU Ecolabel criteria that tackle the mentioned main environmental impacts identified through the LCA analysis and the non-LCA impacts identified by revising other sources. The EU Ecolabel criteria are developed to directly or indirectly address the identified LCA and non-LCA impacts (e.g., the choice and amount of surfactants is an environmental impact directly addressed through one or several EU Ecolabel criteria while the amount of detergent is indirectly addressed). The "energy source used to heat the water" is the only environmental impact that cannot be addressed through the EU Ecolabel as it is not directly linked to the products; even when consumers can choose the source of energy to heat the water or an electricity provider with a

³ Regulation (EC) No 66/2010 of the European Parliament and of the Council of November 25 2009 on the EU Ecolabel

share of renewable energies, this is something out of the scope of what can be promoted through a product environmental label. Moreover, even though waste generation was not among the top 5 KPIs, it can still have an impact of up to 36% for some environmental aspects. Given the prevalence of laundry detergents in everyday life and the fact that they all come with packaging, a relatively small impact can quickly add up; thus, this aspect is also considered in the EU Ecolabel.

Table 1 shows the link between the LCA and non-LCA impacts identified in the Preliminary Report and the revised or newly developed EU Ecolabel criteria.

Table 1: Link between the hotspots identified (LCA and non-LCA impacts) and the revised EU Ecolabel criteria

Identified hotspots (LCA and non-LCA impacts)	% of total impact⁴	Revised or new EU Ecolabel criteria	Comments on the related criteria
Wash temperature	3-96%	User information	The criterion encourages users to opt for lower water temperatures.
		Fitness for use	It ensures that the product is fit to wash at low temperatures (15-30C depending on the product).
		Information appearing on the EU Ecolabel	It informs consumers that the product's performance has been tested, even at low temperatures.
Energy sources to heat up the water	3-96%	--	Out of the scope of this policy tool
Amount of product used per application	3-95 %	User information	It informs users about the amount of product to be used depending on the washing conditions.
		Dosage requirement	This criterion limits the amount of product that manufacturers can recommend to users.
Choice and amount of surfactants	3-95 %	Biodegradability	It ensures that surfactants are biodegradable and will not persist in water.
		Restricted substances	It ensures that hazardous surfactants are not included in the bill of materials.
		Phosphorus content	It ensures that limited and restricted types of phosphorus compounds are not included as ingredients.
		Sustainable Palm oil	It ensures that renewable palm oil surfactants do not cause unnecessary strain on the ecosystem.
Emissions to water	3-95 %	Toxicity to aquatic organisms	It ensures that the sum of the ingredients is not toxic to the aquatic organisms.
		Biodegradability	It ensures that ingredients are not persistent in the water.
		Phosphorus content	It ensures that eutrophication due to phosphorus is limited.
		Restricted substances	It ensures that hazardous substances do not reach water ways.
		Colorants	It ensures that colorants do not accumulate in the water.

⁴ Information provided in Chapter 5 of the Preliminary Report, although aggregated in a different way, available at: <http://susproc.jrc.ec.europa.eu/detergents/stakeholders.html>

Identified hotspots (LCA and non-LCA impacts)	% of total impact ⁴	Revised or new EU Ecolabel criteria	Comments on the related criteria
		Fragrances	It ensures that only a limited amount of ingredients with sensitizing properties is used.
		Enzymes	It ensures that enzymes cannot be inhaled, limiting health risks for users.
		Information appearing on the EU Ecolabel	It informs consumers that the product contains a limited amount of hazardous substances while they are making purchase decisions.
Waste generation	0-37%	Packaging	It ensures that a limited amount of waste will be generated and that this waste can be recycled.
		User information	It reminds consumers to dispose of the packaging in a responsible manner.
Water consumption	Not rated	User information	The criterion encourages users to opt for full wash loads. It provides information to the users on how to get the most out of the product while lowering the damage to the environment.
Hazardous substances	Not rated	Hazardous substances and mixtures	This criterion limits the hazardous substances and mixtures that can be included in the product, limiting environmental and health risks for consumers.
		Ingoing substances listed in accordance with Article 59(1) of Regulation (EC) No 1907/2006	
		Information appearing on the EU Ecolabel	It informs consumers that the product has a limited amount of hazardous substances, in order to encourage the purchase of the product.

3 SUMMARY OF THE FEEDBACK REQUESTED FROM STAKEHOLDERS

LAUNDRY DETERGENTS		
CRITERION / SECTION	QUESTIONS	
Name, definition and scope	1	Should fabric softeners be excluded or included in the scope of the EU Ecolabel?
Reference dosage	1	Are separate dosage requirements needed for concentrated products? Or should concentrated products be encouraged by setting strict dosage limits?
	2	Is the limit proposed for fabric softeners sufficient?
	3	Are the new proposed limits too strict? If yes please provide evidence.
Toxicity to aquatic organisms	1	Should the CDV values be stricter?
	2	Are different CDV values required liquid and powder detergents?
	3	Is the CDV value for fabric softeners sufficient?
Biodegradability	1	Is the proposed approach on biodegradability suitable for consumer laundry detergents?
	2	What would be the appropriate limits for aNBO and anNBO? Could stakeholders please share with the project team data on the amount of aNBO and anNBO organic substances and mixtures in the product groups covered?
Excluded or limited substances and mixtures	1	Do you agree with the exclusion for APEO and APD substances required from this product group?
	2	Are exclusions required for other substances?
Derogations	1	Do you have information which could substantiate keeping/removing the current derogations.
Preservatives	1	Do you agree with the changes proposed to requirement on preservatives?
Colorants, enzymes	1	Do you agree with the proposed requirements on colorants and enzymes?
Packaging requirements	1	Packaging is not one of the top 5 KPIs for laundry detergents, should a criterion related to it be kept?
	2	Are the WUR limits appropriate?
	3	Is the design for recycling requirement suitable for this product group?
Fitness for use	1	Is a requirement on washing performance at low temperatures a suitable way of targeting the impacts related to washing water temperature?
	2	Are any other changes required for this criterion?
Points	1	Do you agree with the removal of the points system?
	2	Are there any other requirements which can be used to encourage the use of lower temperature wash cycles?
Consumer information	1	Is the change to the wash temperature recommendation acceptable?
	2	Is a statement on overdosing required as part of the consumer information criterion?
	3	Is the change to the dosage instruction wording acceptable?
	4	Should recycling labels be included on laundry detergent packaging?
	5	Should the requirement for the applicant to include a recommendation on washing temperature in case of allergies and infectious diseases be kept in the criterion text?

Information appearing on the EU Ecolabel	1	Are the proposed statements suitable?
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4 CRITERIA STRUCTURE COMPARISON TABLE

STRUCTURE OF THE CRITERIA	
Current organisation of the EU Ecolabel criteria	Potential changes, modifications or amendments
Criterion 1: Dosage requirements Criterion 2: Toxicity to aquatic organisms: Critical Dilution Volume (CDV) Criterion 3: Biodegradability of organics Criterion 4: Excluded or limited substances and mixtures Criterion 5: Packaging requirements Criterion 6: Washing performance (fitness for use) Criterion 7: Points Criterion 8: Consumer information Criterion 9: Information appearing on the EU Ecolabel	Criterion 1: Dosage requirements Criterion 2: Toxicity to aquatic organisms Criterion 3: Biodegradability Criterion 4: Sustainable sourcing of palm oil, etc. Criterion 5: Restricted substances Criterion 6: Packaging Criterion 7: Fitness for use Criterion 8: Points (if kept) Criterion 9: User information Criterion 10: Information appearing on the EU Ecolabel
	The proposed changes to the structure reflect the fact that certain criteria are proposed to be merged and an additional criterion is proposed to cover sustainable sourcing of certain ingredients.

5 NAME AND DEFINITION COMPARISON TABLE

NAME OF THE EU ECOLABEL	
Current name of the EU Ecolabel	Potential changes, modifications or amendments
Landry detergents	Consumer laundry detergents
	The proposed name is in line with the name used in the Detergents Regulation and provides more clarity on the fact that only consumer products are covered.
DEFINITION OF THE PRODUCT GROUP	
<p>The product group 'Laundry Detergents' shall comprise: laundry detergents and pre-treatment stain removers whether in powder, liquid or any other form which are marketed and used for the washing of textiles principally in household machines but not excluding their use in laundrettes and common laundries.</p> <p>Pre-treatment stain removers include stain removers used for direct spot treatment of textiles (before washing in the machine) but do not include stain removers dosed in the washing machine and stain removers dedicated to other uses besides pre-treatment.</p> <p>This product group shall not comprise products that are dosed by carriers such as sheets, cloths or other materials nor washing auxiliaries used without subsequent washing such as stain removers for carpets and furniture upholstery.</p>	<p>The product group 'consumer laundry detergents' shall comprise: laundry detergents and pre-treatment stain removers which are marketed and used for the washing of textiles principally in domestic machines but not excluding their use in laundrettes and common laundries.</p> <p>Pre-treatment stain removers include stain removers used for direct spot treatment of textiles (before washing in the machine) but do not include stain removers dosed in the washing machine and stain removers dedicated to other uses besides pre-treatment.</p> <p>This product group shall not comprise products that are dosed by carriers such as sheets, cloths or other materials nor washing auxiliaries used without subsequent washing such as stain removers for carpets and furniture upholstery.</p>
	The proposed change would limit the number of terms that refer to consumer/domestic/household products and their uses. This would bring higher harmonisation among the EU Ecolabel criteria sets, as well as the Detergents Regulation.

6 COMPARISON OF EXISTING AND PROPOSED CRITERIA

CRITERIA																									
Existing EU Ecolabel criteria	Potential changes, modifications or amendments																								
Criterion 1: Dosage requirements																									
<p>The dosage shall not exceed the following amounts:</p> <table border="1"> <thead> <tr> <th>Product type</th> <th>powder/tablet</th> <th>liquid/gel</th> </tr> </thead> <tbody> <tr> <td>Heavy-duty laundry detergent, colour-safe detergent</td> <td>17.0 g/kg wash</td> <td>17.0 ml/kg wash</td> </tr> <tr> <td>Low-duty detergent</td> <td>17.0 g/kg wash</td> <td>17.0 ml/kg wash</td> </tr> <tr> <td>Stain remover (pre-treatment only)</td> <td>2.7 g/kg wash</td> <td>2.7 ml/kg wash</td> </tr> </tbody> </table> <p>(*) Estimated average dose to be used in CDV calculations. Actual dosing will depend on number of stains in any given wash-load. The estimated dose is based on a dosage of 2 ml per application and 6 applications per wash-load of 4,5 kg (liquid stain remover).</p> <p>If recommendations for both prewash and subsequent wash apply, the total recommended dosage (prewash + subsequent wash) shall comply with the maximum dosage level.</p> <p>Assessment and verification: Full formulation of the product, label or artwork including dosage instructions. The density (g/ml) shall be stated for all products (either on the packaging or in a Safety Data Sheet).</p>	Product type	powder/tablet	liquid/gel	Heavy-duty laundry detergent, colour-safe detergent	17.0 g/kg wash	17.0 ml/kg wash	Low-duty detergent	17.0 g/kg wash	17.0 ml/kg wash	Stain remover (pre-treatment only)	2.7 g/kg wash	2.7 ml/kg wash	<p>The reference dosage shall not exceed the following amounts:</p> <table border="1"> <thead> <tr> <th>Product type</th> <th>Dosage, powder/tablet</th> <th>Dosage, liquid/gel</th> </tr> </thead> <tbody> <tr> <td>Heavy-duty laundry detergent, colour-safe detergent</td> <td>16 g/kg laundry</td> <td>14 ml/kg laundry</td> </tr> <tr> <td>Low-duty detergent</td> <td>10 g/kg laundry</td> <td>10 ml/kg laundry</td> </tr> <tr> <td>Stain remover (pre-treatment only)</td> <td>2,7 g/kg laundry</td> <td>2,7 ml/kg laundry</td> </tr> </tbody> </table> <p>Assessment and verification: Full formulation of the product, label or artwork including dosage instructions shall be provided. The density (g/ml) shall be stated for all products (either on the packaging or in a Safety Data Sheet).</p>	Product type	Dosage, powder/tablet	Dosage, liquid/gel	Heavy-duty laundry detergent, colour-safe detergent	16 g/kg laundry	14 ml/kg laundry	Low-duty detergent	10 g/kg laundry	10 ml/kg laundry	Stain remover (pre-treatment only)	2,7 g/kg laundry	2,7 ml/kg laundry
Product type	powder/tablet	liquid/gel																							
Heavy-duty laundry detergent, colour-safe detergent	17.0 g/kg wash	17.0 ml/kg wash																							
Low-duty detergent	17.0 g/kg wash	17.0 ml/kg wash																							
Stain remover (pre-treatment only)	2.7 g/kg wash	2.7 ml/kg wash																							
Product type	Dosage, powder/tablet	Dosage, liquid/gel																							
Heavy-duty laundry detergent, colour-safe detergent	16 g/kg laundry	14 ml/kg laundry																							
Low-duty detergent	10 g/kg laundry	10 ml/kg laundry																							
Stain remover (pre-treatment only)	2,7 g/kg laundry	2,7 ml/kg laundry																							
	<p>The proposed change of dosage for heavy-duty and low-duty detergents is based on the review of dosages for EU Ecolabel laundry detergent products, which revealed that the average doses recommended for existing products are below the current thresholds. No change is proposed for stain remover dosages as no data was obtained in the consultation.</p>																								
Criterion 2: Toxicity to aquatic organisms: Critical Dilution Volume (CDV)																									
<p>The critical dilution volume of the product must not exceed the following limits (CDV_{chronic}):</p>	<p>The critical dilution volume (CDV) of the product must not exceed the following limits for the reference dosage:</p>																								

Product type	CDV _{chronic}	Product type	Limit CDV
Heavy-duty laundry detergent, colour-safe detergent	35,000 l/kg wash	Heavy-duty laundry detergent, colour-safe detergent	32 000 l/kg laundry
Low-duty detergent	20,000 l/kg wash	Low-duty detergent	20 000 l/kg laundry
Stain remover (pre-treatment only)	3,500 l/kg wash (*)	Stain remover (pre-treatment only)	3 500 l/kg laundry
<p>(*) CDV limit based on an estimated dosage of 2 ml per application and 6 applications per wash-load of 4,5 kg for a liquid stain remover. Products dosed as, e.g. powder or paste shall comply with the same CDV limit.</p> <p>The critical dilution volume toxicity (CDV chronic) is calculated for all ingredients (i) in the product using the following equation:</p> $CDV_{chronic} = \sum CDV_{(i)} = \sum \text{weight}_{(i)} \times DF_{(i)} / TF_{chronic(i)} \times 1000$ <p>where</p> <p>weight (i) = the weight of the ingredient per recommended dose</p> <p>DF = the degradation factor</p> <p>TF = the chronic toxicity factor of the substance as stated in the DID list.</p> <p>Preservatives, colouring agents and fragrances present in the product shall also be included in the CDV calculation even if the concentration is lower than 0,010 % (100 ppm).</p> <p>Assessment and verification: Calculation of the CDV chronic of the product. A spreadsheet for calculation of the CDV value is available on the EU Ecolabel website.</p> <p>The values of the DF and TF parameters shall be as given in the Detergent Ingredient Database list (DID list). If the substance is not found on the DID list, the parameters shall be calculated using the guidelines in part B of the DID list and attaching the associated documentation.</p>		<p>Assessment and verification: Calculation of the CDV of the product. A spreadsheet for calculation of the CDV value is available on the EU Ecolabel website.</p> <p>The Critical Dilution Volume (CDV) is calculated for all ingoing substances and mixtures (i) in the product using the following equation:</p> $CDV = \sum CDV(i) = 1000 \cdot \sum \text{dosage}(i) \cdot \frac{DF(i)}{TF(i)}$ <p>Where:</p> <p><i>dosage(i)</i>: weight (g) of the substance or mixture <i>i</i> in the reference dose,</p> <p><i>DF(i)</i>: degradation factor for the substance or mixture <i>i</i></p> <p><i>TF(i)</i>: toxicity factor for the substance or mixture <i>i</i></p> <p>The values of <i>DF(i)</i> and <i>TF(i)</i> shall be as given in the DID list Part A (Appendix I⁵ – to be added). If a substance or mixture is not included in the DID list Part A, the applicant shall estimate the values follow the approach described in the DID list Part B (Appendix I – to be added).</p>	
		<p>Based on the review of CDV values for existing products, it is proposed to lower the threshold for heavy-duty laundry detergents and colour-safe detergents and to keep the existing thresholds for the other categories.</p>	
Criterion 3: Biodegradability of organics			
<p>The content of organic substances in the product that are aerobically non-biodegradable (not readily biodegradable aNBO) or anaerobically non-biodegradable</p>		<p>a) Biodegradability of surfactants <u>To be discussed at the 1st AHWG meeting.</u></p>	

⁵ The "Appendix" referred to in the criteria text is the Appendix found at the end of EU Ecolabel criteria and has not been formulated as of the writing of this report. It does not refer to the Appendixes found at the end of this Technical Report.

(anNBO) shall not exceed the following limits:

aNBO:

Product type	aNBO, powder	aNBO, liquid
Heavy-duty laundry detergent, colour-safe detergent	1.0 g/kg wash	0.55 g/kg wash
Low-duty detergent	0.55 g/kg wash	0.30 g/kg wash
Stain remover (pre-treatment only) (*)	0.10 g/kg wash	0.10 g/kg wash

(*) aNBO limit based on an estimated dosage of 2 ml per application and 6 applications per wash-load of 4.5 kg for a liquid stain remover.

For anaerobically non-biodegradable organics (anNBO):

Product type	anNBO, powder	anNBO, liquid
Heavy-duty laundry detergent, colour-safe detergent	1.3 g/kg wash	0.70 g/kg wash
Low-duty detergent	0.55 g/kg wash	0.30 g/kg wash
Stain remover (pre-treatment only) (*)	0.10 g/kg wash	0.10 g/kg wash

(*) anNBO limit based on an estimated dosage of 2 ml per application and 6 applications per wash-load of 4.5 kg for a liquid stain remover.

Assessment and verification: Calculation of aNBO and anNBO for the product. A spreadsheet for use in calculating aNBO and anNBO values is available on the EU Ecolabel website.

Refer to the DID list. For ingredients 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 and anaerobically biodegradable shall be provided. See Appendix I.

Note that TAED should be considered anaerobically biodegradable.

All surfactants shall be biodegradable under aerobic conditions.

All surfactants shall be biodegradable under anaerobic conditions.

b) Biodegradability of organic substances and mixtures

To be discussed at the 1st AHWG meeting.

The content of organic substances and mixtures in the product that are aerobically non-biodegradable (not readily biodegradable aNBO) or anaerobically non-biodegradable (anNBO) shall not exceed the following limits for the reference dosage:

aNBO

Product type	aNBO, powder	aNBO, liquid
Heavy-duty laundry detergent, colour-safe detergent	1,0 g/kg wash	0,55 g/kg wash
Low-duty detergent	0.55 g/kg wash	0.30 g/kg wash
Stain remover (pre-treatment only)	0.10 g/kg wash	0.10 g/kg wash

anNBO

Product type	anNBO, powder	anNBO, liquid
Heavy-duty laundry detergent, colour-safe detergent	1,3 g/kg wash	0,70 g/kg wash
Low-duty detergent	0,55 g/kg wash	0,30 g/kg wash
Stain remover (pre-treatment only)	0,10 g/kg wash	0,10 g/kg wash

Assessment and verification: The applicant shall provide documentation for the degradability of surfactants, as well as the calculations of aNBO and anNBO for the product. A spreadsheet for use in calculating aNBO and anNBO values is available on the EU Ecolabel website.

For both surfactants and aNBO and anNBO values, reference shall be made to the DID List. For ingredients 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 and anaerobically biodegradable shall be provided as described in Appendix I – to be added.

In the absence of documentation in accordance with the above requirements, an

	<p>ingoing substances and mixtures other than a surfactant may be exempted from the requirement for anaerobic degradability if one of the following three alternatives is fulfilled:</p> <ol style="list-style-type: none"> 1. Readily degradable and has low adsorption ($A < 25\%$); 2. Readily degradable and has high desorption ($D > 75\%$); 3. Readily degradable and non-bioaccumulating. <p>Testing for adsorption/desorption may be conducted in accordance with OECD guidelines 106.</p>
	<p>As six EU Ecolabels related to detergents are being revised at the same time and as these products often have similar formulations, it is judicious to consider the harmonisation of their criteria. The current six EU Ecolabel criteria approach the subject using three different manners and stakeholder consultation has yielded a multitude of opinions. It has thus been decided that a discussion during the 1st AHWG meeting will be held. As a starting point for the harmonised approach, the criterion included in the most recently voted criteria for industrial and institutional products (laundry and dishwasher detergents) is proposed. The criterion will be revised following discussions with stakeholders. Collection of data on aNBO and anNBO is conducted.</p>
<p>Criterion 4: Excluded or limited substances and mixtures</p>	
<p>(a) Specified excluded ingredients</p> <p>The following ingredients must not be included in the product, neither as part of the formulation nor as part of any preparation included in the formulation:</p> <ul style="list-style-type: none"> • phosphates • EDTA (ethylenediaminetetraacetate) • nitro-musks and polycyclic musks. <p>Assessment and verification: The applicant shall provide a completed and signed declaration of compliance.</p>	<p>(a) Specified excluded ingoing substances and mixtures</p> <p>The product shall not be formulated or manufactured using any of the following compounds:</p> <ol style="list-style-type: none"> (i) Phosphates (ii) Phosphonates that are not readily biodegradable (iii) APEO (alkylphenol ethoxylates) and APD (alkylphenol derivatives) (iv) EDTA (ethylenediaminetetraacetate) (v) Nitro-musks and polycyclic musks (vi) 3-cyclohexene carboxaldehyde (HICC) (vii) Atranol and Chloroatranol (viii) Fragrance substances subject to the declaration requirement provided for in Regulation (EC) No 648/2004 of the European Parliament and of the Council on detergents (Annex VII) and which are not already excluded by criterion 2b

	<p>shall not be present in quantities $\geq 0,010\%$ (≥ 100 ppm) per substance.</p> <p>Assessment and verification: the applicant shall provide:</p> <p>a) a signed declaration of compliance supported by declarations from manufacturers of mixtures, as appropriate, confirming that the listed substances and/or mixtures have not been included in the product.</p> <p>b) written statements on compliance, including:</p> <ul style="list-style-type: none"> - information on the complexing agents in the product (detailed information of the type of phosphonates added as ingredients); - Information for the biodegradability of the phosphonates. A spreadsheet for use in calculating aNBO values is available on the EU Ecolabel website. For aNBO values reference should be done to the DID List. For phosphonates which are not included in the most updated DID list, the relevant information from literature or other sources, or appropriate test results, showing that they are aerobically biodegradable shall be provided as described in Appendix (to be added). <p>c) a declaration from the fragrance manufacturer specifying the content of each of the substances in the fragrances which are listed in Annex III of the Regulation (EC) No 1223/2009.</p>										
	<p>The proposed changes aim at excluding ingredients with undesired environmental and health-related properties from EU Ecolabel products. Further discussion on the harmonisation of this criterion across all product groups is needed.</p>										
<p>b) Hazardous substances and mixtures</p> <p>According to the Article 6(6) of Regulation (EC) No 66/2010 on EU Ecolabel, the product or any part of it thereof shall not contain substances or mixtures meeting the criteria for classification with the hazard classes or categories in accordance with Regulation (EC) No 1272/2008 specified below nor shall it contain substances referred to in Article 57 of Regulation (EC) No 1907/2006.</p> <p>List of hazard statements:</p> <table border="1" data-bbox="185 1185 1084 1385"> <thead> <tr> <th>GHS Hazard Statement</th> <th>EU Risk Phrase</th> </tr> </thead> <tbody> <tr> <td>H300 Fatal if swallowed</td> <td>R28</td> </tr> <tr> <td>H301 Toxic if swallowed</td> <td>R25</td> </tr> <tr> <td>H304 May be fatal if swallowed and enters airways</td> <td>R65</td> </tr> <tr> <td>H310 Fatal in contact with skin</td> <td>R27</td> </tr> </tbody> </table>	GHS Hazard Statement	EU Risk Phrase	H300 Fatal if swallowed	R28	H301 Toxic if swallowed	R25	H304 May be fatal if swallowed and enters airways	R65	H310 Fatal in contact with skin	R27	<p>(b) Hazardous substances and mixtures</p> <p>According to Article 6(6) of Regulation (EC) No 66/2010, the EU Ecolabel may not be awarded to any product that contains substances meeting criteria for classification with the hazard statements specified in Table 2 in accordance with Regulation (EC) No 1272/2008 of the European Parliament or substances referred to in Article 57 of Regulation (EC) No 1907/2006. The hazard statements in Table 2 generally refer to substances. However, if information on substances cannot be obtained, the classification rules for mixtures apply.</p> <p>Substances or mixtures which change their properties through processing and thus become no longer bioavailable, or undergo chemical modification in a way that removes the previously identified hazard are exempted from criterion x(b)</p>
GHS Hazard Statement	EU Risk Phrase										
H300 Fatal if swallowed	R28										
H301 Toxic if swallowed	R25										
H304 May be fatal if swallowed and enters airways	R65										
H310 Fatal in contact with skin	R27										

H311 Toxic in contact with skin	R24
H330 Fatal if inhaled	R23/26
H331 Toxic if inhaled	R23
H340 May cause genetic defects	R46
H341 Suspected of causing genetic defects	R68
H350 May cause cancer	R45
H350i May cause cancer by inhalation	R49
H351 Suspected of causing cancer	R40
H360F May damage fertility	R60
H360D May damage the unborn child	R61
H360FD May damage fertility. May damage the unborn child	R60-61
H360Fd May damage fertility. Suspected of damaging the unborn child	R60-63
H360Df May damage the unborn child. Suspected of damaging fertility	R61-62
H361f Suspected of damaging fertility	R62
H361d Suspected of damaging the unborn child	R63
H361fd Suspected of damaging fertility. Suspected of damaging the unborn child.	R62-63
H362 May cause harm to breast fed children	R64
H370 Causes damage to organs	R39/23; R39/24; R39/25; R39/26; R39/27; R39/28
H371 May cause damage to organs	R68/20; R68/21; R68/22
H372 Causes damage to organs through prolonged or repeated exposure	R48/25; R48/24; R48/23
H373 May cause damage to organs through prolonged or repeated exposure	R48/20; R48/21; R48/22
H400 Very toxic to aquatic life	R50
H410 Very toxic to aquatic life with long-lasting effects	R50-53
H411 Toxic to aquatic life with long-lasting effects	R51-53
H412 Harmful to aquatic life with long-lasting effects	R52-53

Table 2: Hazard statements

GHS Hazard Statement
H300 Fatal if swallowed
H301 Toxic if swallowed
H304 May be fatal if swallowed and enters airways
H310 Fatal in contact with skin
H311 Toxic in contact with skin
H330 Fatal if inhaled
H331 Toxic if inhaled
H340 May cause genetic defects
H341 Suspected of causing genetic defects
H350 May cause cancer
H350i May cause cancer by inhalation
H351 Suspected of causing cancer
H360F May damage fertility
H360D May damage the unborn child
H360FD May damage fertility. May damage the unborn child
H360Fd May damage fertility. Suspected of damaging the unborn child
H360Df May damage the unborn child. Suspected of damaging fertility
H361f Suspected of damaging fertility
H361d Suspected of damaging the unborn child
H361fd Suspected of damaging fertility. Suspected of damaging the unborn child.
H362 May cause harm to breast fed children
H370 Causes damage to organs
H371 May cause damage to organs
H372 Causes damage to organs through prolonged or repeated exposure
H373 May cause damage to organs through prolonged or repeated exposure
H400 Very toxic to aquatic life
H410 Very toxic to aquatic life with long-lasting effects
H411 Toxic to aquatic life with long-lasting effects
H412 Harmful to aquatic life with long-lasting effects
H413 May cause long-lasting harmful effects to aquatic life
EUH059 Hazardous to the ozone layer
EUH029 Contact with water liberates toxic gas

H413 May cause long-lasting harmful effects to aquatic life	R53
EUH059 Hazardous to the ozone layer	R59
EUH029 Contact with water liberates toxic gas	R29
EUH031 Contact with acids liberates toxic gas	R31
EUH032 Contact with acids liberates very toxic gas	R32
EUH070 Toxic by eye contact	R39-41
Sensitising substances	
H334: May cause allergy or asthma symptoms or breathing difficulties if inhaled	R42
H317: May cause allergic skin reaction	R43

This criterion applies to all ingredients present in concentrations $\geq 0,010\%$, including preservatives, colouring agents and fragrances.

The use of substances or mixtures which upon processing change their properties (e.g. become no longer bioavailable, undergo chemical modification) in a way that the identified hazard no longer applies are exempted from the above requirement.

Derogations: the following substances or mixtures are specifically exempted from this requirement:

Surfactants in concentrations $<25\%$ in the final product	H400 Very toxic to aquatic life	R50
Surfactants in concentrations $<25\%$ in the final product (*)	H412 Harmful to aquatic life with long-lasting effects	R52-53
Biocides used for preservation purposes (**)	H410 Very toxic to aquatic life with long-lasting effects	R50-53
	H411 Toxic to aquatic life with long-lasting effects	R51-53
	H412 Harmful to aquatic life with long-lasting effects	R52-53
Fragrances	H412 Harmful to aquatic life with long-lasting effects	R52-53

EUH031 Contact with acids liberates toxic gas
EUH032 Contact with acids liberates very toxic gas
EUH070 Toxic by eye contact
H334: May cause allergy or asthma symptoms or breathing difficulties if inhaled
H317: May cause allergic skin reaction

This criterion applies to all ingredients present in concentrations $\geq 0,010\%$, including preservatives, colouring agents and fragrances.

For consumer laundry products, the substances in Table 3 are exempted from the obligation in Article 6(6) of Regulation (EC) No 66/2010 following application of Article 6(7) of the same Regulation.

Table 3: Derogated substances - To be discussed in the 1st AHWG meeting

Derogated substance	H phrases
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Assessment and verification: the applicant shall demonstrate compliance with criterion X(b) for any ingoing substance or mixture present at concentrations greater than $0,010\%$ in the product.

A declaration of compliance shall be provided by the applicant supported, where appropriate, by the declarations from producer(s) of the raw materials that none of these ingoing substances and/or mixtures meet the criteria for classification with one or more of hazard statements listed in Table 2 in the form(s) and physical state(s) they are present in the product.

The following technical information related to the form(s) and physical state(s) of the ingoing substances and/or mixtures as present in the product shall be provided to support the declaration of non-classification:

- (i) For substances that have not been registered under Regulation (EC) No 1907/2006 and/or which do not yet have a harmonised CLP classification: Information meeting the requirements listed in Annex VII to that Regulation;
- (ii) For substances that have been registered under Regulation (EC) No 1907/2006 and which do not meet the requirements for CLP classification: Information based on the REACH registration dossier confirming the non-classified status of the substance;
- (iii) For substances that have a harmonised classification or are self-classified: safety

Enzymes(***)	H334: May cause allergy or asthma symptoms or breathing difficulties if inhaled H317: May cause allergic skin reaction	R42 R43	<p>data sheets where available. If these are not available or the substance is self-classified then information shall be provided relevant to the substances hazard classification according to Annex II to Regulation (EC) No 1907/2006;</p> <p>(iv) In the case of mixtures: safety data sheets where available. If these are not available then calculation of the mixture classification shall be provided according to the rules under Regulation (EC) No 1272/2008 together with information relevant to the mixtures hazard classification according to Annex II to Regulation (EC) No 1907/2006.</p> <p>For substances listed in Annexes IV and V to Regulation (EC) No 1907/2006, which are exempted from registration obligations under point (a) and (b) of Article 2(7) of that Regulation, a declaration to this effect by the applicant shall suffice to comply with criterion X(b).</p> <p>A declaration on the presence of ingoing substances that fulfil the derogation conditions shall be provided by the applicant, supported, where appropriate, by declarations from the producer(s) of the raw materials. Where required for the derogation, the applicant shall confirm the concentrations of these ingoing substances in the final product.</p>
Bleach catalyts (***)	H334: May cause allergy or asthma symptoms or breathing difficulties if inhaled H317: May cause allergic skin reaction	R42 R43	
NTA as an impurity in MGDA and GLDA (****)	H351 suspected of causing cancer	R40	
Optical brighteners (only for heavy duty laundry detergent)	H413: May cause long lasting effects to aquatic life	R33	
<p>(*) This derogation is applicable provided that surfactants comply with Criterion 3(a) and they are anaerobically degradable</p> <p>(**) Referred to in Criterion 4(e). This derogation is applicable provided that biocides' bioaccumulation potentials are characterised by log K_{ow} (log octanol/water partition coefficient) < 3.0 or an experimentally determined bioconcentration factor (BCF) ≤ 100.</p> <p>(***) Including stabilisers and other auxiliary substances in the preparations.</p> <p>(****) In concentrations lower than 1.0 % in the raw material as long as the total concentration in the final product is lower than 0.10 %.</p> <p>Assessment and verification: The applicant shall provide the exact formulation of the product to the competent body. The applicant shall also provide a declaration of compliance with this criterion, together with related documentation, such as declarations of compliance signed by the material suppliers and copies of relevant Safety Data Sheets for substances or mixtures.</p>			
			<p>The proposed changes are linked to an alignment with the criterion text for rinse-off cosmetics (ROCs). The assessment and verification part explains in more detail what evidence should be provided depending on the situation, e.g. availability of harmonised classification or SDS.</p> <p>Derogations will be discussed at the 1st AHWG meeting. Industry/stakeholders are</p>

	asked to provide information substantiating requests to keep the current derogations by filling in the derogation request form included at the end of the Technical Annexe. The same applies to potential new requests for derogations.
<p>(c) Substances listed in accordance with article 59(1) of Regulation (EC) No 1907/2006</p> <p>No derogation from the exclusion in Article 6(6) of the Regulation (EC) No 66/2010 shall be given concerning substances identified as substances of very high concern and included in the list foreseen in Article 59 of Regulation (EC) No 1907/2006 present in mixtures in concentrations higher than 0,010 %.</p> <p>Assessment and verification: The list of substances identified as substances of very high concern and included in the candidate list in accordance with Article 59 of Regulation (EC) No 1907/2006 can be found here: http://echa.europa.eu/chem_data/authorisation_process/candidate_list_table_en.asp</p> <p>Reference to the list shall be made on the date of application. The applicant shall provide the exact formulation of the product to the competent body. The applicant shall also provide a declaration of compliance with this criterion, together with related documentation, such as declarations of compliance signed by the material suppliers and copies of relevant Safety Data Sheets for substances or mixtures.</p>	<p>(c) "Ingoing substances listed in accordance with Article 59(1) of Regulation (EC) No 1907/2006"</p> <p>No derogation from the exclusion in Article 6(6) of Regulation (EC) No 66/2010 shall be given concerning ingoing substances identified as substances of very high concern and included in the list provided for in Article 59(1) of Regulation (EC) No 1907/2006, present in the product in concentrations higher than 0,010 % (weight by weight).</p> <p>Assessment and verification: reference to the list of substances identified as substances of very high concern shall be made on the date of application. The applicant shall provide the full formulation of the product to the competent body. The applicant shall also provide a declaration of compliance with criterion X(c), together with related documentation, such as declarations of compliance signed by the material suppliers and copies of relevant safety data sheets for substances or mixtures.</p>
	No content-wise changes are proposed. The text is proposed to be aligned with that of the corresponding criterion in the ROC criteria.
<p>(d) Specified limited ingredients – fragrances</p> <p>Any ingredients added to the product as a fragrance shall be manufactured and handled following the code of practice of the International Fragrance Association (IFRA). The code can be found on IFRA website: http://www.ifraorg.org</p> <p>The recommendations of the IFRA Standards concerning prohibition, restricted use and specified purity criteria for materials shall be followed by the manufacturer.</p> <p>Fragrance substances subject to the declaration requirement provided for in Regulation (EC) No 648/2004 of the European Parliament and of the Council on detergents (Annex VII) and which are not already excluded by criterion 4b and (other) fragrance substances classified H317/R43 (May cause allergic skin reaction) and/or H334/R42 (May cause allergy or asthma symptoms or breathing difficulties if</p>	<p>(d) Fragrances</p> <p>Any ingoing substance or mixture added to the product as a fragrance shall be manufactured and handled following the code of practice of the International Fragrance Association (IFRA). The code can be found on the IFRA website: http://www.ifraorg.org. The recommendations of the IFRA Standards concerning prohibition, restricted use and specified purity criteria for materials shall be followed by the manufacturer.</p> <p>Assessment and verification: <i>the applicant shall provide a signed declaration of compliance, supported by a declaration of the fragrance manufacturer, as appropriate.</i></p>

<p>inhaled) shall not be present in quantities $\geq 0,010\%$ (≥ 100 ppm) per substance.</p> <p><i>Assessment and verification:</i> The applicant shall provide a signed declaration of compliance indicating the amount of fragrances in the product. The applicant shall also provide a declaration from the fragrance manufacturer specifying the content of each of the substances in the fragrances which are listed in Annex III, Part I to Council Directive 76/768/EEC as well as the content of (other) substances which have been assigned the risk phrases H317/R43 and/or H334/R42.</p>	
	<p>No content-wise changes are proposed. The text is proposed to be aligned with that of other product groups. The reference to the Cosmetics Directive 76/768/EEC should be changed to the Cosmetics Regulation (EC) No 1223/2009.</p>
<p>(e) Biocides</p> <p>(i) The product may only include biocides in order to preserve the product, and in the appropriate dosage for this purpose alone. This does not refer to surfactants, which may also have biocidal properties.</p> <p>Assessment and verification: The applicant shall provide copies of the material safety data sheets of any preservatives added, together with information on their exact concentration in the product. The manufacturer or supplier of the preservatives shall provide information on the dosage necessary to preserve the product (e.g. results of a challenge test or equivalent).</p> <p>(ii) It is prohibited to claim or suggest on the packaging or by any other communication that the product has an antimicrobial action.</p> <p>Assessment and verification: The applicant shall provide texts and layouts used on each type of packaging and/or an example of each different type of packaging to the competent body.</p>	<p>(e) Preservatives</p> <p>(i) The product may contain preservatives provided that they are not bioaccumulating. A preservative is not considered bioaccumulating if $BCF < 100$ or $\log P_{ow} < 3,0$. If both BCF and $\log K_{ow}$ values are available, the highest measured BCF value shall be used.</p> <p>(ii) Preservatives in the product shall not release or degrade to substances that are classified in accordance with the requirements of criterion x(b) Hazardous substances and mixtures.</p> <p>(iii) It is prohibited to claim or suggest on the packaging or by any other communication that the product has an antimicrobial action.</p> <p>Assessment and verification: the applicant shall provide a signed declaration of compliance, together with copies of the safety data sheets of any preservative added, and information on its BCF and/or $\log K_{ow}$ values. The applicant shall provide also artwork of the packaging.</p>
	<p>The proposed changes aim at harmonising the requirements on preservatives across all six product groups and they add two additional restrictions. Firstly, it is requested that preservatives used are not bioaccumulating and secondly, that they do not release or degrade to hazardous substances excluded by criterion X(b). The statement that "product may only include biocides in order to preserve the product, and in the appropriate dosage for this purpose alone. This does not refer to surfactants, which may also have biocidal properties" is proposed to be removed as it is not easily verifiable by competent bodies.</p>
	<p>(f) Colorants</p>

	<p>Colorants in the product must not be bioaccumulating. A colorant is considered not bioaccumulating if $BCF < 100$ or $\log P_{ow} < 3,0$. If both BCF and $\log K_{ow}$ values are available, the highest measured BCF value shall be used. In the case of colouring agents approved for use in food, it is not necessary to submit documentation of bioaccumulation potential.</p> <p>Assessment and verification: the applicant shall provide copies of the safety data sheets of any colorant added together with information on its BCF and/or $\log K_{ow}$ value, or documentation to ensure that the colouring agent is approved for use in food.</p>
	<p>(g) Enzymes</p> <p>Enzymes shall be in liquid form or dust-free granulate. Enzymes must be free from micro-organism remnants from manufacture.</p> <p>Assessment and verification: the applicant shall provide copies of the material safety data sheets of any enzyme added, together with documentation to ensure that the enzyme is free from micro-organism remnants.</p>
	<p>The proposed changes aim at harmonising the requirements on detergent ingredients, here colorants and enzymes, across the six detergent product groups. The requirement for colorants not to be bioaccumulating is in line with the requirement included for ROCs. Further, the use of enzymes is increasing and they should not render the product unsafe for users.</p>
	<p>(h) Phosphorus content</p> <p>The total content of phosphorus in the product is limited to 0,03 Pg/kg laundry.</p> <p>Assessment and verification: The applicant shall provide written statements on compliance, including:</p> <ul style="list-style-type: none"> - information on the complexing agents in the product (detail information of the type of phosphorus-content substances added as ingredients); - information on the recommended dose for different levels of soiling or water hardness (when applicable); - calculation of the product's total P-content
	<p>While all phosphates and non-readily biodegradable phosphonates are proposed to be excluded through criterion X(a), the total phosphorus content is proposed to be limited in order to ensure that this type of substance will contribute to eutrophication.</p>

Criterion 5 – Packaging requirements

(a) Weight/utility (WUR):

The weight/utility ratio (WUR) of the product shall not exceed the following values:

Product type	WUR
Powders	1.2 g/kg wash
Others (e.g. liquids, gels, tablets, capsules)	1.5 g/kg wash

WUR shall be calculated only for primary packaging (including caps, stoppers and hand pumps/spraying devices) using the formula below:

$$WUR = \Sigma[(W_i + U_i)/(D_i * r_i)]$$

Where:

W_i = the weight (g) of the packaging component (i) including the label if applicable.

U_i = the weight (g) of non-recycled (virgin) material in the packaging component (i).
If the proportion of recycled material in the packaging component is 0 % then $U_i = W_i$.

D_i = the number of functional units contained in the packaging component (i). The functional unit = dosage in g/kg wash.

r_i = recycling figure, i.e. the number of times the packaging component (i) is used for the same purpose through a return or refill system. The default value for r is set to 1 (= no re-use). Only if the applicant can document that the packaging component is re-used for the same purpose, a higher value for r can be used in the calculation.

Exceptions:

Plastic/paper/cardboard packaging containing more than 80 % recycled material is exempted from this requirement.

Packaging is regarded as recycled if the raw material used to make the packaging has been collected from packaging manufacturers at the distribution stage or at the consumer stage. Where the raw material is industrial waste from the material manufacturer's own production process, then the material will not be regarded as recycled.

(a) Weight/utility ratio (WUR)

The weight/utility ratio (WUR) of the product shall be calculated for the primary packaging only and shall not exceed the following values for the reference dosage:

Product type	WUR
Powders	1,2 g/kg wash
Others (e.g. liquids, gels, tablets, capsules)	1,5 g/kg wash

Are exempted from this requirement:

- Plastic/paper/cardboard packaging containing more than 80 % recycled materials,
- Paper/cardboard packaging that comes 80% from certified sustainable sources,
- Plastic packaging containing more than 80 % plastic from sustainable sources.

Assessment and verification: the applicant shall provide the calculation of the WUR of the product. A spreadsheet for this calculation is available on the EU Ecolabel website. If the product is sold in different packaging (i.e. with different volumes), the calculation shall be submitted for each packaging size for which the EU Ecolabel shall be awarded.

The applicant shall provide a completed and signed declaration for the content of recycled material in the packaging.

- For paper and cardboard, packaging is regarded as recycled if the raw material used to make the packaging has been collected from packaging manufacturers at the distribution stage or at the consumer stage. Where the raw material is industrial waste from the material manufacturer's own production process, then the material will not be regarded as recycled.

- For plastic, packaging is regarded as recycled if the raw material used to make the packaging comes from industrial waste or has been collected from packaging manufacturer at the distribution or at the consumer stage.

Assessment and verification: Calculation of the WUR of the product. A spreadsheet for this calculation is available on the EU Ecolabel website. Account on the content for recycled material in the packaging. For approval of refill packaging, the applicant and/or retailer shall document that the refills will be/are available for purchase on the market.

$$WUR = \sum[(W_i + U_i)/(D_i * r_i)]$$

Where:

W_i = the weight (g) of the packaging component (i) including the label if applicable.

U_i = the weight (g) of non-recycled (virgin) material in the packaging component (i).
If the proportion of recycled material in the packaging component is 0 % then $U_i = W_i$.

D_i = the number of functional units contained in the packaging component (i). The functional unit = dosage in g/kg wash.

r_i = recycling figure, i.e. the number of times the packaging component (i) is used for the same purpose through a return or refill system. The default value for r is set to 1 (= no re-use). Only if the applicant can document that the packaging component is re-used for the same purpose, a higher value for r can be used in the calculation.

(b) Plastic packaging:

Only phthalates that at the time of application have been risk assessed and have not been classified according to criterion 4(b) (and combinations hereof) may be used in the plastic packaging.

(c) Labelling of plastic packaging

To allow for identification of different parts of the packaging for recycling, plastic parts in the primary packaging must be marked in accordance with DIN 6120, Part 2 or the equivalent. Caps and pumps are exempted from this requirement.

Assessment and verification: The applicant shall provide completed and signed declaration of compliance.

The applicant shall provide a completed and signed declaration for the content of sustainably sourced material in the packaging. For paper and cardboard, the applicant shall provide TBD⁶. For plastic, the applicant shall provide TBD.

The WUR is calculated as follows:

$$WUR = \sum((W_i + U_i)/(D_i * R_i))$$

Where:

W_i : weight (g) of the primary packaging (i),

U_i : weight (g) of non-recycled and non-sustainably sourced packaging in the primary packaging (i). $U_i = W_i$ unless the applicant can document otherwise,

D_i : number of reference doses contained in the primary packaging (i),

R_i : number of times that the primary packaging (i) can be refilled and used for the same purpose. $R_i = 1$ (packaging is not reused for the same purpose) unless the applicant can document a higher number.

(b) Design for recycling

Plastic packaging shall be designed to facilitate effective recycling by avoiding potential contaminants and incompatible materials that are known to impede separation or reprocessing or to reduce the quality of recyclate. The label or sleeve, closure and, where applicable, barrier coatings shall not comprise, either singularly or in combination the materials and components listed in Table 4. Pumps are exempted from this requirement.

Table 4: Materials and components excluded from packaging elements

Packaging element	Excluded materials and components ⁷
Label or sleeve	- PS label or sleeve in combination material used with a PET, PP or HDPE bottle - PVC label or sleeve in combination with a PET, PP or HDPE

⁶ TBD: to be determined. The acceptable certification schemes for the assessment and verification of this criterion have not been determined yet.

⁷ EVA – Ethylene Vinyl Acetate, EVOH – Ethylene vinyl alcohol, HDPE – High-density polyethylene, PET – Polyethylene terephthalate, PETG – Polyethylene terephthalate glycol-modified, PP – Polypropylene, PS – Polystyrene, PVC – Polyvinylchloride

	<table border="1"> <tr> <td data-bbox="1131 188 1355 352"></td> <td data-bbox="1355 188 2060 352"> bottle - PETG label or sleeve in combination with a PET bottle - Sleeves made of different polymer than the bottle - Labels or sleeves that are metallised or are welded to a packaging body (in mould labelling) </td> </tr> <tr> <td data-bbox="1131 352 1355 699">Closure</td> <td data-bbox="1355 352 2060 699"> - PS closure in combination a with a PET, HDPE or PP bottle - PVC closure in combination with a PET, PP or HDPE bottle - PETG closures and/or closure material with density of above 1 g/cm³ in combination with a PET bottle - Closures made of metal, glass, EVA - Closures made of silicone. Exempted are silicone closures with a density < 1 g/cm³ in combination with a PET bottle and silicone closures with a density > 1g/cm³ in combination with PEHD or PP bottle - Metallic foils or seals which remain fixed to the bottle or its closure after the product has been opened </td> </tr> <tr> <td data-bbox="1131 699 1355 762">Barrier coatings</td> <td data-bbox="1355 699 2060 762">Polyamide, EVOH, functional polyolefins, metallised and light blocking barriers</td> </tr> </table> <p>Assessment and verification: The applicant shall submit a signed declaration of compliance specifying the material composition of the packaging including the container, label or sleeve, adhesives, closure and barrier coating, and a sample of primary packaging.</p>		bottle - PETG label or sleeve in combination with a PET bottle - Sleeves made of different polymer than the bottle - Labels or sleeves that are metallised or are welded to a packaging body (in mould labelling)	Closure	- PS closure in combination a with a PET, HDPE or PP bottle - PVC closure in combination with a PET, PP or HDPE bottle - PETG closures and/or closure material with density of above 1 g/cm ³ in combination with a PET bottle - Closures made of metal, glass, EVA - Closures made of silicone. Exempted are silicone closures with a density < 1 g/cm ³ in combination with a PET bottle and silicone closures with a density > 1g/cm ³ in combination with PEHD or PP bottle - Metallic foils or seals which remain fixed to the bottle or its closure after the product has been opened	Barrier coatings	Polyamide, EVOH, functional polyolefins, metallised and light blocking barriers
	bottle - PETG label or sleeve in combination with a PET bottle - Sleeves made of different polymer than the bottle - Labels or sleeves that are metallised or are welded to a packaging body (in mould labelling)						
Closure	- PS closure in combination a with a PET, HDPE or PP bottle - PVC closure in combination with a PET, PP or HDPE bottle - PETG closures and/or closure material with density of above 1 g/cm ³ in combination with a PET bottle - Closures made of metal, glass, EVA - Closures made of silicone. Exempted are silicone closures with a density < 1 g/cm ³ in combination with a PET bottle and silicone closures with a density > 1g/cm ³ in combination with PEHD or PP bottle - Metallic foils or seals which remain fixed to the bottle or its closure after the product has been opened						
Barrier coatings	Polyamide, EVOH, functional polyolefins, metallised and light blocking barriers						
	<p>The minor proposed change in WUR aims to promote sustainably sourced raw materials. The currently present specific criteria on labelling of packaging and plastic packaging are proposed to be removed, while the recyclability of plastic packaging is proposed to be promoted by limiting combinations of materials that can hinder the recycling process.</p>						
Criterion 6: Fitness for use							
<p>The product shall comply with the performance requirements as specified for the relevant product type according to the EU Ecolabel laundry detergents performance test's latest version which can be found here: http://ec.europa.eu/environment/ecolabel/products-groups-and-criteria.html</p>	<p>Tests shall be carried out to ensure that the product has a satisfactory wash performance at the lowest recommended dosage for the water hardness according to the EU Ecolabel protocol available at the website⁸. The tests shall be carried out at the water temperature stated in the protocol or at</p>						

⁸ <http://ec.europa.eu/environment/ecolabel/documents/Performance%20Test%20Laundry%20Detergents.pdf>

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

the lowest temperature the product claims to be effective at. The test shall be performed by a laboratory complying with Appendix (to be added).

Assessment and verification: The applicant shall provide documentation confirming that the product has been tested under the protocol conditions and that the results passed the minimum washing performance required. Information should be provided on the compliance within the laboratory requirements included in Appendix (to be added).

The main changes to this criterion come from updates made to the protocol – since June 2014, the maximum water temperature for performance testing has been lowered. Changes are proposed to the documents to provide for the verification of the compliance with the minimum requirements for the testing laboratory.

Criterion 7: Points

(a) Heavy-duty laundry detergents, Colour-safe laundry detergents:

A minimum of 3 points shall be achieved from the matrix below. The maximum achievable points are 8 points for cold-water products, 7 points for low-temperature and 6 points for other products.

Climate profile	Coldwater product (washing performance documents at ≤20 °C)	2P
	Low-temperature product (washing performance documented at >20 °C to <30 °C)	1P
Maximum dosage	Max dosage ≤14 g/kg wash (powder/tablet) or ≤ 14 ml/kg wash (liquid/gel)	2P
	Max dosage ≤16 g/kg wash (powder/tablet) or ≤ 16 ml/kg wash (liquid/gel)	1P
CDV	CDVchronic <25,000 l/kg wash	2P
	CDVchronic between 25,000 to 30,000 l/kg wash	1P
aNBO	aNBO ≤75 % of limit value	1P
anNBO	anNBO ≤75 % of limit value	1P
Minimum points to be achieved in order to be awarded EU Ecolabel		3P

(b) Low-duty laundry detergents:

A minimum of 3 points shall be achieved from the matrix below. The maximum achievable points are 8 points for coldwater products, 7 points for low-temperature products and 6 points for other products.

Criterion proposed to be removed

Climate profile	Coldwater product (washing performance documented at ≤20 °C)	2P	
	Low-temperature product (washing performance documented at >20 °C to <30 °C)	1P	
Maximum dosage	Max dosage ≤14 g/kg wash (powder/tablet) or ≤ 14 ml/kg wash (liquid/gel)	2P	
	Max dosage ≤16 g/kg wash (powder/tablet) or ≤ 16 ml/kg wash (liquid/gel)	1P	
CDV	CDVchronic <15,000 l/kg wash	2P	
	CDVchronic between 15,000 to 18,000 l/kg wash	1P	
aNBO	aNBO ≤75 % of limit value	1P	
anNBO	anNBO ≤75 % of limit value	1P	
Minimum points to be achieved in order to be awarded EU Ecolabel		3P	
<p>Assessment and verification: Calculation of the sum of points achieved for the product. A spreadsheet for this calculation is available on the EU Ecolabel.</p>			
			It is proposed to remove the points system as it is considered not to fulfil the objective it was set for.
Criterion 8: Consumer information			
<p>(a) Dosage instructions</p> <p>The recommended dosages shall be specified for ‘normally’ and ‘heavily’ soiled textiles and various water hardness’ ranges relevant to the countries concerned and referred as appropriate to the weight of textile. (Not applicable for stain removers).</p> <p>The difference between the dosage recommendations for the lowest water hardness range (soft) for normally soiled textiles and the highest water hardness range (hard) for heavily soiled textiles may not differ by more than a factor of 2. (Not applicable for stain removers).</p> <p>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 on the package for ‘normally soiled’ textiles and a water hardness corresponding to 2,5 mmol CaCO₃/l.</p> <p>Where only water hardness lower than 2,5 mmol CaCO₃/l are included in the recommendations, the maximum dosage recommended for ‘normally soiled’ shall be lower than the reference dosage used in the washing performance test (water</p>		<p>The detergent shall be accompanied by instructions for proper use so as to maximise product performance and minimise waste. These instructions shall be legible or include graphical representation or icons and include information on:</p> <p>a) dosing instructions</p> <p>The primary packaging shall include information on the recommended dosage in g or ml for a standard load for at least two levels of soiling. A second well-known metric may be given in brackets. If the packing has an efficient and convenient dosage system that can provide an equally reliable dosage, an alternative metric (e.g. capsules, squirts, or other) can be used. The dosing instructions shall include information on the impact of water hardness on dosing and indicate the most prevalent water hardness in the area where the product is intended to be marketed or where this information can be found.</p> <p>b) resource saving measures</p> <p>An indication on the primary packaging shall encourage users to wash at the lowest appropriate temperature: the applicant shall recommend washing at the lowest temperature the product claims effectiveness, which shall not be higher than 30C, and recommend washing beddings and cloths at 60C if the users suffer from</p>	

<p>hardness 2,5 mmol CaCO₃/l).</p> <p>(b) Information on the packaging</p> <p>The following washing recommendations (or equivalent) shall appear on the packaging of EU Ecolabelled products within the product group except pre-treatment stain removers. The washing recommendations may be present either as text or symbols:</p> <ul style="list-style-type: none"> - Wash at the lowest possible temperature - Always wash with full load - Dose according to soil and water hardness, follow the dosing instructions - If you are allergic to house dust, always wash bedding at 60 °C. Increase wash temperature to 60 °C in case of infectious diseases. <p>Using this EU Ecolabelled product according to the dosage instructions will contribute to the reduction of water pollution, waste production and energy consumption.'</p> <p>(c) Claims on the packaging</p> <p>In general, claims on the packaging shall be documented either through performance testing or other documentation (e.g. claims of efficiency at low temperatures, claims of removal of certain stain types, claims of benefits for certain types or colours of textile or other claims of specific properties/benefits of the product) e.g. if a product claims efficiency at 20 °C, the efficiency test must be performed at ≤ 20 °C (and correspondingly for other temperature claims below 30 °C). e.g. if a product claims to be efficient on certain stain types, this must be documented with efficiency test.</p> <p>(d) Information on the packaging — additional requirements for stain removers</p> <p>The removal of stains, for which no performance test has been conducted, shall not be claimed on the product.</p> <p>Assessment and verification (a-d): The applicant shall provide a sample of the product label, together with a declaration of compliance with this criterion. Product claims shall be documented through appropriate test reports or other relevant documentation.</p>	<p>allergies to house dust or infectious diseases.</p> <p>An indication on the primary packaging shall encourage users to wash full loads.</p> <p>c) packaging disposal information</p> <p>The primary packaging shall include information on the reuse, recycling and/or correct disposal of packaging.</p> <p>d) environmental information (voluntary)</p> <p>The following text is recommended to appear on the primary packaging but its use is voluntary:</p> <p>"All detergents have an effect on the environment. Always use the correct dose for maximum effectiveness, the lowest recommended temperature. This will minimize both energy and water consumption and reduce water pollution".</p> <p>Assessment and verification: The applicant shall provide a sample of the product packaging, including the label.</p>
	<p>The proposed changes bring the wording of the requirements in line with the corresponding criterion found in other detergent product group EU Ecolabels. An optional environmental statement is proposed as well as the removal of the</p>

	requirement on claims on the packaging.
Criterion 9 – Information appearing on the EU Ecolabel	
<p>Optional label with text box shall contain the following text:</p> <p>‘— Reduced impact on aquatic ecosystems — Limited hazardous substances — Performance tested.’</p> <p><i>The guidelines for the use of the optional label with text box can be found in the ‘Guidelines for use of the Ecolabel logo’ on the website: http://ec.europa.eu/environment/ecolabel/promo/logos_en.htm</i></p> <p>Assessment and verification: The applicant shall provide a sample of the label.</p>	<p>The logo should be visible and legible. The use of the EU Ecolabel logo is protected in primary EU law. The EU Ecolabel registration/licence number must appear on the product, it must be legible and clearly visible.</p> <p>The optional label with text box shall contain the following text:</p> <ul style="list-style-type: none"> - reduced impact on aquatic ecosystems - limited hazardous substances - performance tested <p>Assessment and verification: The applicant shall provide a sample of the product packaging, including the label.</p>
	The proposed change concerns the visibility and use of the EU Ecolabel logo and box.
Criterion NEW: Sustainable sourcing of palm oil, palm kernel oil and their derivatives	
	<p>Ingredients used in the product which are derived from palm oil or palm kernel oil must be sourced from plantations that meet the criteria for sustainable management that have been developed by multi-stakeholder organisations who have a broad based membership including NGOs, industry and government.</p> <p>Assessment and verification: the applicant shall provide third-party certifications that the palm oil used in the manufacturing of the product originates from sustainable managed plantations. Certifications accepted shall include RSPO (by identified preserved, segregates or mass balance) or any equivalent scheme based on multi-stakeholder sustainable management criteria. For chemical derivatives of palm oil it is acceptable to demonstrate sustainability for these through book and claim systems such as GreenPalm or equivalent.</p>
	New criterion proposal to ensure the sustainable sourcing of ingredients for which certification schemes exist.

7 REVISION OF MAIN DECISION TEXT

7.1 Name, definition and scope for EU Ecolabel

Current definition and scope

The product group 'Laundry Detergents' shall comprise: laundry detergents and pre-treatment stain removers whether in powder, liquid or any other form which are marketed and used for the washing of textiles principally in household machines but not excluding their use in laundrettes and common laundries.

Pre-treatment stain removers include stain removers used for direct spot treatment of textiles (before washing in the machine) but do not include stain removers dosed in the washing machine and stain removers dedicated to other uses besides pre-treatment.

This product group shall not comprise products that are dosed by carriers such as sheets, cloths or other materials nor washing auxiliaries used without subsequent washing such as stain removers for carpets and furniture upholstery.

Proposal for new definition and scope

The product group 'Consumer laundry detergents' shall comprise laundry detergents and pre-treatment stain removers which are marketed and used for the washing of textiles principally in [domestic machines](#) but not excluding their use in laundrettes and common laundries.

Pre-treatment stain removers include stain removers used for direct spot treatment of textiles (before washing in the machine) but do not include stain removers dosed in the washing machine and stain removers dedicated to other uses besides pre-treatment.

This product group shall not comprise products that are dosed by carriers such as sheets, cloths or other materials nor washing auxiliaries used without subsequent washing such as stain removers for carpets and furniture upholstery.

Rationale and discussion

The Detergents Regulation provides the following definition for the product group covered by this EU Ecolabel:

"consumer laundry detergent' means a detergent for laundry placed on the market for use by non-professionals, including in public laundrettes."

In order to harmonise the EU Ecolabel with the Detergents Regulation and to clarify the scope, it is proposed to change the **name** of the product group from "laundry detergents" to "consumer laundry detergents".

The **definition** of the product group is proposed to be slightly modified in order to bring further harmonisation, in terms of wording, among the EU Ecolabels and the Detergents Regulation. Several terms are used in the documents to refer to domestic/household/consumer products, by limiting the variety, the texts should be more easily understood.

Further information on the differences between consumer and industrial and institutional detergents can be found in the Technical Annexe Section 3.1.

Concerning the **scope** of the EU Ecolabel, it is proposed to discuss the inclusion of fabric softeners during the 1st AHWG meeting. Indeed, it appears to be an issue of interest as several stakeholders expressed a favourable opinion on their inclusion during consultation, although they did not provide reasons behind their recommendations.

During the previous revision of this product group the inclusion of fabric softeners was recommended on the basis that they are used in high tonnages in Europe and stakeholders

requested ecolabel alternatives. However, not all of the members of the working group were in favour of the inclusion of fabric softeners and as such it was dropped from the final criteria document.

As part of the technical analysis presented in the Preliminary Report (Section 4.9.6), an LCA with addition of a fabric softener was conducted to analyse potential additional impact of a fabric softener/detergent combination. The addition of fabric softener was modelled to be at the recommended dose rate of 5,6 ml/kg of laundry. The normalized results of the sensitivity analysis are shown in Figure 2 for key impact categories.

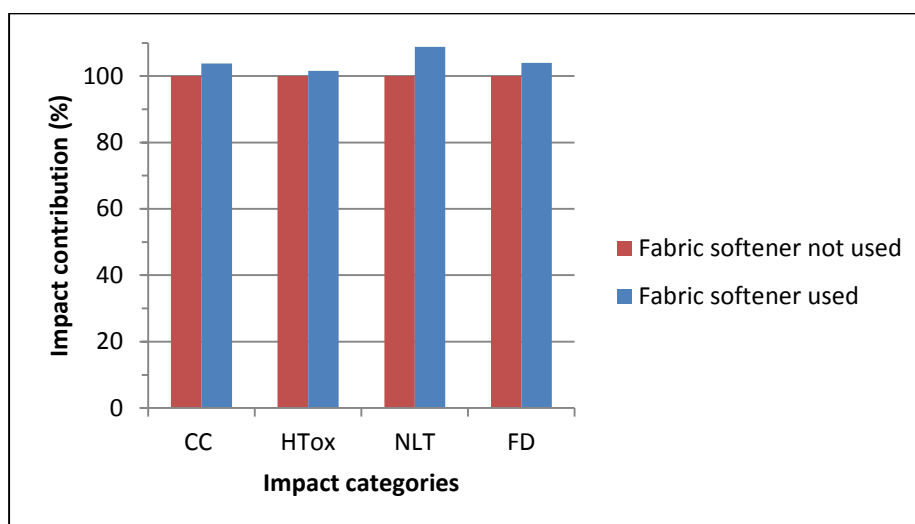


Figure 2: Sensitivity analysis of fabric softener use

The results of the analysis showed that using a fabric softener, in addition to a laundry detergent, causes a low increase of the overall environmental impact (less than 10% increase in the worst category, Natural Land Transformation (NLT)). The increase in contribution to NTL can be attributed to the increased chemical loading, in particular the use of additional ethoxylated alcohol surfactants. In conclusion, if fabric softener is used correctly (i.e. no overdosing occurs) it does not cause a significant increase in environmental impact for a single wash.

Other ecolabelling schemes vary in their approach taken to fabric softeners. Further information on the scope definitions adopted by other ecolabelling schemes can be found in the Preliminary Report (Section 2.5). The different approaches are summarised in Table 5.

Table 5: Summary of the approach taken by other ecolabeling schemes on fabric softeners

Scheme	Fabric softeners included in scope of laundry detergents?
Nordic Swan	No
Environmental Choice NZ	No
Current EU Ecolabel	No
Bra Miljöval (Good Environmental Choice)	Yes
Green Seal	Yes
Korea Eco Label	Yes
Singapore Green Labelling	No

A point of concern raised on the issue of the inclusion of fabric conditioners is whether or not they are necessary to the washing process. Indeed, the use of fabric conditioners adds an extra chemical load which is not core to the cleaning action and, as such, the general use of this type of products should be discouraged. However, the counter argument is that if consumers want to use a fabric softeners they should be able to easily choose a more environmentally friendly product bearing the EU Ecolabel. Regardless of whether or not EU Ecolabel fabric softeners are available, the consumption of these products is not expected to change. But by introducing an additional product into the scope of the EU Ecolabel, the overall environmental impact of these products can be reduced on the long term.

Consultation questions	
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1	Should fabric softeners be excluded or included in the scope of the EU Ecolabel?
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7.2 Definitions

Current definition text

For the purpose of this Decision, the following definitions shall apply:

- (1) 'heavy-duty detergents' means detergents used for ordinary washing of white textiles at any temperature;
- (2) 'colour-safe detergents' means detergents used for ordinary washing of coloured textiles at any temperature;
- (3) 'low-duty detergents' means detergents intended for delicate fabrics;
- (4) 'substance' means a chemical element and their compounds in the natural state or obtained by any production process, including any additive necessary to preserve the stability of the products and any impurity deriving from the process used, but excluding any solvent which may be separated without affecting the stability of the substance or changing its composition.

Proposal for definitions text

For the purpose of this Decision, the following definitions shall apply:

- (1) "heavy-duty detergents" means detergents used for ordinary washing of white textiles at any temperature;
- (2) "colour-safe detergents" means detergents used for ordinary washing of coloured textiles at any temperature;
- (3) "low-duty detergents" means detergents intended for delicate fabrics;
- (4) "ingoin substances and mixtures" means
 - biocides, fragrances, colouring agents, and mixtures thereof, regardless of concentration in the final formulation,
 - substances and mixtures intentionally added, by-products and impurities from raw materials, the concentration of which equals or exceeds 0,010% by weight of final formulation,
- (5) "primary packaging" means
 - for single doses in a wrapper that is intended to be removed before washing, the individual dose wrapping in direct contact with the content and the packaging conceived so as to constitute the smallest sales unit of distribution to the final user or consumer at the point of purchase, including label where applicable,
 - for all other types of products, packaging conceived so as to constitute the smallest sales unit of distribution to the final user or consumer at the point of purchase in direct contact with the content, including label where applicable.

Rationale and discussion

For further information on the update of definitions listed, refer to Section 4 of the Technical Annexe.

The section on definitions for consumer laundry detergents is proposed to be kept as is for all the definitions related to the different types of laundry detergents, as the classification of a product will impact on which requirements it should fulfil.

In the definition list, the definition for "substance" is proposed to be replaced with "ingoin substances and mixtures", which also provides information on the measurement thresholds for the different types of substances and mixtures covered.

The definition for "primary packaging" is proposed to be moved from the criterion on packaging to the definition section. The proposed expansion of the definition reflects the fact that tablets and other single dose products are appearing on the consumer laundry detergent market, although still in smaller quantities than for consumer laundry detergents, and their special packaging should be covered.

8 REVISION OF EXISTING CRITERIA OF EU ECOLABEL

8.1 Assessment and verification requirements and measurement thresholds

Current assessment and verification requirements and measurement thresholds

A) 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.

Appendix I makes reference to 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 the Critical Dilution Volume (CDV) and for the assessment of the biodegradability of the ingredients. For substances not present on the DID List, guidance is given on how to calculate or extrapolate the relevant data. The latest version of the DID List is available from the EU Ecolabel website or via the websites of the individual competent bodies.

Where appropriate, competent bodies may require supporting documentation and may carry out independent verifications.

B) Measurement thresholds

Constituent substances the concentration of which exceeds 0,010 % by weight of the preparation shall comply with the ecological criteria.

For preservatives, colouring agents and fragrance compliance with the criteria is required regardless of their concentration except for criterion 4(b) on excluded or limited substances and mixtures.

Ingoing substances are defined as all substances in the product including additives (e.g. preservatives or stabilisers) in the ingredients. Impurities resulting from the raw material production, which are present in concentrations > 0,010 % by weight of the final formulation shall also comply with the criteria.

Where the dosage instruction on the package has specifications for both prewash and subsequent wash (in addition to a normal, single wash), the total dosage (prewash + wash) shall also comply with the ecological criteria.

If the product has a water-soluble foil intended not to be removed before washing, the foil must be considered to be part of the product formulation in all requirements.

Proposal for assessment and verification requirements and measurement thresholds

A) Requirements

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

Where the applicant is required to provide declarations, documentation, analyses, test reports, or other evidence to show compliance with the criteria, [these may originate from the applicant or his supplier\(s\) or both](#).

Where possible, the testing shall be performed by laboratories that meet the general requirements of European Standard 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.

Where appropriate, competent bodies may require supporting documentation and may carry out independent verifications.

The Appendix makes reference to the "Detergent Ingredient Database" list (DID list) which contains the most widely used ingredients in detergents and cosmetics formulations. It shall be used for deriving the data for the calculations of the Critical Dilution Volume (CDV) and for the assessment of the biodegradability of the ingoing substances. For substances not present on the DID list, guidance is given on how to calculate or extrapolate the relevant data. The latest version of the DID list is available from the EU Ecolabel website or via the websites of the individual competent bodies.

[The following information shall be provided to the competent body:](#)

(i) [The full formulation of the product indicating trade name, chemical name, CAS no. and INCI designations, DID no.2, the ingoing quantity including and excluding water, the function and the form of all ingredients regardless of concentration;](#)

(ii) [safety data sheets for each ingoing substance or mixture in accordance with Regulation \(EC\) No 1907/2006 of the European Parliament and of the Council.](#)

B) Measurement thresholds

[Compliance with the ecological criteria is required for all ingoing substances, with the exception of compliance with criterion X\(b\) and X\(c\) for preservatives, colorants and fragrances which is requested when their concentration equals or exceeds 0,010% by weight in the final formulation.](#)

If the product has a water-soluble foil intended not to be removed before washing, the foil must be considered to be part of the product formulation in all requirements.

Rationale and discussion

a) Requirements

The text regarding the assessment and verification requirements is proposed to be aligned with the text from the EU Ecolabel on Rinse-off Cosmetics. One of the most significant changes proposed is the addition of the text that clarifies what is to be provided to the CB – it was previously found in the section on the assessment and verification of the measurement threshold and functional unit. This change simplifies the reading of the criteria and harmonises the text with the ones for the other product groups being revised.

b) Measurement thresholds

The measurement threshold is the concentration of ingredients in the product for which there is a requirement for documentation of compliance with the ecological criteria. It is proposed to harmonise the measurement thresholds for all the EU Ecolabels in the detergents group and the EU Ecolabel for rinse-off cosmetics. The new text and thresholds are discussed in Section 5 of the Technical Annex.

In the specific case of the EU Ecolabel for laundry detergents, the new text proposes the same thresholds as in the current one except in the case of section (c) of the criterion on restricted substances. In the current text, fragrances, preservatives and colouring agents are to be taken into account regardless of concentration for all requirements except for section

(b) of the criterion on restricted substances, where the measurement threshold of 0,01% applies. In the proposed text, this exception would also apply to section (c) of that same criterion.

8.2 Functional unit and reference dose

Current requirements for functional unit and reference dose

Functional unit

The functional unit for this product group shall be expressed in g/kg wash (grams per kilo wash)

Reference dosage

For 'heavy-duty detergents' and 'colour-safe detergents' the dosage recommended by the manufacturer to consumers for the water hardness of 2.5 mmol CaCO₃ /l and 'normally soiled' textiles is taken as the reference dosage for the calculation of the ecological criteria, and for the testing of washing performance. For heavy-duty detergents and colour-safe detergents this is related to the dosage per 4.5 kg load (dry textiles) in the washing machine.

For 'low-duty detergents' the dosage recommended by the manufacturer to consumers for the water hardness of 2.5 mmol CaCO₃ /l and 'lightly soiled' textiles is taken as the reference dosage for the calculation of the ecological criteria, and for the testing of washing performance. For low-duty detergents this is related to the dosage per 2.5 kg load (dry textiles) in the washing machine.

If the recommended dosage is stated for other wash load sizes than the above, the reference dosage used for calculation of the ecological criteria must, however, correspond to the average load size. If the water hardness of 2.5 mmol CaCO₃ /l is not relevant in the Member States in which the detergent is marketed, the applicant shall specify the dosage used as the reference.

Proposal for functional unit and reference dose

Reference dosage

The following dosage is taken as the reference dosage for the calculations aiming at documenting compliance with the EU Ecolabel criteria and for testing of cleaning ability:

Heavy-duty detergent, colour-safe detergent	Dosage recommended by the manufacturers for one kilogram of normally soiled dry laundry (indicated in g/kg laundry or ml/kg laundry) calculated on the basis of the dosage recommended for a load of 4,5kg at a water hardness of 2,5 mmol CaCO ₃ /l
Low-duty detergent	Dosage recommended by the manufacturers for one kilogram of lightly soiled dry laundry (indicated in g/kg laundry or ml/kg laundry) calculated on the basis of the dosage recommended for a load of 2,5kg at a water hardness of 2,5 mmol CaCO ₃ /l
Stain remover (pre-treatment only)	Dosage recommended by the manufacturer for one kilogram of dry laundry (indicated in g/kg laundry or ml/kg laundry) calculated on the basis of 6 applications for a load of 4,5kg.

If the recommended dosage is stated for other wash load sizes than the above, the reference dosage used for calculation of the ecological criteria must, however, correspond to the average load size. If the water hardness of 2,5 mmol CaCO₃ /l is not relevant in the Member States in which the detergent is marketed, the applicant shall specify the dosage used as the reference.

Rationale and discussion

A functional unit in the case of laundry detergents is the amount of dishes that should be washed using a reference dosage. A reference dosage is the quantity of product used when calculating compliance with ecological requirements such as biodegradability and CDV. Further information on functional units and reference dosage in EU Ecolabels related to detergents can be found in Section 6 of the Technical Annexe.

It is proposed to remove the paragraph on the functional unit "g/kg wash" is not a functional unit and is not used consistently throughout the text. The reference dosage for all types of detergents is proposed to remain the same. For stain removers, the current criteria state the reference dosage as a footnote for all concerned requirements. It is proposed to state explicitly the reference dosage for stain removers in the table.

Should fabric softeners be included in the scope of the EU Ecolabel for laundry detergents, a reference dosage would have to be indicated in the table.

8.3 Criterion 1: Dosage requirements

Current criterion 1

The dosage corresponds to the recommended dosage in g/kg wash (powders/tablets) or ml/kg wash (liquids). The recommended dosage for a water hardness of 2.5 mmol CaCO₃/l for normally soiled textiles (heavy-duty detergents, colour-safe detergents) and lightly soiled textiles (low-duty detergents), respectively, shall be used.

The dosage shall not exceed the following amounts:

Product type	Dosage, powder/tablet	Dosage, liquid/gel
Heavy-duty laundry detergent, colour-safe detergent	17.0 g/kg wash	17.0 ml/kg wash
Low-duty detergent	17.0 g/kg wash	17.0 ml/kg wash
Stain remover (pre-treatment only)	2.7 g/kg wash	2.7 ml/kg wash(*)

(*) Estimated average dose to be used in CDV calculations. Actual dosing will depend on number of stains in any given wash-load. The estimated dose is based on a dosage of 2 ml per application and six applications per wash-load of 4.5 kg (liquid stain remover).

If recommendations for both prewash and subsequent wash apply, the total recommended dosage (prewash + subsequent wash) shall comply with the maximum dosage level.

Assessment and verification: Full formulation of the product, label or artwork including dosage instructions. The density (g/ml) shall be stated for all products (either on the packaging or in a Safety Data Sheet).

Proposal for criterion 1

The reference dosage shall not exceed the following amounts:

Product type	Dosage, powder/tablet	Dosage, liquid/gel
Heavy-duty laundry detergent, colour-safe detergent	16 g/kg laundry	14 ml/kg laundry
Low-duty detergent	10 g/kg laundry	10 ml/kg laundry
Stain remover (pre-treatment only)	2,7 g/kg laundry	2,7 ml/kg laundry

Assessment and verification: Full formulation of the product, label or artwork including dosage instructions. The density (g/ml) shall be stated for all products (either on the packaging or in a Safety Data Sheet).

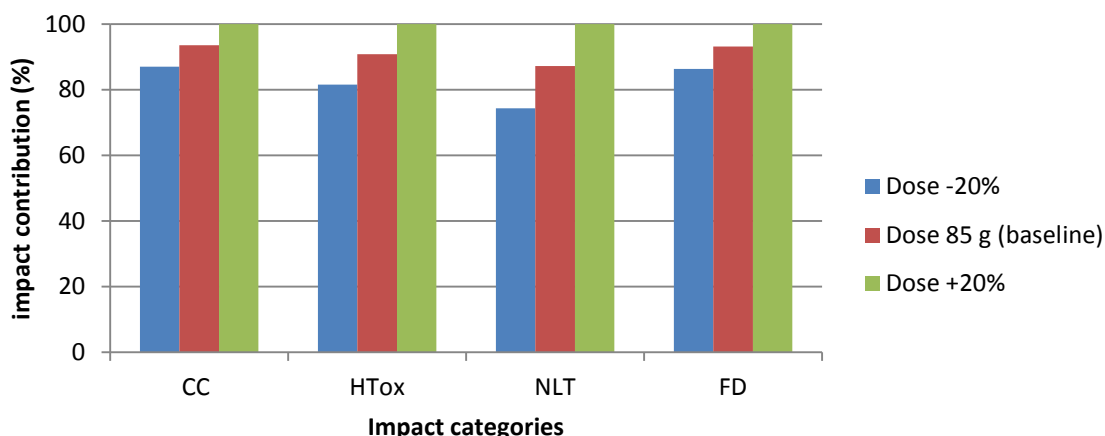
Rationale and discussion

As dosage is recognised as an important factor for laundry detergents, the environmental impacts of product dosage were investigated in the LCA (Section 4.9.3 of the Preliminary Report). The results of the sensitivity analysis found that an increase in 20% in the dosage results in an impact increase of 16% for terrestrial ecotoxicity and up to 13% for other impact categories. The results of the sensitivity analysis for dosage are shown in N.B. CC=Climate Change; HTox=Human Toxicity; NLT=Natural Land Transformation; FD=Fossil Depletion

Figure 3.

A review of dosages for laundry detergent products with and without the EU Ecolabel found that most products met the dosage requirements. In fact many of the products were well within the current dosage limits – for powder, liquid and gel products. Of the 45 different

products surveyed only 3 exceeded the current dosage limits and the average dosage across all product types was around 12 g/kg wash.



N.B. CC=Climate Change; HTox=Human Toxicity; NLT=Natural Land Transformation; FD=Fossil Depletion

Figure 3: Characterised results of sensitivity analysis for dosage

The investigation also revealed that, in general, low-duty detergents have lower dosages than heavy-duty detergents. Of the 45 products identified (EU Ecolabel and non-EU Ecolabel), 40 fell into the heavy duty laundry detergent category, with different ranges seen for gel, liquid and powder detergents (see Table 6). With averages for all types falling below the current limits; there is sufficient evidence to substantiate lower dosage limits for both heavy and low-duty detergents in all formats:

- For heavy duty powder detergents 80 % of products analysed met the proposed dosage requirement of 16 g/kg wash.
- For heavy duty liquid laundry detergents 78 % of products analysed met the proposed dosage requirements of 14 ml per kg wash.

Table 6: Dosage ranges for heavy duty laundry detergents

	No.	Dosage (ml/kg wash)			Current limit (ml kg/wash)	Proposed limit (ml kg/wash)
		Min	Max	Average		
Liquid	19	4,66	17,00	10,13	17	14
Powder	21	10,00	22,22	15,13	17	16

NB: Comprehensive data for other low duty, stain removers and fabric conditioners not available

For low-duty detergents 80 % of products analysed met the proposed dosage requirements of 10 ml/kg wash. It should be noted that only 5 different low-duty detergent products were analysed during this investigation.

Further information on the products analysed can be found in Appendix 2 of this document.

As well as analysing the dosage requirements of laundry detergent products available on the market, the requirements of other ecolabel schemes and voluntary agreements have also been analysed (Table 7). It should be noted that the dosage levels for EU Ecolabels are calculated based on medium water hardness whereas it is calculated based on soft water for others. Washing in soft water requires less detergent and therefore the maximum dosages will be lower

Table 7: Dosage requirements for other ecolabels and voluntary schemes

Scheme	Liquid detergents	Powder detergents	Low-duty	Fabric softeners	Stain removers
AISE PREP ⁹		17 g/kg wash*		8 ml/kg wash*	
AISE Charter for sustainable cleaning	17 ml/kg wash*	17 g/kg wash*		8 ml/kg wash*	
Good Env. Choice	11.0 ml/kg wash* For soft water	9 g/kg wash* For soft water		5,5 ml/kg wash* For soft water	9,0 ml/kg wash* For soft water
Nordic Swan	14,0 ml/kg wash For soft water	14,0 g/kg wash For soft water	4,5 g/kg wash For soft water		2,7 ml/kg wash For soft water
Current EU Ecolabel	14,0 ml/kg wash	17,0 g/kg wash	17,0 g or ml/kg wash		2,7 ml/kg wash

*Figure reported per wash; 4,5 kg wash load used to convert to g/kg wash.

Thus it is proposed to lower the maximum dosages for all types of **laundry detergents** to reflect the fact that the current values do not represent challenging limits for products on the market and the fact that more concentrated formulas are readily available.

It is proposed that the dosage limits for **stain removers** should remain the same as there has been no evidence to suggest that they should change. The current limit for stain removers matches that of the Nordic Swan criteria, which are the most demanding.

Should **fabric softeners** be added to the scope of the EU Ecolabel for laundry detergents, it is proposed to set a limit of 5,6ml/kg laundry, which corresponds to 25ml/load. This limit is in line with Australia's Good Environmental Choice and would set a strict requirement, which would reflect the fact that only the best environmentally performing products should be awarded the EU Ecolabel.

Consultation questions	
1	Are separate dosage requirements needed for concentrated products? Or should concentrated products be encouraged by setting strict dosage limits?
2	Is the limit proposed for fabric softeners sufficient?
3	Are the new proposed limits too strict? If yes please provide evidence.

⁹ <http://www.aise.eu/our-activities/sustainable-cleaning-78/product-resource-efficiency-projects.aspx>

8.4 Criterion 2: Toxicity to aquatic organisms: Critical Dilution Volume (CDV)

Current criterion 2

The critical dilution volume of the product must not exceed the following limits (CDV_{chronic}):

Product type	CDV _{chronic}
Heavy-duty laundry detergent, colour-safe detergent	35,000 l/kg wash
Low-duty detergent	20,000 l/kg wash
Stain remover (pre-treatment only)	3,500 l/kg wash (*)

(*) CDV limit based on an estimated dosage of 2 ml per application and 6 applications per wash-load of 4.5 kg for a liquid stain remover. Products dosed as, e.g. powder or paste shall comply with the same CDV limits.

Preservatives, colouring agents and fragrances present in the product shall also be included in the CDV calculation even if the concentration is lower than 0.010 % (100 ppm).

Assessment and verification: Calculation of the CDV chronic of the product. A spreadsheet for calculation of the CDV value is available on the EU Ecolabel website.

The values of the DF and TF parameters shall be as given in the Detergent Ingredient Database list (DID List). If the substance is not found on the DID List, the parameters shall be calculated using the guidelines in part B of the DID List and attaching the associated documentation.

Proposal for criterion 2 – "Toxicity to aquatic organisms"

The critical dilution volume (CDV) of the product must not exceed the following limits for the reference dosage:

Product type	Limit CDV
Heavy-duty laundry detergent, colour-safe detergent	32 000 l/kg laundry
Low-duty detergent	20 000 l/kg laundry
Stain remover (pre-treatment only)	3 500 l/kg laundry

Assessment and verification: Calculation of the CDV of the product. A spreadsheet for calculation of the CDV value is available on the EU Ecolabel website.

The Critical Dilution Volume (CDV) is calculated for all ingoing substances and mixtures (i) in the product using the following equation:

$$CDV = \sum CDV(i) = 1000 \cdot \sum dosage(i) \cdot \frac{DF(i)}{TF(i)}$$

Where:

dosage(i): weight (g) of the substance or mixture *i* in the reference dose,

DF(i): degradation factor for the substance or mixture *i*

TF(i): toxicity factor for the substance or mixture *i*

The values of *DF(i)* and *TF(i)* shall be as given in the DID list Part A (Appendix I – to be added). If a substance or mixture is not included in the DID list Part A, the applicant shall estimate the values follow the approach described in the DID list Part B (Appendix I – to be added).

Rationale and discussion

Detergents have great potential to cause disturbances in aquatic ecosystems as they cause chemical emissions to water during their entire life cycle. For this reason, EU Ecolabels limit the amount of emissions due to EU Ecolabel products. Critical Dilution Volume (CDV) is used in the current EU Ecolabels related to detergents to assess toxicity to aquatic organisms. It is proposed to keep this assessment method in this revision.

Further description of CDV and discussion of other assessment methods can be found in Section 8 of the Technical Annexe.

To align with the other EU Ecolabels related to detergents, it is proposed to shorten the criterion's name to "toxicity to aquatic organisms".

In order to revise the CDV limits for the different products covered by this EU Ecolabel on laundry detergents, stakeholders (including competent bodies) were contacted and asked to provide information on CDV values of products on the market. A total of 28 CDV values for laundry detergents were received, no information was received on stain removers. These can be split into liquids and powders (Table 8, see also Figure 4 and Figure 5 in Appendix 1 of this document for more detail). In summary it was found that the average values for the sample investigated were lower than the current criteria values.

Table 8: CDV ranges for heavy duty laundry detergents

	CDV (l/kg wash)			Current limit (l/kg wash)	Proposed limit (l/kg wash)
	Min	Max	Average		
Liquid	19 600	31 600	27 000	35 000	32 000
Powder	11 000	30 700	20 100	35 000	32 000

NB: Comprehensive data for other low duty, stain removers and fabric conditioners not available

For these heavy-duty detergents there is a wide range of CDV values, from 11,000 to 31,600 l/kg wash with average value for liquids of 27,000 and 20,100 l/kg wash for powders. This indicates that a proposal for stricter CDV limits for heavy duty detergents could be substantiated. It could even be argued that powder and liquid heavy-duty detergents could be covered by two different CDV limits as there are differences in the CDV values for the two types of products. This type of differentiation has also been suggested by stakeholders.

In general liquid detergents contain more surfactants per functional unit than powder detergents and, as surfactants have a high contribution to the CDV of the product, it follows that liquid detergents will have a higher contribution to the CDV than do powder detergents. Nevertheless, due to the relatively small sample size and as no other criterion differentiates the two, it is proposed to keep liquid and powder detergents under one requirement with a CDV limit of 32 000.

No change is proposed to the CDV limit for low-duty detergents or stain removers, as no data for these product types was obtained and the market analysis did not highlight any significant changes in the low-duty detergents market.

Should **fabric softeners** be added to the scope of the EU Ecolabel for laundry detergents, a CDV limit of 7 500 litres is proposed. This limit was proposed during the previous revision and was established following an investigation of the CDV values of 10 fabric softeners on the market. As fabric softeners have not experienced significant product innovation over the past few years, the previously proposed limits should still be suitable.

Consultation questions	
1	Should the CDV values be stricter?
2	Are different CDV values required liquid and powder detergents?
3	Is the CDV value for fabric softeners sufficient?

8.5 Criterion 3: Biodegradability of organics

Current criterion 3

The content of organic substances in the product that are aerobically non-biodegradable (not readily biodegradable aNBO) or anaerobically non-biodegradable (anNBO) shall not exceed the following limits:

aNBO:

Product type	aNBO, powder	aNBO, liquid
Heavy-duty laundry detergent, colour-safe detergent	1.0 g/kg wash	0.55 g/kg wash
Low-duty detergent	0.55 g/kg wash	0.30 g/kg wash
Stain remover (pre-treatment only) (*)	0.10 g/kg wash	0.10 g/kg wash

(*) aNBO limit based on an estimated dosage of 2 ml per application and 6 applications per wash-load of 4.5 kg for a liquid stain remover.

For anaerobically non-biodegradable organics (anNBO):

Product type	anNBO, powder	anNBO, liquid
Heavy-duty laundry detergent, colour-safe detergent	1.3 g/kg wash	0.70 g/kg wash
Low-duty detergent	0.55 g/kg wash	0.30 g/kg wash
Stain remover (pre-treatment only) (*)	0.10 g/kg wash	0.10 g/kg wash

(*) anNBO limit based on an estimated dosage of 2 ml per application and 6 applications per wash-load of 4.5 kg for a liquid stain remover.

Assessment and verification: Calculation of aNBO and anNBO for the product. A spreadsheet for use in calculating aNBO and anNBO values is available on the EU Ecolabel website.

Refer to the DID List. For ingredients 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 and anaerobically biodegradable shall be provided. See Appendix I.

Note that TAED should be considered anaerobically biodegradable

Proposal for criterion 3 – "Biodegradability"

a) Biodegradability of surfactants

To be discussed at the 1st AHWG meeting.

All surfactants shall be biodegradable under aerobic conditions.

All surfactants shall be biodegradable under anaerobic conditions.

b) Biodegradability of organic substances and mixtures

To be discussed at the 1st AHWG meeting.

The content of organic substances and mixtures in the product that are aerobically non-biodegradable (not readily biodegradable aNBO) or anaerobically non-biodegradable (anNBO) shall not exceed the following limits for the reference dosage:

aNBO

Product type	aNBO, powder	aNBO, liquid
Heavy-duty laundry detergent, colour-safe detergent	1,0 g/kg wash	0,55 g/kg wash
Low-duty detergent	0,55 g/kg wash	0,30 g/kg wash
Stain remover (pre-treatment only)	0,10 g/kg wash	0,10 g/kg wash

anNBO

Product type	anNBO, powder	anNBO, liquid
Heavy-duty laundry detergent, colour-safe detergent	1,3 g/kg wash	0,70 g/kg wash
Low-duty detergent	0,55 g/kg wash	0,30 g/kg wash
Stain remover (pre-treatment only)	0,10 g/kg wash	0,10 g/kg wash

Assessment and verification: The applicant shall provide documentation for the degradability of surfactants, as well as the calculations of aNBO and anNBO for the product. A spreadsheet for use in calculating aNBO and anNBO values is available on the EU Ecolabel website.

For both surfactants and aNBO and anNBO values, reference shall be made to the DID List. For ingredients 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 and anaerobically biodegradable shall be provided as described in Appendix I – to be added.

In the absence of documentation in accordance with the above requirements, an ingoing substances and mixtures other than a surfactant may be exempted from the requirement for anaerobic degradability if one of the following three alternatives is fulfilled:

1. Readily degradable and has low adsorption ($A < 25\%$);
2. Readily degradable and has high desorption ($D > 75\%$);
3. Readily degradable and non-bioaccumulating.

Testing for adsorption/desorption may be conducted in accordance with OECD guidelines 106.

Rationale and discussion

In the current EU Ecolabel criteria for laundry detergents only the biodegradability of organic substances is considered. Nevertheless, laundry detergents contain large number of surfactants, some of which are not readily biodegradable (aerobically, aNBO) or not anaerobically degradable (anNBO).

As explained in Section 9 of the Technical Annexe, the use of non-biodegradable (aNBO, anNBO) ingredients should be limited as substances which do not degrade rapidly in the environment have the potential to exert toxicity. A limitation (i.e. having maximum concentrations) allows for flexibility with formulations whilst reducing the risk to the environment.

As six EU Ecolabels related to detergents are being revised at the same time and as these products often have similar formulations, it is judicious to consider the harmonisation of their

criteria. In the case of biodegradability, the current six EU Ecolabel criteria approach the subject using three different approaches and stakeholder consultation has yielded a multitude opinions. It has thus been decided that a discussion during the 1st AHWG meeting will be conducted. As a starting point for the harmonised approach the criterion included in the most recently voted criteria for industrial and institutional products (laundry and dishwasher detergents) is proposed. It requires aerobic and anaerobic degradability of surfactants and limits the amount of non-aerobically and non-anaerobically degradable organics. Specific issues related to single product groups should be then taken into account (for instance in the case of IILD only non-ionic and cationic surfactants have to be anaerobically degradable, while anionic surfactants were exempted from this requirement). At present the values for aNBO and anNBO of the products are collected. This exercise will help evaluating validity of the current thresholds. The criterion on biodegradability will be revised following discussions with stakeholders.

Consultation questions	
1	Is the proposed approach to biodegradability suitable for consumer laundry detergents?
2	What would be the appropriate limits for aNBO and anNBO? Could stakeholders please share with the project team data on the amount of aNBO and anNBO organic substances and mixtures in the product groups covered?

8.6 Criterion 4: Excluded or limited substances and mixtures

Current criterion 4 a

The following ingredients must not be included in the product, neither as part of the formulation nor as part of any preparation included in the formulation:

- phosphates
- EDTA (ethylenediaminetetraacetate)
- nitro-musks and polycyclic musks.

Assessment and verification:

The applicant shall provide a completed and signed declaration of compliance.

Proposal for criterion X(a) – "Specified excluded ingoing substances and mixtures"

The product shall not be formulated or manufactured using any of the following compounds:

- (i) Phosphates
- (ii) Phosphonates that are not readily biodegradable
- (iii) APEO (alkylphenol ethoxylates) and APD (alkylphenol derivatives)
- (iv) EDTA (ethylenediaminetetraacetate)
- (v) Nitro-musks and polycyclic musks
- (vi) Hydroxyisohexyl 3-cyclohexene carboxaldehyde (HICC)
- (vii) Atranol and Chloroatranol
- (viii) Fragrance substances subject to the declaration requirement provided for in Regulation (EC) No 648/2004 of the European Parliament and of the Council on detergents (Annex VII) and which are not already excluded by criterion 2b shall not be present in quantities $\geq 0,010\%$ (≥ 100 ppm) per substance.

Assessment and verification: *the applicant shall provide :*

a) a signed declaration of compliance supported by declarations from manufacturers of mixtures, as appropriate, confirming that the listed substances and/or mixtures have not been included in the product.

b) written statements on compliance, including:

- information on the complexing agents in the product (detailed information of the type of phosphonates added as ingredients);
- information for the biodegradability of the phosphonates. A spreadsheet for use in calculating aNBO values is available on the EU Ecolabel website.

For aNBO values reference should be done to the DID List. For phosphonates which are not included in the most updated DID list, the relevant information from literature or other sources, or appropriate test results, showing that they are aerobically biodegradable shall be provided as described in Appendix I – to be added.

c) a declaration from the fragrance manufacturer specifying the content of each of the substances in the fragrances which are listed in Annex III of the Regulation (EC) No 1223/2009.

Rationale and discussion

Limiting environmentally harmful substances from the product group of LDs is important, as most ingredients of these products end up in the aquatic environment through sewage treatment systems after use and sometimes they can be released directly to aquatic environment.

The requirement (a) *Specified excluded ingoing substances and mixtures* lists substances of concern, which (due to their properties and related impacts) are undesired in Ecolabel products. Among them there are certainly also substances which are classified or excluded above the concentration of 0.01% by sub-section (b) *Hazardous substances and mixtures* of this criterion. Nevertheless, due e.g. lack of harmonised classification and their potential hazard, it seems reasonable to cover them under this section and exclude completely from the EU Ecolabel products. We are conscious that at this stage overlaps in criteria regarding substances are possible. This will be tackled at the later stage of the process.

The information and grounds that lead to the exclusion of the following substances and substance groups are summarized in Section 10 of the Technical Annexe and in the last section of this criterion.

Harmonisation with IILD product group

Where possible, the list of specified excluded ingoing substances should be harmonised between the IILD and LD product groups. The Commission Statement following the previous

revision on of the requirements expressed that the possibility of a closer alignment between the Industrial and Institutional and Domestic criteria should be investigated. As a consequence the substances to be excluded in various product groups will be discussed in a horizontal session in the 1st AHWG meeting.

At present the following substances are proposed to be added to the excluded substances list based on initial feedback and information collected (however, further consideration of the scope if this criterion is needed):

- APEO (alkylphenol ethoxylates) and APD (alkylphenol derivatives), excluded already in IILD
- Hydroxyisohexyl 3-cyclohexene carboxaldehyde (HICC), Atranol and Chloroatranol;

Consultation questions	
1	Is exclusion for APEO and APD substances required for this product group?
2	Are exclusions required for other substances?

Current criterion 4b

According to Article 6(6) of the Regulation (EC) No 66/2010 on the EU Ecolabel, the product or any part of it thereof shall not contain substances or mixtures meeting the criteria for classification with the hazard classes or categories in accordance with Regulation (EC) No 1272/2008 specified below nor shall it contain substances referred to in Article 57 of Regulation (EC) No 1907/2006.

List of hazard statements:

GHS Hazard Statement	EU Risk Phrase
H300 Fatal if swallowed	R28
H301 Toxic if swallowed	R25
H304 May be fatal if swallowed and enters airways	R65
H310 Fatal in contact with skin	R27
H311 Toxic in contact with skin	R24
H330 Fatal if inhaled	R23/26
H331 Toxic if inhaled	R23
H340 May cause genetic defects	R46
H341 Suspected of causing genetic defects	R68
H350 May cause cancer	R45
H350i May cause cancer by inhalation	R49
H351 Suspected of causing cancer	R40
H360F May damage fertility	R60
H360D May damage the unborn child	R61
H360FD May damage fertility. May damage the unborn child	R60/61/60-61
H360Fd May damage fertility. Suspected of damaging the unborn child	R60/63
H360Df May damage the unborn child. Suspected of damaging fertility	R61/62
H361f Suspected of damaging fertility	R62
H361d Suspected of damaging the unborn child	R63
H361fd Suspected of damaging fertility. Suspected of damaging the unborn child.	R62-63
H362 May cause harm to breast fed children	R64
H370 Causes damage to organs	R39/23/24/25/26/27/28
H371 May cause damage to organs	R68/20/21/22
H372 Causes damage to organs through prolonged or repeated exposure	R48/25/24/23
H373 May cause damage to organs through prolonged or repeated exposure	R48/20/21/22
H400 Very toxic to aquatic life	R50
H410 Very toxic to aquatic life with long-lasting effects	R50-53
H411 Toxic to aquatic life with long-lasting effects	R51-53
H412 Harmful to aquatic life with long-lasting effects	R52-53
H413 May cause long-lasting harmful effects to aquatic life	R53
EUH059 Hazardous to the ozone layer	R59
EUH029 Contact with water liberates toxic gas	R29
EUH031 Contact with acids liberates toxic gas	R31
EUH032 Contact with acids liberates very toxic gas	R32
EUH070 Toxic by eye contact	R39-41
Sensitising substances	
H334: May cause allergy or asthma symptoms or breathing difficulties if inhaled	R42

H317: May cause allergic skin reaction	R43
<p>This criterion applies to all ingredients present in concentrations $\geq 0.010\%$, including preservatives, colouring agents and fragrances.</p> <p>The use of substances or mixtures which upon processing change their properties (e.g. become no longer bioavailable, or undergo chemical modification) in a way that the previously identified hazard no longer applies are exempted from the above requirement. Derogations: the following substances or mixtures are specifically exempted from this</p>	

Proposal for criterion X(b) – "Hazardous substances and mixtures"

According to Article 6(6) of Regulation (EC) No 66/2010, the EU Ecolabel may not be awarded to any product that contains substances meeting criteria for classification with the hazard statements specified in Table 2 in accordance with Regulation (EC) No 1272/2008 of the European Parliament and of the Council or Council Directive 67/548/E or substances referred to in Article 57 of Regulation (EC) No 1907/2006.

The hazard statements in Table 2 generally refer to substances. However, if information on substances cannot be obtained, the classification rules for mixtures apply.

Substances or mixtures which change their properties through processing and thus become no longer bioavailable, or undergo chemical modification in a way that removes the previously identified hazard are exempted from criterion X(b).

Table 2: Hazard statements

GHS Hazard Statement
H300 Fatal if swallowed
H301 Toxic if swallowed
H304 May be fatal if swallowed and enters airways
H310 Fatal in contact with skin
H311 Toxic in contact with skin
H330 Fatal if inhaled
H331 Toxic if inhaled
H340 May cause genetic defects
H341 Suspected of causing genetic defects
H350 May cause cancer
H350i May cause cancer by inhalation
H351 Suspected of causing cancer
H360F May damage fertility
H360D May damage the unborn child
H360FD May damage fertility. May damage the unborn child
H360Fd May damage fertility. Suspected of damaging the unborn child
H360Df May damage the unborn child. Suspected of damaging fertility
H361f Suspected of damaging fertility
H361d Suspected of damaging the unborn child
H361fd Suspected of damaging fertility. Suspected of damaging the unborn child.

H362 May cause harm to breast fed children
H370 Causes damage to organs
H371 May cause damage to organs
H372 Causes damage to organs through prolonged or repeated exposure
H373 May cause damage to organs through prolonged or repeated exposure
H400 Very toxic to aquatic life
H410 Very toxic to aquatic life with long-lasting effects
H411 Toxic to aquatic life with long-lasting effects
H412 Harmful to aquatic life with long-lasting effects
H413 May cause long-lasting harmful effects to aquatic life
EUH059 Hazardous to the ozone layer
EUH029 Contact with water liberates toxic gas
EUH031 Contact with acids liberates toxic gas
EUH032 Contact with acids liberates very toxic gas
EUH070 Toxic by eye contact
Sensitising substances
H334: May cause allergy or asthma symptoms or breathing difficulties if inhaled
H317: May cause allergic skin reaction

This criterion applies to all ingredients present in concentrations $\geq 0.01\%$, including preservatives, colouring agents and fragrances.

For consumer laundry products, the substances in Table 3 are exempted from the obligation in Article 6(6) of Regulation (EC) No 66/2010 following application of Article 6(7) of the same Regulation.

Table 3: Derogated substances - To be discussed in the 1st AHWG meeting

Derogated substance	H phrases
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Assessment and verification: the applicant shall demonstrate compliance with criterion x(b) for any ingoing substance or mixture present at concentrations greater than 0.010% in the product.

A declaration of compliance shall be provided by the applicant supported, where appropriate, by the declarations from producer(s) of the raw materials that none of these ingoing substances and/or mixtures meet the criteria for classification with one or more of hazard statements listed in Table 2 in the form(s) and physical state(s) they are present in the product.

The following technical information related to the form(s) and physical state(s) of the ingoing substances and/or mixtures as present in the product shall be provided to support the declaration of non-classification:

- (i) For substances that have not been registered under Regulation (EC) No 1907/2006 and/or which do not yet have a harmonised CLP classification: Information meeting the requirements listed in Annex VII to that Regulation;
- (ii) For substances that have been registered under Regulation (EC) No 1907/2006 and which do not meet the requirements for CLP classification: Information based on the REACH registration dossier confirming the non-classified status of the substance;
- (iii) For substances that have a harmonised classification or are self-classified: safety

data sheets where available. If these are not available or the substance is self-classified then information shall be provided relevant to the substances hazard classification according to Annex II to Regulation (EC) No 1907/2006;

(iv) In the case of mixtures: safety data sheets where available. If these are not available then calculation of the mixture classification shall be provided according to the rules under Regulation (EC) No 1272/2008 together with information relevant to the mixtures hazard classification according to Annex II to Regulation (EC) No 1907/2006.

For substances listed in Annexes IV and V to Regulation (EC) No 1907/2006, which are exempted from registration obligations under point (a) and (b) of Article 2(7) of that Regulation, a declaration to this effect by the applicant shall suffice to comply with criterion x(b).

A declaration on the presence of ingoing substances that fulfil the derogation conditions shall be provided by the applicant, supported, where appropriate, by declarations from the producer(s) of the raw materials. Where required for the derogation, the applicant shall confirm the concentrations of these ingoing substances in the final product.

Rationale and discussion

Background information on the criterion for hazardous substance is given in Section 10.2 of the Technical Annexe.

Assessment and verification

The assessment and verification has been updated to harmonise with a recently voted similar product group (ROC).

Consultation questions

1	Do you have information which could substantiate keeping/removing the current derogations?
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Current criterion 4c

a) Substances listed in accordance with Article 59(1) of Regulation (EC) No 1907/2006

No derogation from the exclusion in Article 6(6) shall be given concerning substances identified as substances of very high concern and included in the list foreseen in Article 59 of Regulation (EC) No 1907/2006 present in mixtures in concentrations higher than 0,010 %.

Assessment and verification: The list of substances identified as substances of very high concern and included in the candidate list in accordance with Article 59 of Regulation (EC) No 1907/2006 can be found here: http://echa.europa.eu/chem_data/authorisation_process/candidate_list_table_en.asp

Proposal for criterion X(c) – "Ingoing substances listed in accordance with Article 59(1) of Regulation (EC) No 1907/2006"

No derogation from the exclusion in Article 6(6) of Regulation (EC) No 66/2010 shall be given concerning ingoing substances identified as substances of very high concern and included in the list provided for in Article 59(1) of Regulation (EC) No 1907/2006¹⁰, present in the product in concentrations higher than 0.010 % (weight by weight).

Assessment and verification: *reference to the list of substances identified as substances of very high concern shall be made on the date of application. The applicant shall provide the full formulation of the product to the competent body. The applicant shall also provide a declaration of compliance with criterion 3(c), together with related documentation, such as declarations of compliance signed by the material suppliers and copies of relevant safety data sheets for substances or mixtures.*

Rationale and discussion

No content-wise changes are proposed. The text is proposed to be aligned with that of the corresponding criterion in the ROC criteria.

Current criterion 4d

(d) Specified limited ingredients – fragrances

Any ingredients added to the product as a fragrance shall be manufactured and handled following the code of practice of the International Fragrance Association (IFRA). The code can be found on IFRA website: <http://www.ifraorg.org>.

The recommendations of the IFRA Standards concerning prohibition, restricted use and specified purity criteria for materials shall be followed by the manufacturer.

Fragrance substances subject to the declaration requirement provided for in Regulation (EC) No 648/2004 of the European Parliament and of the Council on detergents (Annex VII) and which are not already excluded by criterion 4b and (other) fragrance substances classified H317 (May cause allergic skin reaction) and/or H334 (May cause allergy or asthma symptoms or breathing difficulties if inhaled) shall not be present in quantities ≥ 0.010 % (≥ 100 ppm) per substance..

Assessment and verification: The applicant shall provide a signed declaration of compliance indicating the amount of fragrances in the product. The applicant shall also provide a declaration from the fragrance manufacturer specifying the content of each of the substances in the fragrances which are listed in Annex III, Part I to Council Directive 76/768/EEC as well as the content of (other) substances which have been assigned the risk phrases H317/R43 and/or H334/R42.

¹⁰ http://echa.europa.eu/chem_data/authorisation_process/candidate_list_table_en.asp

Proposal for criterion X(d) - Fragrances

- (i) Any [ingoing substance](#) or [mixture](#) added to the product as a fragrance shall be manufactured and handled following the code of practice of the International Fragrance Association (IFRA). The code can be found on the IFRA website: <http://www.ifraorg.org>. The recommendations of the IFRA Standards concerning prohibition, restricted use and specified purity criteria for materials shall be followed by the manufacturer.
- (ii) Fragrance substances subject to the declaration requirement provided for in Regulation (EC) No 648/2004 of the European Parliament and of the Council on detergents (Annex VII) and which are not already excluded by criterion X(b) shall not be present in quantities $\geq 0.010\%$ (≥ 100 ppm) per substance.

Assessment and verification: *the applicant shall provide a signed declaration of compliance, supported by a declaration of the fragrance manufacturer, as appropriate, specifying the content of each of the substances in the fragrances which are listed in [Annex III of the Regulation \(EC\) No 1223/2009](#).*

Rationale and discussion

Background information on the criterion for fragrances is given in Section 10.3 of the Technical Annex.

No content-wise change is proposed to this criterion. The exclusion of specific fragrances (Hydroxyisohexyl 3-cyclohexene carboxaldehyde (HICC), Atranol and Chloroatranol) was added to the requirements on fragrances but included in the sub-criterion (a) on Specified excluded ingoing substances and mixtures.

Furthermore, the reference to the Directive 76/768/EEC (Cosmetics Directive) was changed to Regulation (EC) No 1223/2009 (Cosmetic Regulation).

Current criterion 4e

(e) Biocides

(i) The product may only include biocides in order to preserve the product, and in the appropriate dosage for this purpose alone. This does not refer to surfactants, which may also have biocidal properties.

Assessment and verification: The applicant shall provide copies of the material safety data sheets of any preservatives added, together with information on their exact concentration in the product. The manufacturer or supplier of the preservatives shall provide information on the dosage necessary to preserve the product (e.g. results of a challenge test or equivalent).

(ii) It is prohibited to claim or suggest on the packaging or by any other communication that the product has an antimicrobial or disinfecting effect.

Assessment and verification: The applicant shall provide texts and layouts used on each type of packaging and/or an example of each different type of packaging to the competent body.

Proposal for criterion X(e) – "Preservatives"

- (i) The product may contain preservatives provided that they are not bioaccumulating. A preservative is not considered bioaccumulating if $BCF < 100$ or $\log Pow < 3,0$. If both BCF and $\log K_{ow}$ values are available, the highest measured BCF value shall be used.
- (ii) Preservatives in the product shall not release or degrade to substances that are classified in accordance with the requirements of criterion x(b) Hazardous substances and mixtures.
- (iii) It is prohibited to claim or suggest on the packaging or by any other communication that the product has an antimicrobial action.

Assessment and verification: the applicant shall provide a signed declaration of compliance, together with copies of the safety data sheets of any preservative added, and information on its BCF and/or $\log K_{ow}$ values. The applicant shall provide also artwork of the packaging.

Rationale and discussion

Biocides are used in detergent products for preservation purposes. They prevent the product from spoiling during storage by preventing the growth of microorganisms. However, the use of biocides in detergent products is a cause for concern; they are highly toxic to aquatic organisms and can also produce hypersensitivity and allergies (for background information see Section 10.4 of the Technical Annexe).

In this revision the following changes are proposed:

- The name of sub-criterion is proposed to be changed to 'Preservatives'.
- The statement "Product may only include biocides in order to preserve the product, and in the appropriate dosage for this purpose alone. This does not refer to surfactants, which may also have biocidal properties" is proposed to be removed as CBs mentioned in the ROC criteria development process that they cannot verify the compliance with this requirement and it should be removed.
- A requirement that biocides included in the product shall not be bioaccumulating is proposed to be added to further harmonise the criteria of the six different detergent and cleaning product groups. Some EU Ecolabel criteria (i.e., for the IILD, IIDD and ROC), as well as Nordic Swan criteria for dishwasher detergents have a requirement that preservatives may only be used if they are not bioaccumulating. The motivation behind this requirement is that substances that bioaccumulate collect in the fat tissues of living organisms and can cause long-lasting damage.
- Finally, in the recent criteria developments it was pointed out that sometimes preservatives may release or degrade to substances that are even more hazardous than the preservatives used. Therefore an additional requirement is proposed for consideration: *Preservatives in the product shall not release or degrade to substances that classified in accordance with the requirements of criterion x(b) Hazardous substances and mixtures.*

Consultation questions

- | | |
|---|---|
| 1 | Do you agree with the changes proposed to requirement on preservatives? |
|---|---|

Proposal for criterion X(f) – Colorants NEW REQUIREMENT

Colorants in the product must not be bioaccumulating. A colorant is considered not bioaccumulating if $BCF < 100$ or $\log P_{ow} < 3.0$. If both BCF and $\log K_{ow}$ values are available, the highest measured BCF value shall be used. In the case of colouring agents approved for use in food, it is not necessary to submit documentation of bioaccumulation potential.

Assessment and verification: the applicant shall provide copies of the safety data sheets of any colorant added together with information on its BCF and/or $\log K_{ow}$ value, or documentation to ensure that the colouring agent is approved for use in food.

Rationale and discussion

The inclusion of this criterion is proposed in order to harmonise the different criteria sets.

For more information on colorants see Section 10.6 of the Technical Annexe.

Proposal for criterion X(g) – Enzymes NEW REQUIREMENT

Enzymes must be in liquid form or dust-free granulate. Enzymes must be free from micro-organism remnants from manufacture.

Assessment and verification: the applicant shall provide copies of the material safety data sheets of any enzyme added, together with documentation to ensure that the enzyme is free from micro-organism remnants.

Rationale and discussion

The inclusion of this criterion is proposed in order to harmonise the different criteria sets.

For more information on colorants see Section 10.2.4 of the Technical Annexe.

Proposal for criterion X(h) – Phosphorus content

The total content of phosphorus in the product is limited to 0,03 Pg/kg laundry.

Phosphonates which are not readily biodegradable shall not be included in the product, neither as part of the formulation nor as part of any mixture included in the formulation

Assessment and verification: The applicant shall provide written statements on compliance, including:

- information on the complexing agents in the product (detail information of the type of phosphorus-content substances added as ingredients);
- information on the recommended dose for different levels of soiling or water hardness (when applicable);
- calculation of the product's total P-content

Rationale and discussion

Phosphorous is a source of eutrophication of water bodies. Information on its environmental impacts are reported in Section 10.1.1 of the Technical Annexe.

The Detergents Regulation has recently been reviewed and addressed the use of phosphates, introducing a limitation on the use of phosphates and other phosphorous compounds in household detergents ($< 0,5g$ per dose for the main cycle of wash process). Phosphates are already banned in laundry detergents in a range of other European countries and many of the

retailers in Europe have voluntarily decided to phase out phosphates. High market shares of phosphate free detergents are already a reality in several European countries¹¹.

Phosphates have been replaced in many products by phosphonates or phosphonic acids. One of the uses of phosphonates in laundry detergents is to stabilise peroxy bleaches, this is achieved through inactivating metal ions that catalyse peroxide decomposition¹². The majority of phosphonates found in detergents will end up in sewage sludge. Due to their low terrestrial toxicity, this is not a cause for concern.

In order to limit the environmental impact caused by phosphorus-content compounds, two measures are generally implemented in the ecolabel schemes. The first one, and in line with the Detergent Regulation, is the restriction in the total amount of phosphorus in the products. This approach has also been implemented by national regulations such as the Swedish and Finnish ones that limit the content of phosphorus up to 0,2 wt%. The second one is the restriction of using phosphates and/or not biodegradable phosphonates. This approach has been undertaken mainly in ecolabel schemes such as Good environmental Choice label.

The revision of the EU ecolabel criterion will consider a limitation in the total content of phosphorus in the product and a ban for phosphates and phosphonates that don't comply with certain requirements.

Consultation questions	
1	Do you agree with the proposed requirements on colorants and enzymes?
2	Do you agree with the proposed limitation on phosphorus content?

¹¹ Opinion of the scientific committee on toxicity, ecotoxicity and the environment on "the environmental impact (reduction in eutrophication) that would result from banning sodium tripolyphosphate (STPP) in household detergents" adopted 12-13 November 2003

¹² Polyphosphonates (phosphonic acids), ingredient safety information, P&G Environmental Science data.

8.7 Criterion 5: Packaging requirements

Current criterion 5

a) Weight/utility (WUR):

The weight/utility ratio (WUR) of the product shall not exceed the following values:

Product type	WUR
Powders	1.2 g/kg wash
Others (e.g. liquids, gels, tablets, capsules)	1.5 g/kg wash

Exceptions:

Plastic/paper/cardboard packaging containing more than 80% recycled material is exempted from this requirement.

Packaging is regarded as recycled if the raw material used to make the packaging has been collected from packaging manufacturers at the distribution stage or at the consumer stage. Where the raw material is industrial waste from the material manufacturer's own production process, then the material will not be regarded as recycled.

Assessment and verification: Calculation of the WUR of the product. A spreadsheet for this calculation is available on the EU Ecolabel website. Account on the content for recycled material in the packaging. For approval of refill packaging, the applicant and/or retailer shall document that the refills will be/are available for purchase on the market.

b) Plastic packaging:

Only phthalates that at the time of application have been risk assessed and have not been classified according to criterion 4(b) (and combinations hereof) may be used in the plastic packaging.

c) Labelling of plastic packaging:

To allow for identification of different parts of the packaging for recycling, plastic parts in the primary packaging must be marked in accordance with DIN 6120, Part 2 or the equivalent. Caps and pumps are exempted from this requirement.

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

Proposal for criterion 5 – "Packaging"

a) Weight/utility ratio (WUR)

The weight/utility ratio (WUR) of the product shall be calculated for the primary packaging only and shall not exceed the following values for the reference dosage:

Product type	WUR
Powders	1,2 g/kg wash
Others (e.g. liquids, gels, tablets, capsules)	1,5 g/kg wash

Are exempted from this requirement:

- Plastic/paper/cardboard packaging containing more than 80 % recycled materials,
- Paper/cardboard packaging that comes 80% from certified sustainable sources,
- Plastic packaging containing more than 80 % plastic from sustainable sources.

Assessment and verification: the applicant shall provide the calculation of the WUR of the product. A spreadsheet for this calculation is available on the EU Ecolabel website. If the product is sold in different packaging (i.e. with different volumes), the calculation shall be submitted for each packaging size for which the EU Ecolabel shall be awarded.

The applicant shall provide a completed and signed declaration for the content of recycled material in the packaging.

- For paper and cardboard, packaging is regarded as recycled if the raw material used to make the packaging has been collected from packaging manufacturers at the distribution stage or at the consumer stage. Where the raw material is industrial waste from the material manufacturer's own production process, then the material will not be regarded as recycled.

- For plastic, packaging is regarded as recycled if the raw material used to make the packaging comes from [industrial waste](#) or has been collected from packaging manufacturer at the distribution or at the consumer stage.

The applicant shall provide a completed and signed declaration for the content of sustainably sourced material in the packaging. For paper and cardboard, the applicant shall provide TBD. For plastic, the applicant shall provide TBD.

The WUR is calculated as follows:

$$WUR = \sum ((W_i + U_i) / (D_i * R_i))$$

Where:

W_i : weight (g) of the primary packaging (i),

U_i : weight (g) of non-recycled and non-sustainably sourced packaging in the primary packaging (i). $U_i = W_i$ unless the applicant can document otherwise,

D_i : number of reference doses contained in the primary packaging (i),

R_i : number of times that the primary packaging (i) can be refilled and used for the same purpose. $R_i = 1$ (packaging is not reused for the same purpose) unless the applicant can document a higher number.

b) Design for recycling

Plastic packaging shall be designed to facilitate effective recycling by avoiding potential contaminants and incompatible materials that are known to impede separation or reprocessing or to reduce the quality of recycle. The label or sleeve, closure and, where applicable, barrier coatings shall not

comprise, either singularly or in combination the materials and components listed in Table 4. Pumps are exempted from this requirement.

Table 4: Materials and components excluded from packaging elements

Packaging element	Excluded materials and components ¹³
Label or sleeve	<ul style="list-style-type: none"> - PS label or sleeve in combination material used with a PET, PP or HDPE bottle - PVC label or sleeve in combination with a PET, PP or HDPE bottle - PETG label or sleeve in combination with a PET bottle - Sleeves made of different polymer than the bottle - Labels or sleeves that are metallised or are welded to a packaging body (in mould labelling)
Closure	<ul style="list-style-type: none"> - PS closure in combination a with a PET, HDPE or PP bottle - PVC closure in combination with a PET, PP or HDPE bottle - PETG closures and/or closure material with density of above 1 g/cm³ in combination with a PET bottle - Closures made of metal, glass, EVA - Closures made of silicone. Exempted are silicone closures with a density < 1 g/cm³ in combination with a PET bottle and silicone closures with a density > 1g/cm³ in combination with PEHD or PP bottle - Metallic foils or seals which remain fixed to the bottle or its closure after the product has been opened
Barrier coatings	Polyamide, EVOH, functional polyolefins, metallised and light blocking barriers

Assessment and verification: The applicant shall submit a signed declaration of compliance specifying the material composition of the packaging including the container, label or sleeve, adhesives, closure and barrier coating, and a sample of primary packaging.

Rationale and discussion

From a life cycle perspective, packaging is not the most important environmental impact for laundry detergents but can represent up to 24% of impact contribution for agricultural land occupation when non-recycled material is used in the packaging (Section 4.4 of the Preliminary Report), for example. It is therefore proposed that a criterion on packaging is kept present in the EU Ecolabel for laundry detergents.

Further information on the wording of the proposed criterion and background information on packaging can be found in the Section 11 of the Technical Annexe.

a) Weight/Utility Ratio (WUR)

No changes are proposed to the WUR values, as mixed feedback was received on the subject. Some stakeholders suggested tightening the limits while others would prefer to see them increased, as to ensure that the quality of the packaging does not suffer. Overall, the only change proposed is to consider the percentage of recycled and sustainably sourced materials when calculating WUR, in order to promote the use of these types of materials.

Further information on this aspect can be found in Sections 11.3.1 and 11.3.2 of the Technical Annexe.

c) Design for recycling

¹³ EVA – Ethylene Vinyl Acetate, EVOH – Ethylene vinyl alcohol, HDPE – High-density polyethylene, PET – Polyethylene terephthalate, PETG – Polyethylene terephthalate glycol-modified, PP – Polypropylene, PS – Polystyrene, PVC – Polyvinylchloride

In line with the EU Ecolabel on Rinse-off cosmetics, it is proposed to remove the requirement on the labelling of plastics parts but instead to promote the recyclability of packaging by avoiding combinations of incompatible materials and potential contaminants.
Further information on this aspect can be found in Section 11.3.4 of the Technical Annexe.

Consultation questions	
1	Packaging is not one of the top 5 KPIs for laundry detergents, should a criterion related to it be kept?
2	Are the WUR limits appropriate?
3	Is the design for recycling requirement suitable for this product group?

8.8 Criterion 6: Fitness for use

Current criterion 6

The product shall comply with the performance requirements as specified for the relevant product type according to the EU Ecolabel laundry detergents performance test's latest version *which can be found here:* <http://ec.europa.eu/environment/ecolabel/products-groups-and-criteria.html>

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

Proposal for criterion 6

Tests shall be carried out to ensure that the product has a satisfactory wash performance at the lowest recommended dosage for the water hardness according to the EU Ecolabel protocol available at:

<http://ec.europa.eu/environment/ecolabel/documents/Performance%20Test%20Laundry%20Detergents.pdf>

The tests shall be carried out at the water temperature stated in the protocol or at the lowest temperature the product claims to be effective at. The test shall be performed by a laboratory complying with Appendix (to be added)

Assessment and verification The applicant shall provide documentation confirming that the product has been tested under the protocol conditions and that the results passed the minimum washing performance required. Information should be provided on the compliance within the laboratory requirements included in Appendix (to be added)

Rationale and discussion

A revised EU Ecolabel performance test for laundry detergents was introduced in 2014 (20/06/2014) as a separate activity to this EU Ecolabel criteria revision. It is intended to be used directly as evidence of compliance with the fitness for use criterion.

This criterion ensures that the product is fit to wash at low temperatures as the protocol proposes cycles to test the consumer laundry detergents and other products that vary from 15 to 30C. The maximum of 30C in the newly updated protocol is lower than the previous maximum washing temperatures and lower than the current average washing temperature used across Europe (41C¹⁴). As one key aspect of convincing users to opt for lower washing temperatures is to ensure that the products they use are effective at these temperatures, requiring for all tests to be performed at 30C is crucial.

If fabric softeners are to be included in the product group a performance test for them is required as they are not included in the current fitness for use test for laundry detergents. During the previous revision, the following test guidelines for fabric softeners were developed:

"The performance of the product shall be documented by a relevant test for inhibition of static electricity in synthetic materials or other relevant documentation. The test can be a laboratory test, the applicant's internal quality test, a consumer test or a comparative test with a corresponding product. If a washing test is performed, the washing temperature shall be max. 40 °C and the water hardness shall be 2,5 mmol CaCO₃/l (equivalent to 14 °dH, medium European water hardness). The general conditions for a consumer test are described in Appendix III".

In line with the updated testing requirements for detergents, the maximum testing temperature for fabric softeners, should they be included in the scope, would be lowered to 30C.

For further information please refer to Section 12 of the Technical Annexe.

¹⁴ AISE "I prefer 30" substantiation dossier, June 2013

Consultation questions

1	Do you agree with the requirement on wash performance at low temperatures?
2	Are any other changes required for this criterion?

8.9 Criterion 7: Points

Current criterion 7

a) Heavy-duty laundry detergents, Colour-safe laundry detergents:

A minimum of 3 points shall be achieved from the matrix below. The maximum achievable points are 8 points for coldwater products, 7 points for low-temperature and 6 points for other products.

Climate profile	Coldwater product (washing performance documents at ≤ 20 °C)	2P
	Low-temperature product (washing performance documented at >20 °C to <30 °C)	1P
Maximum dosage	Max dosage ≤ 14 g/kg wash (powder/tablet) or ≤ 14 ml/kg wash (liquid/gel)	2P
	Max dosage ≤ 16 g/kg wash (powder/tablet) or ≤ 16 ml/kg wash (liquid/gel)	1P
CDV	CDVchronic $<25,000$ l/kg wash	2P
	CDVchronic between 25,000 to 30,000 l/kg wash	1P
aNBO	aNBO ≤ 75 % of limit value	1P
anNBO	anNBO ≤ 75 % of limit value	1P
Minimum points to be achieved in order to be awarded EU Ecolabel		3P

b) Low-duty laundry detergents:

A minimum of 3 points shall be achieved from the matrix below. The maximum achievable points are 8 points for coldwater products, 7 points for low-temperature products and 6 points for other products.

Climate profile	Coldwater product (washing performance documented at ≤ 20 °C)	2P
	Low-temperature product (washing performance documented at >20 °C to <30 °C)	1P
Maximum dosage	Max dosage ≤ 14 g/kg wash (powder/tablet) or ≤ 14 ml/kg wash (liquid/gel)	2P
	Max dosage ≤ 16 g/kg wash (powder/tablet) or ≤ 16 ml/kg wash (liquid/gel)	1P
CDV	CDVchronic $<15,000$ l/kg wash	2P
	CDVchronic between 15,000 to 18,000 l/kg wash	1P
aNBO	aNBO ≤ 75 % of limit value	1P
anNBO	anNBO ≤ 75 % of limit value	1P
Minimum points to be achieved in order to be awarded EU Ecolabel		3P

Assessment and verification: Calculation of the sum of points achieved for the product. A spreadsheet for this calculation is available on the EU Ecolabel.

Proposal for criterion 7

The points system is removed.

Rationale and discussion

During the previous revision, the points system was introduced in order to promote cold-water and low-temperature products, which reduce the energy consumption during the use phase linked to the main environmental impact of laundry detergents. The scoring system aimed to address the trade-offs in CDV, aNBO, anNBO, dosage and packaging which were thought to be required for low-temperature formulations. However, in practice, the points system turned out to be confusing and too easy to pass as developments in formulation have negated the need for large trade-offs for achieving low-temperature performance.

As long ago as 2006, Procter and Gamble's analysis (Comparative Life Cycle Assessment (LCA) of Ariel "Actif à froid" (2006), a laundry detergent that allows to wash at colder wash temperatures, with previous Ariel laundry detergents (1998, 2001)) calculated no detrimental aquatic toxicity from the reformulated low temperature product. Given the developments in

chemistry since that time, there seems to be little case for supporting a criterion which allows a trade-off between these two parameters. *For further information on the effects of wash temperature on the overall environmental impact of the product please see the Preliminary Report Chapter 4 and Section 7.1 of the Technical Annex.*

As washing temperature plays contributes to the environmental impacts of laundry detergents, it is proposed to mainly tackle it with the "Fitness for use" criterion and the requirement for all detergents to be proved efficient at a maximum of 30C. Section 7.2 of the Technical Annex discusses in more detail how washing water temperature can be addressed in order to promote low or cold water use among consumers.

Consultation questions	
1	Should the points system be removed?
2	Are there any other requirements which can be used to encourage the use of lower temperature wash cycles?

8.10 Criterion 8: Consumer information

Current criterion 8

a) Dosage instructions:

The recommended dosages shall be specified for 'normally' and 'heavily' soiled textiles and various water hardness ranges relevant to the countries concerned and referred as appropriate to the weight of textile. (Not applicable for stain removers).

The difference between the dosage recommendations for the lowest water hardness range (soft) for normally soiled textiles and the highest water hardness range (hard) for heavily soiled textiles may not differ by more than a factor of 2. (Not applicable for stain removers).

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 on the package for 'normally soiled' textiles and a water hardness corresponding to 2.5 mmol CaCO₃ /l.

Where only water hardness lower than 2.5 mmol CaCO₃ /l are included in the recommendations, the maximum dosage recommended for 'normally soiled' shall be lower than the reference dosage used in the washing performance test (water hardness 2.5 mmol CaCO₃ /l).

b) Information appearing on the packaging:

The following washing recommendations (or equivalent) shall appear on the packaging of EU Ecolabelled products within the product group except pre-treatment stain removers. The washing recommendations may be present either as text or symbols:

- Wash at the lowest possible temperature
- Always wash with full load
- Dose according to soil and water hardness, follow the dosing instructions
- If you are allergic to house dust, always wash bedding at 60 °C. Increase wash temperature to 60 °C in case of infectious diseases.
- Using this EU Ecolabelled product according to the dosage instructions will contribute to the reduction of water pollution, waste production and energy consumption.'

c) Claims on the packaging:

In general, claims on the packaging shall be documented either through performance testing or other documentation (e.g. claims of efficiency at low temperatures, claims of removal of certain stain types, claims of benefits for certain types or colours of textile or other claims of specific properties/benefits of the product).

- e.g. if a product claims efficiency at 20 °C, the efficiency test must be performed at ≤ 20 °C (and correspondingly for other temperature claims below 30 °C). EN L 111/44 Official Journal of the European Union 30.4.2011
- e.g. if a product claims to be efficient on certain stain types, this must be documented with efficiency test.

d) Information on the packaging – additional requirements for stain removers:

The removal of stains, for which no performance test has been conducted, shall not be claimed on the product.

Assessment and verification (a-d): The applicant shall provide a sample of the product label, together with a declaration of compliance with this criterion. Product claims shall be documented through appropriate test reports or other relevant documentation.

Proposal for criterion 8 – "User information"

The detergent shall be accompanied by instructions for proper use so as to maximise product performance and minimise waste. These instructions shall be legible or include graphical representation or icons and include information on:

a) dosing instructions

The primary packaging shall include information on the recommended dosage in g or ml for a standard load for at least two levels of soiling. A second well-known metric may be given in brackets. If the packing has an efficient and convenient dosage system that can provide an equally reliable dosage, an alternative metric (e.g. capsules, squirts, or other) can be used. The dosing instructions shall include information on the impact of water hardness on dosing and indicate the most prevalent water hardness in the area where the product is intended to be marketed or where this information can be found.

b) resource saving measures

An indication on the primary packaging shall encourage users to wash at the lowest appropriate temperature: the applicant shall recommend washing at the lowest temperature the product claims effectiveness, which shall not be higher than 30C, and recommend washing beddings and cloths at 60C if the users suffer from allergies to house dust or infectious diseases.

An indication on the primary packaging shall encourage users to wash full loads.

c) packaging disposal information

The primary packaging shall include information on the reuse, recycling and/or correct disposal of packaging.

d) environmental information (voluntary)

The following text is recommended to appear on the primary packaging but its use is voluntary:

"All detergents have an effect on the environment. Always use the correct dose for maximum effectiveness, the lowest recommended temperature. This will minimize both energy and water consumption and reduce water pollution".

Assessment and verification: The applicant shall provide a sample of the product packaging, including the label.

Rationale and discussion

Information appearing on the packaging provides useful information on how the consumer should use the product most effectively to achieve the best cleaning results whilst minimising the environmental impacts.

Further information about the key issues where the information should be provided is included in Section 12 of the Technical Annex.

Consultation questions

1	Is the change to the wash temperature recommendation acceptable?
2	Is a statement on overdosing required as part of the consumer information criterion?
3	Is the change to the dosage instruction wording acceptable?
4	Should recycling labels be included on laundry detergent packaging?
5	Should the requirement for the applicant to include a recommendation on washing temperature in case of allergies and infectious diseases be kept in the criterion text?

8.11 Criterion 9: Information appearing on the EU Ecolabel

Current criterion 9

Optional label with text box shall contain the following text:

- ‘— Reduced impact on aquatic ecosystems
- Limited hazardous substances
- Performance tested.’

The guidelines for the use of the optional label with text box can be found in the ‘Guidelines for use of the Ecolabel logo’ on the website: http://ec.europa.eu/environment/ecolabel/promo/logos_en.htm

Assessment and verification: The applicant shall provide a sample of the label.

Proposal for criterion 9

The logo should be visible and legible. The use of the EU Ecolabel logo is protected in primary EU law. The EU Ecolabel registration/licence number must appear on the product and it must be legible and clearly visible.

Optional label with text box shall contain the following text:

- ‘— Harm to aquatic life is limited
- Amount of hazardous substances is restricted
- Tested for wash performance’

Assessment and verification: The applicant shall provide a sample of the product label or an artwork of the packaging where the EU Ecolabel is placed, together with a signed declaration of compliance.

Rationale and discussion

The information displayed in the EU Ecolabel should be visible, legible and accompanied by the licence number. The text included is proposed to be harmonized among the EU Ecolabel criteria for detergents. Further information can be found in the Technical Annex Section 14.

Consultation questions

1	Are the proposed statements suitable?
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8.12 Criterion NEW - Sustainable sourcing of palm oil, palm kernel oil and their derivatives

Proposed addition

Ingredients used in the product which are derived from palm oil or palm kernel oil must be sourced from plantations that meet the criteria for sustainable management that have been developed by multi-stakeholder organisations who have a broad based membership including NGOs, industry and government.

Assessment and verification: the applicant shall provide third-party certifications that the palm oil used in the manufacturing of the product originates from sustainable managed plantations. Certifications accepted shall include RSPO (by identified preserved, segregates or mass balance) or any equivalent scheme based on multi-stakeholder sustainable management criteria. For chemical derivatives of palm oil it is acceptable to demonstrate sustainability for these through book and claim systems such as GreenPalm or equivalent.

Rationale and discussion

Further information on this criterion can be found in Section 15 of the Technical Annex.

9 APPENDIX

9.1 Appendix 1: Analysis of CDV values

Product type	Countries where product is sold	Dosage
Heavy duty, (uni-dose capsule)	Italy	27,304
Heavy duty (liquid)	France, Italy, Belgium, Netherlands, Portugal	30,510
Heavy duty (liquid)	France, Netherlands	30,567
Heavy duty (liquid)	France, Poland	31,550
Heavy duty (liquid)	France, Belgium	30,512
Heavy duty (liquid)	All EU	19,647
Heavy duty (liquid)	All EU	20,589
Heavy duty (liquid)	Germany, Poland, Czech Republic, Hungary, Turkey, Albania, the Baltics, Russia and Ukraine	21,317
Heavy duty (liquid)	Germany	23,096
Heavy duty (liquid)	France, Belgium, Poland, UK, Portugal	31,030.5
Heavy duty (liquid)	France, Holland	31,314.5
Heavy duty (liquid - capsule)	France, Italy, Belgium, Netherlands, Portugal	26,724
Heavy duty (powder)	Austria	30,695
Heavy duty (powder)	Russia	11,040
Heavy duty (powder)	France	24,053
Heavy duty (powder)	France	15,084
Heavy duty (powder)	France, Spain, Holland, Poland, Germany, Italy, Greece, England and Turkey	22,263
Heavy duty (powder)	France, Spain, Holland, Poland, Germany, Italy, Greece, England and Turkey	22,595
Heavy duty (powder)	Denmark	17,948
Heavy duty (powder)	Romania	14,169
Heavy duty (powder)	Romania	14,308
Heavy duty (powder)	Germany, Poland, Czech Republic, Hungary, Lithuania and Ukraine	21,018
Heavy duty (powder)	Germany	27,783
Heavy duty (powder)	All EU	15,865
I&I Heavy duty (powder)	Belgium, France	34,675
Laundry detergent (unknown)	Sweden	18,490
Laundry detergent (unknown)	Austria	29,068

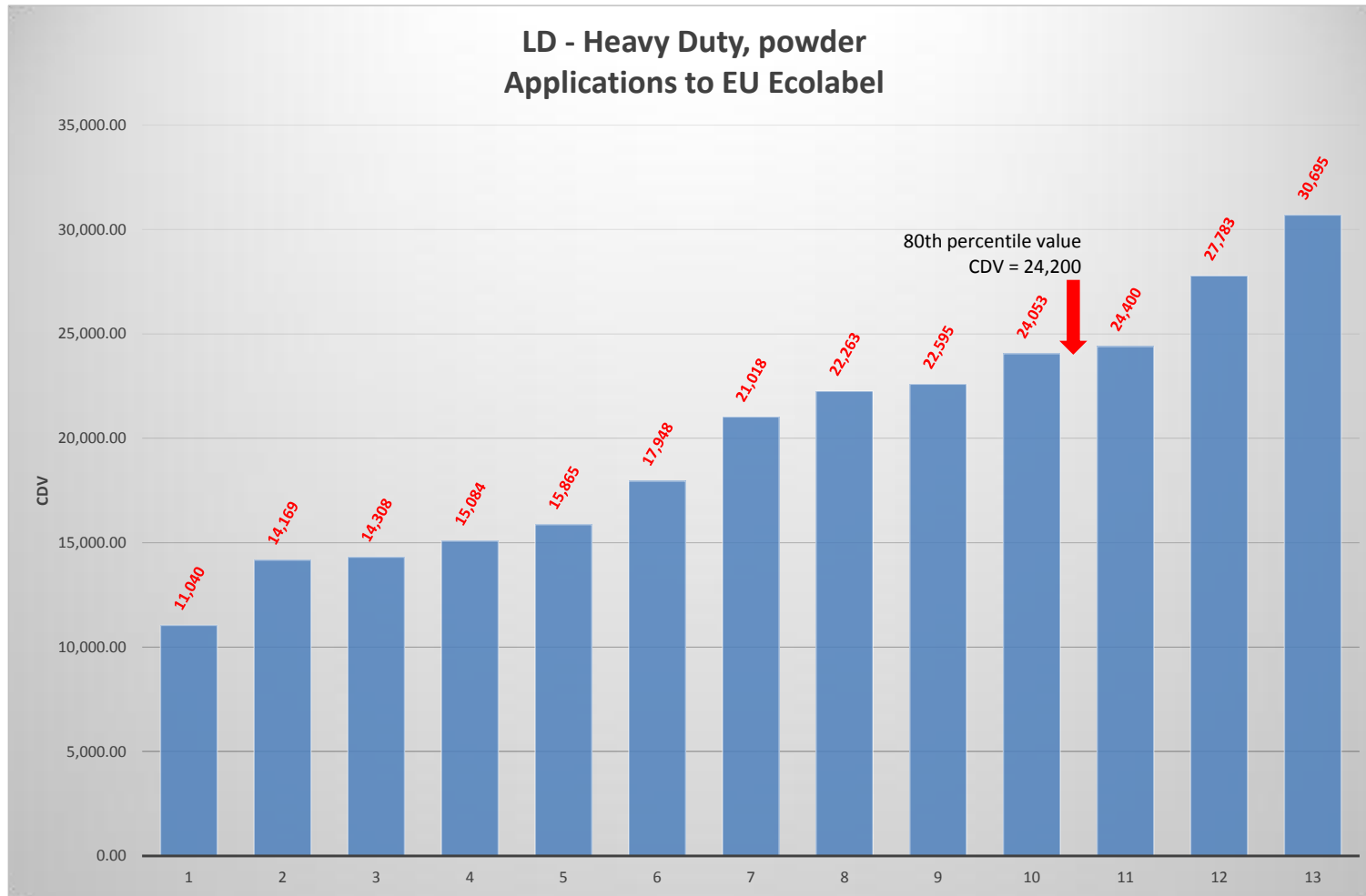


Figure 4: Chart of CDVs of EU Ecolabel applicants for Laundry Detergents - Heavy Duty, powder

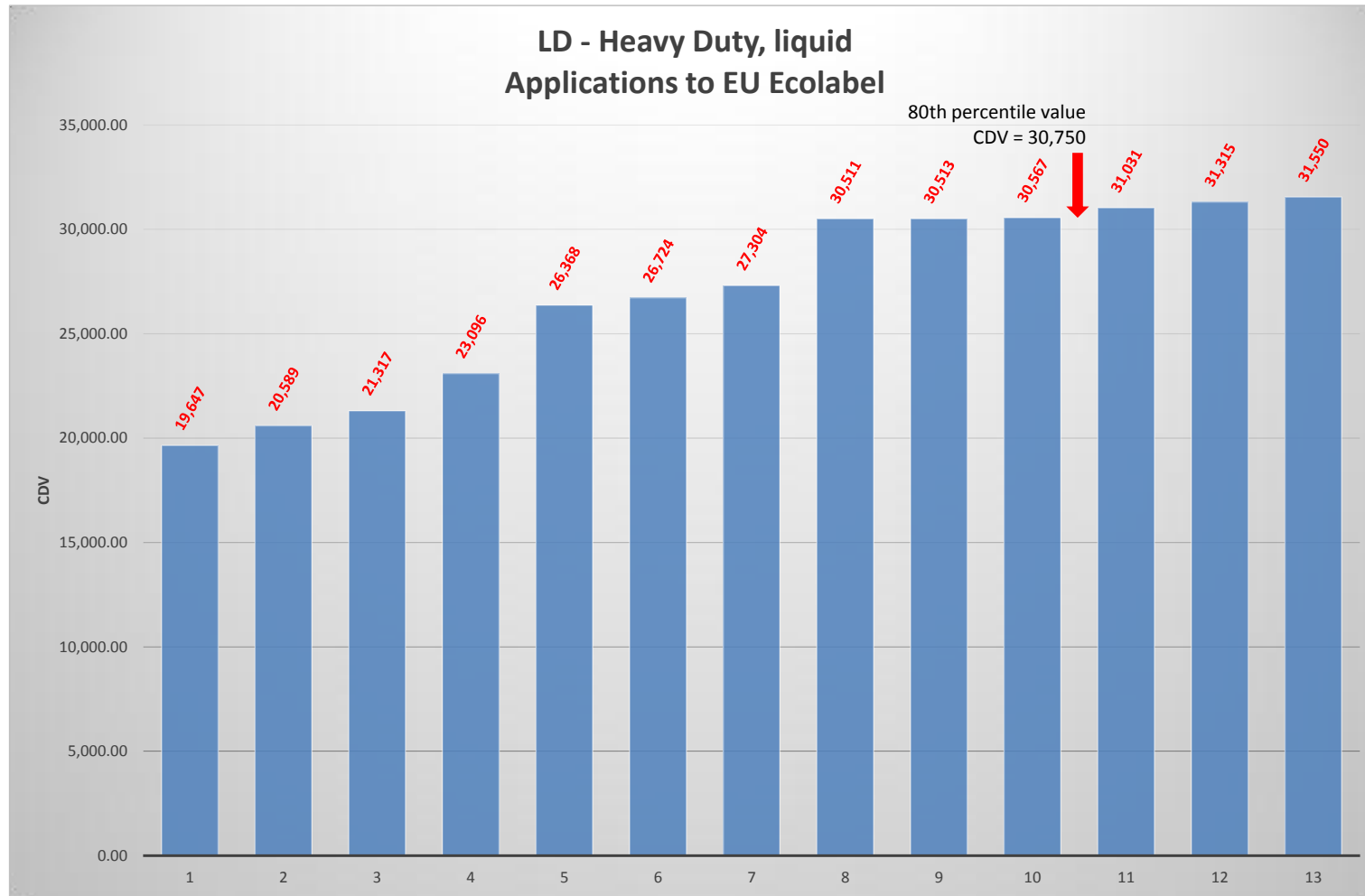


Figure 5: Chart of CDVs of EU Ecolabel applicants for Laundry Detergents - Heavy Duty, liquid

9.2 Appendix 2: Analysis of product dosages

Product type	Format	Ecolabel Y/N	Dosage ml or g per kg wash
Heavy duty	Liquid - concentrated	N	7.78
Heavy duty	Liquid	N	11.11
Heavy duty	Liquid	N	7.78
Heavy duty	Liquid	N	11.11
Heavy duty	Liquid	Y	8.31
Heavy duty	Liquid	Y	14.95
Heavy duty	Liquid	Y	8.31
Heavy duty	Liquid	Y	10.60
Heavy duty	Liquid	Y	11.10
Heavy duty	Liquid	Y	14.40
Heavy duty	Liquid	Y	14.40
Heavy duty	Liquid	Y	8.31
Heavy duty	Liquid	Y	14.95
Heavy duty	Liquid	Y	17.00
Heavy duty	Liquid - capsule	Y	4.66
Heavy duty	Liquid - concentrated	N	6.67
Heavy duty	Gel	N	8.22
Heavy duty	gel	N	8.22
Heavy duty	Unit-dose	Y	4.67
Heavy duty	Powder	N	22.22
Heavy duty	Powder	N	17.78
Heavy duty	Powder	N	14.44
Heavy duty	Powder	N	15.78
Heavy duty	Powder	N	16.67
Heavy duty	Powder - compacted	N	14.4
Heavy duty	Powder	N	15.78
Heavy duty	Powder	N	17.78
Heavy duty	Powder	Y	16.88
Heavy duty	Powder	Y	15.00
Heavy duty	Powder	Y	16.90
Heavy duty	Powder	Y	11.11
Heavy duty	Powder	Y	15.00
Heavy duty	Powder	Y	15.00
Heavy duty	Powder	Y	10.00
Heavy duty	Powder	Y	15.00
Heavy duty	Powder	Y	15.00
Heavy duty	Powder	Y	11.24
Heavy duty	Powder	Y	15.00
Heavy duty	Powder	Y	10.00
Heavy duty	Powder	Y	16.62
Low duty	Liquid	N	10.00
Low duty	Liquid	N	6.67

Low duty	Liquid	N	11.11
Low duty	Liquid	N	8.00
Low duty	Liquid	N	9.33