



## Community Reference Laboratory for Dioxins and PCBs in Feed and Food



State Institute for Chemical and Veterinary Analysis of Food, Freiburg, Germany

### Contamination of Guar Gum from India with Pentachlorophenol (PCP) and Dioxins

The Rapid Alert System for Food and Feed (RASSF) of the European Commission received on 24 July 2007 in the evening a notification from the competent authorities of Switzerland concerning a finding of a **serious contamination by dioxins and pentachlorophenol in guar gum originating from India**. This contamination incident was reported through the RASSF on 25 July 2007 to all Member States by alert notification 2007.0499 (and additions).

Guar gum is an edible thickening agent extracted from the guar bean. India produces approximately 80 % of the world's total production of guar beans. There is a food grade guar gum powder which is authorized as food additive and used as a thickening, emulsifying, binding and gelling additive in a very wide range of foodstuffs. There exists also an industrial grade of guar gum powder for non-food uses.

The contamination levels of dioxins and pentachlorophenol found in certain batches of guar gum are very high. The **initially found levels of up to 480 pg WHO-PCDD/F-TEQ/g product and 4 mg PCP/kg** gave reason for serious concern. Analyses of samples collected to follow up these findings confirmed these high levels in certain batches; even higher levels were detected in few cases. However, also uncontaminated guar gum was found.

The dioxin pattern confirms that the **presence of dioxins is related to the presence of pentachlorophenol**. However, the **exact source** of contamination (pathway and place of contamination) is still to **be clarified**. The Commission has urged the competent authorities from India to provide more information as regards the source of contamination in order to enable a better assessment of the possible extent of the contamination.

The Commission asked the Member States to **trace and block identified contaminated of guar gum**. In addition, all batches of **guar gum originating from the Indian company producing the contaminated product** should be detained, sampled and analysed for the presence of pentachlorophenol and dioxins. In case pentachlorophenol is quantified and/or unacceptable levels of dioxins are found, the guar gum cannot enter the feed and food chain and must be safely disposed of. Batches of guar gum from this Indian company can only be released after an analysis has demonstrated that dioxin is not present in quantifiable levels. Furthermore, also **guar gum from other suppliers in India** should be sampled and analysed for a possible presence of pentachlorophenol and dioxins. In case pentachlorophenol is quantified and/or unacceptable levels of dioxins are found, the sampled batch of guar gum has to be traced and blocked and safely disposed off.



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In case a contaminated batch of guar gum has already been used for the production of food, it has to be assessed if the food products made from the contaminated guar gum are compliant with EU legislation. In case the products are compliant, the food products can remain on the market. In case the food products are not compliant, a withdrawal / recall from the market has to be ordered. In case of doubt, the food products should be sampled and analysed for the presence of dioxins or pentachlorophenol.

As regards the **reference point of action for unacceptable levels of dioxins and pentachlorophenol in guar gum**, the Commission services have sent the following information to the competent authorities of the Member States in the interest of a uniform approach within the EU:

1) **Guar gum is generally traded under CN code 1302 32 90.**

2) **As regards acceptable levels of pentachlorophenol and dioxins in guar gum:**

- **Pentachlorophenol** should be absent in guar gum (and also other food products). Regulation (EC) No 396/2005 of the European Parliament and of the Council of 23 February 2005 on maximum residue levels of pesticides in or on food and feed of plant and animal origin and amending Council Directive 91/414/EEC (OJ L 70, 16.3.2005, p.1) does not establish an MRL for pentachlorophenol. However it is foreseen in a draft Commission Regulation amending Regulation 396/2005 currently notified to WTO for comments that for pentachlorophenol **the default MRL of 0.01 mg/kg (limit of quantification) would apply for all foods and feeds**. Currently national MRLs exist of 0.01 mg/kg and 0.05 mg/kg. **Therefore any level of pentachlorophenol in guar gum exceeding 0.01 mg/kg taking into account the measurement uncertainty is to be considered as unacceptable.**
- As regards **dioxins**: No maximum levels have been established for dioxins in guar gum by Commission Regulation (EC) 1881/2006 of 19 December 2006 setting maximum levels for certain contaminants in food (OJ L 364, 20.12.2006, p. 5). However to determine what is to be considered as an unacceptable level, reference can be made to the **maximum level existing for vegetable oils and fats which 0.75 pg PCDD/F WHO-TEQ /g fat (which is in the case of pure vegetable oils and fats also 0.75 pg PCDD/F WHO-TEQ /g product)** or reference can also be made to the **action level** set by Commission Recommendation 2006/88/EC of 6 February 2006 on the reduction of the presence of dioxins, furans and PCBs in feedingstuffs and foodstuffs (OJ L42, 14.2.2006, p. 26) for **fruits vegetables and cereals which is 0.4 ng/kg product or 0.4 pg/g product**. Following the requirement that contaminant levels shall be kept as low as can reasonably be achieved by following good practices at all the stages of production, processing and distribution (Article 2 (2) of Council Regulation (EEC) 315/93 of 8 February 1993 laying down Community procedures for contaminants in food, **levels of dioxins (PCDD/F) in guar gum should be lower than 0.75 pg PCDD/F WHO-**



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**TEQ /g product (or 0.75 ng PCDD/F- WHO-TEQ /kg product). Levels higher than 0.75 pg PCDD/F WHO TEQ /g product are to be considered as unacceptably contaminated with dioxins**

3) The presence of dioxins is related to the presence of pentachlorophenol, as confirmed by so called "**pentachlorophenol pattern**" found by **analysis of dioxins in contaminated guar gum**. Therefore in order to **gain time and money** it appears that **the analysis of dioxin-like PCBs is not absolutely necessary** as the presence of dioxin-like PCBs in relation to the dioxins and furans would be low, **insofar it continues to be confirmed that the presence of dioxins is exclusively related to the presence of pentachlorophenol**.

4) **The sampling of guar gum** has to be performed in accordance with the sampling provisions outlined **Annex I to Commission Regulation (EC) N0 1883/2006 of 19 December 2006** laying down methods of sampling and analysis for the official control of levels of dioxins and dioxin-like PCBs in certain foodstuffs (OJ L364, 20.12.2006, p. 32).