



Recommendations from the Group of Independent Experts concerning "an application for eggshell colouring agents for organic Easter eggs"

The meeting took place in Brussels on 9 and 10 July 2008

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Agenda

- Elaboration of a recommendation to the Commission on the authorisation of egg colouring agents and conservation agents for organic Easter eggs.

This work followed from a request by Austria and Germany to add certain colouring agents and other substances for the colouring of organic Easter eggs to Annex VI, A and B and the Commission Regulation (EEC) No. 207/93¹, which defines the content of Annex VI, A and B in Council Regulation (EEC) No 2092/91² and in its second article sets out limitations for the adoption of food additives and processing aids authorised for the production of organic foodstuffs. A prerogative is that food additives and preservatives have to be adopted by horizontal European law, and processing aids have to be accepted by the general food law. As main requirement only substances should be included, for which it had been shown that without them it would be impossible to produce or preserve such foodstuffs.

Since the new organic regulation will be applied from January 2009, the recommendations have been based on the objectives, principles and criteria for organic production as set out in Council Regulation (EC) No 834/2007³ of 28 June 2007 on organic production and labelling of organic products and repealing Regulation (EEC) No 2092/91.

¹ OJ No L 25, 2.2.1993, p. 5

² OJ L 198, 22.7.1991, p. 1

³ OJ L 189, 20.7.2007, p. 1

Thursday, July 10, 2008

The group of experts has, based on the knowledge available in the group and the dossier presented by the Commission, given the following recommendations based on the objectives, principles and criteria for organic production as set out in Council Regulation (EC) No 834/2007 of 28 June 2007 on organic production and labelling of organic products and repealing Regulation (EEC) No 2092/91.

I. Colouring agents for eggshells in organic production

General considerations

The expert group recognises Easter eggs as a traditional part of Middle European food customs. However, the expert group is of the opinion that several colouring agents and other substances used today in large scale production are not similar to those that were used traditionally (e.g. the old custom of colouring Easter eggs with onion or beet root peel in the families). Nevertheless, the expert group considers Easter eggs as belonging to the category of “well established foods” in accordance to Article 22(2)(e) of Council Regulation (EC) No. 834/2007.

The colouring of Easter eggs should in general follow the objectives and principles for organic production. In the attached table the expert group has listed all substances that were discussed in the expert group meeting, and which seem to be relevant for the colouring of Easter eggs.

In general, the materials used on the eggshell do to a limited degree penetrate the eggshell and may come in contact with the edible part.

Another important aspect from Regulation Article 6(c) is that the colours used on eggs do not mislead the consumers towards the true nature of the product.

In accordance to Council Regulation (EC) No. 834/2007 colours from natural food ingredients should have first priority. If natural food ingredients cannot be used for colouring e.g. natural fruit- and vegetable juices, concentrates and powders, then wood and plant extracts are possible alternatives. The expert group therefore added colours, which normally come from natural sources. There are Companies in Switzerland and Germany using natural colouring agents today. In accordance to Article 4(c) of Council Regulation (EC) No. 834/2007, synthetic substances can only be used under exceptional circumstances.

However, for industrial production of Easter eggs, the expert group accepts the necessity to use certain colours, coating and sealing agents as well as substances for the pH-regulation.

Recommendations

The following recommendations were agreed on by the whole panel.

Processing aids

The expert group does not see any problems on the use of these two processing aids in the production of organic coloured eggs.

Ethanol

Observation:

The requested processing aid, **ethanol** as a solvent and disinfectant is listed in Annex VI, Part B of the current organic Regulation (Council Regulation (EEC) No. 2092/91).

Recommendation:

The limitation for its use should be extended. This means that **ethanol** also should be allowed for disinfection purposes.

Citric acid

Observation:

If natural colours are used, **citric acid** is needed for pH-regulation. **Citric acid** is listed in Annex VI, Part B of the current regulation.

Recommendation:

The limitation for the use of **citric acid** should be extended for the pH- regulation of the eggshell colouring.

Additives

Covering agents

Cellulose

Observation:

By a further questioning of the industry it was clarified that the requested substance **cellulose (E 463)** is not the substance that is used in reality. The needed substance is **E 464 hydroxypropyl methyl cellulose HPMC**. This substance is already listed in Annex VI, A as an additive.

Recommendation:

The specific conditions of **hydroxypropyl methyl cellulose HPMC** should be extended to the eggshell treatment. The expert group does not see any problem with this proposal.

Copal

Observation:

Furthermore, Austria and Germany requested the use of **copal (no E-number)**. The substance is presently not listed in the horizontal legislation in the EU as a food additive. It is only authorised in Austria until 15th of March 2009 and the national authorization was notified to DG SANCO. It is not clear if a risk assessment for consumers has been performed by this country before authorisation.

Recommendation:

Therefore it has to be clarified whether copal can be added to the list of food additives allowed in organic production even though it has not yet been added to the list of additives in the horizontal legislation. No dossier is undergoing in EFSA for risk assessment of **copal**.

The expert group would like to make the Standing Committee of Organic Farming (SCOF) aware that there are alternatives for **copal** such as **shellac (E 904)**, **carnauba wax (E 903)** and **beeswax (E 901)**. **Potassium aluminium silicate (E 555)** can be used as a covering- and anti-lumping agent. These substances are from natural or mineral origin and classified with an ADI “not specified” from a toxicological point of view, except for **potassium aluminium silicate** which has a Tolerable weekly intake (TWI) as an aluminium source; however in its use on eggshells this would not be a major concern. They are needed for colouring eggs with natural colouring agents and are, with the exception of **shellac** and **potassium aluminium silicate**, listed in Annex VI, B of the current organic regulation as processing aids. However, if they are to be used as covering agents for Easter eggs, they would need to be listed as food additives in Annex VI, A.

Colourings

Iron oxides and hydroxides

Observation:

The requested group of substances **iron oxides** and **hydroxides (E 172)** is today normally produced synthetically. The natural sources are theoretically available, but because of their impurities there are toxicological concerns. In addition, because of these impurities, the final colour is also difficult to control in the natural derivatives.

Recommendation:

The expert group recommends allowing **iron oxides** and **hydroxides** for a limited time period. It should be re-examined before the 31st December 2010.

Annatto

Observation:

The requested substance **annatto (E 160b)** is of natural origin. The substance is listed in Annex VI, A of the current organic regulation for different cheese products. The ADI fixed by the Scientific Committee on Food (SCF now EFSA) is very low (0,065 mg/kg bw/d) and exposure of young children could be high. Nevertheless, the shell will not be consumed and the quantity of **annatto** which could migrate in the eggs seems for the experts to be low.

Recommendation:

The expert group recommends extending the specific conditions for the use of **annatto** to include the colouring of eggshell.

The expert group would like to make the SCOF aware that there are other natural colouring agents available, which better comply with the organic principles in Council Regulation (EC) No. 834/2007, Article 4, 19 and 21) These substances could be: **curcumin (E100)**, **riboflavins (E 101)**, **carmines (E 120)**, **indigo carmine (E 132)**, **chlorophylls (E 140)**, **vegetable carbon (E 153)**, **carotenes (E 160a)**, **paprika extract (E 160c)**, **lutein (E 161b)**, **beetroot red (E 162)**, **anthocyanins (E 163)** (see table below).

The expert group believes that only the natural forms of these colours comply with the regulation of organic production. Therefore, their authorization should be restricted to the natural forms. To use these natural substances implies that the colours will have a slightly different appearance compared to eggs coloured with **iron oxides** and **hydroxides**. This also implies adapting the colouring technology.

E -numbers	Substances	Origin	Acceptable Daily Intake, ADI*	Solubility	Colour	Listed in organic regulation	Remarks
Colouring agents							
E 160 b	Annatto	natural	0,065 mg/kg bw/d	W	red	yes	Concerns because of a low ADI
E 172	Iron oxide and hydroxides	synthetic - sometimes mineral	not specified	E	yellow, red, black	no	Mostly synthetic - not in accordance to organic principles - limitation to mineral origin might be problematic because toxicological concerns can arise by the impurities of the natural form of these colours
E 100	Curcumin	natural - sometimes biotechnology or synthetic	not specified	W	yellow, orange	no	Is available in organic quality -> should be limited to natural origin
E 101	Riboflavins	natural - sometimes biotechnology or synthetic	not specified	W	yellow, orange	no	Should be limited to natural origin
E 120	Carmines	natural	5 mg/kg bw/d	W	red	no	
E 132	Indigo carmine	synthetic - natural possible	5 mg/kg bw/d	W	blue	no	Should be limited to natural origin
E 140	Chlorophylls	natural	not specified	W	green	no	
E 153	Vegetable carbon	natural	not specified	W/E	black	yes	Should be allowed for the colouring of eggs
E 160a	Carotenes	natural - biotechnology	5 mg/kg bw/d (set for E 160aii, however later suspended by SCF)	W	orange	no	
E 160c	Paprika extract	natural	not specified	W	red orange	no	
E 161 b	Lutein	natural	not specified	W	orange	no	
E 162	Beetroot red	natural	not specified	W	red	No	
E 163	Anthocyanins	natural	acceptable	W	red	no	
Covering agents							
	Copal	natural	not known	E		no	Legal status to be clarified
E 463	Cellulose	natural	not specified	E		yes	The substance could be replaced by pectin, xanthan, agar agar or HPMC ⁴
E 904	Shellac	natural	not specified	E		no	

⁴ HPMC = hydroxypropyl methyl cellulose

E -numbers	Substances	Origin	Acceptable Daily Intake, ADI*	Solubility	Colour	Listed in organic regulation	Remarks
E 903	Carnauba wax	natural	not specified	E		yes	Should be listed as additive for the colouring of eggs
E 555	Potassium Aluminium silicate	mineral	not specified	E		no	
Processing aids							
	Citric acid	Biotechnology				yes	Added for the colouring of eggs
	Ethanol	Biotechnology				yes	Added for the colouring of eggs as disinfectant

*ADI is expressed as mg per kg body weight per day: mg/kg bw/d