

Maisons-Alfort, 26 September 2011

The Director General

## **Call for contributions by the French Agency for Food, Environmental and Occupational Health & Safety**

### **Reports on the 'health effects and uses of bisphenol A'**

*The aim of this note is to launch a consultation and a call for contributions on the basis of the work on Bisphenol A (BPA) undertaken by ANSES, through two reports and the summary note by its Expert Committee (CES) for Assessment of the risks related to chemical substances, which are available on its website. This call for contributions will run until 30 November 2011. Its goal is to collect scientific data, particularly in relation to available BPA substitute products according to use, in order to take them into account in the Opinion that ANSES will issue at the beginning of 2012 as an initial response to requests from the French Health and Environment Ministries regarding endocrine disruptors, including BPA.*

#### **Background**

Bisphenol A (BPA) has been the subject of extensive expert appraisal work and various Opinions published by the Agency since 2008 (24 October and 21 November 2008, 7 July 2009, 29 January, 2 March and 7 June 2010). In this context, recommendations have been issued in order to:

- reduce exposure to BPA, particularly in the most susceptible populations (children, pregnant women),
- improve information for consumers by systematically labelling household utensils and containers in contact with foods and which contain BPA, in order to prevent them from being used for the excessive heating of food,
- encourage manufacturers to develop substitutes for BPA, whose safety would be demonstrated, for food uses.

Collective expert appraisal work on BPA has been undertaken since 2010, mobilising a working group of French and foreign experts under the leadership of the Expert Committee (CES) for Assessment of the risks related to chemical substances, in response to the following solicited requests:

- Request no. 2009-SA-0331: in a letter to the Agency dated 4 June 2009, the Directorate General for Health (DGS) requested an expert assessment on the health risks to consumers linked to category 3 reprotoxic substances and/or endocrine disruptors found in products and/or items on the market, including BPA.

- Request no. 2010-SA-0197: in a letter to the Agency dated 18 February 2010, the Directorate General for Risk Prevention (DGPR) requested an expert assessment on BPA, specifically to identify its uses, exposure and various toxic effects, and not only reprotoxic effects and/or effects related to endocrine disruption, and to assess the relevance of undertaking a health risk assessment. The DGPR also requested that the Agency identify potential BPA substitutes and characterise their effects.

In order to supplement the published scientific data and address queries from the parties involved, hearings have been held with nationally and internationally renowned scientists and stakeholders and are continuing. The issues addressed have included the definition of endocrine disruption, the classification of substances, the taking into account of uncertainties (methodologies for the assessment of effects, appraisal of exposures, etc.) and concerns regarding chemical compounds suspected as having an endocrine disrupting effect. A comprehensive analysis of the results of these hearings is in progress and will be finalised on a later date.

At the same time, the Agency undertook extensive work in order to identify the uses of reprotoxic substances and/or potential endocrine disruptors, and BPA in particular. It examined nearly sixty industry sectors that potentially use BPA, which were identified either through a literature search or through a questionnaire sent to French manufacturers that potentially use this substance.

On 30 June 2011, the CES adopted an expert appraisal report on the health effects of BPA and, on this basis, a collective expert appraisal note. A study report on the uses of BPA was examined in a session on 30 June 2011.

This work concluded the first stage of the Agency's expert appraisal in response to the solicited requests. The Agency will continue its work with the CES in 2011 and the first half of 2012 with the goal of characterising dietary and environmental exposure to BPA by use and will examine the possibility of assessing the risks related to this substance in light of the available scientific data.

### **Conclusions and recommendations submitted for consultation by the Agency**

The Agency hereby endorses the conclusions and recommendations of its CES for Assessment of the risks related to chemical substances which deal with the characterisation of BPA's health effects.

It should be noted that this expert appraisal was undertaken in a fecund scientific and regulatory context that has been constantly changing over the past five years, both nationally and internationally. Different epidemiological studies have shown a rise in various diseases affecting the reproductive organs or impairing fertility in recent decades. These studies raise questions as to the potential link between these diseases and environmental exposure in the broad sense. For example, the role of endocrine disruptors in the increased incidence of diseases of the reproductive system and other systems is

widely disputed and has been the subject of numerous studies. Various studies have also been undertaken to document their potential impact on the environment and ecosystems.

In this context, deep concern has been expressed over the past few years by some scientists and stakeholders regarding the impact of potential endocrine disruptors found in the environment or in consumer products, and particularly BPA.

The questions raised have primarily dealt with its toxicity at low doses, its sources of exposure (particularly oral), and levels of contamination in the population. They have been the subject of discussions and proposals in various recent documents:

- various AFFSA Opinions
- the conclusions of the INSERM collective expert appraisal report on ‘Reproduction and the Environment’ (2011) including BPA
- recently published expert assessments of BPA by international authorities (EFSA, FAO-WHO, NTP-CERHR, etc.)

These publications have resulted in initiatives and regulatory developments at the national and international levels. Below are some recent examples:

- the ban on polycarbonate baby bottles in the European Union since 1 June 2011
- the discussions underway in Europe in order to define criteria for the characterisation of endocrine disruptors in a regulatory framework
- the French legislative and regulatory context and particularly Act no. 2010-729 of 30 June 2010 aiming to suspend the marketing of baby bottles containing bisphenol A
- the parliamentary report by Senator G. Barbier, “*Les perturbateurs endocriniens, le temps de la précaution*” (Endocrine disruptors, the age of precaution) (2011).

ANSES is *inter alia* undertaking a comprehensive analysis of published scientific studies on BPA in order to propose, before mid-2012, a re-assessment of the classification of risks related to this substance in the European regulatory context. ANSES is also examining a proposal for the specific classification of endocrine disruptors, which would improve information for users with, for example, the use of labelling.

The Agency’s CES and its working group on Endocrine disruptors and category 3 reprotoxic substances are continuing their work on the basis of data from exposure scenarios in order to characterise the health risks related to BPA and the risks related to other potential endocrine disruptors. The experts obviously reserve the right to update the expert appraisal on the health effects of BPA as new publications appear. On account of the complexity and scope of the questions raised, this expert appraisal work is a long-term undertaking. Nevertheless, ANSES considers that initial conclusions and recommendations related to BPA can already be issued in light of the available information regarding the substance’s health effects. However, they give no indication as to the

conclusions of the expert appraisal on the assessment of risks related to BPA that is being pursued in the upcoming months.

In this context, ANSES highlights the main conclusions drawn on the basis of its expert assessment work:

The conclusions of the collective expert report on the health effects of BPA, and in particular:

- **the development and implementation of a classification of effects** based on a critical analysis of all available recent publications aiming to characterise the potential health effects of BPA at low doses
- **the demonstration of these effects at doses significantly below the reference doses used for regulatory purposes**
- **suspected effects in humans:**
  - reprotoxic effects (oocyte maturation)
  - effects on metabolism (cardiovascular diseases, diabetes)
- **proven effects in animals:**
  - reprotoxic effects (sperm production, ovarian cysts)
  - hyperplastic effects (breast and endometrium)
  - other effects on metabolism and neurogenesis
  - ecotoxicological effects
- **the multiple mechanisms of action potentially involved** in the onset of these various effects
- **the possible existence of a non-linear dose-effect relationship**
- **the difficulty in defining a no-effect dose threshold** on the basis of the available scientific data
- **remaining questions in relation to certain effects**, regarding the transposition of observations in animals to humans
- **the existence of exposure windows** corresponding to periods of susceptibility to BPA's effects
- **the existence of susceptible populations** (pregnant women, infants, young children)
- **BPA contamination in the population** reflecting ubiquitous exposure<sup>1</sup>
- **cumulative exposure** to other potential endocrine disruptors and the possibility of synergies and interactions.

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<sup>1</sup> INSERM (2011) Collective expert appraisal on 'Reproduction and the Environment'. Summary. Page 14.

The conclusions of the study report on uses of BPA issued in 2011 aiming to gather non-exhaustive information from manufacturers on uses of BPA, and in particular:

- **the wide variety of industry sectors declaring that they use BPA**
- **its primary uses** in the production of polycarbonate and the synthesis of epoxy resins, which are often used in food contact materials affecting sensitive populations
- **steadily increasing consumption**, particularly in certain business sectors (automotive, construction, electronics and medical devices).

On these bases, the Agency considers that there is currently sufficient scientific information to identify the prevention of exposure in the most susceptible populations, i.e. infants, young children and pregnant and breastfeeding women, as the chief objective.

This objective requires reducing exposure to bisphenol A, principally by replacing it in food contact materials, which are the main source of exposure in the most susceptible populations.

In this context, ANSES hereby launches a **call for contributions aiming to collect, by 30 November 2011, scientific data and relevant information relating to available BPA substitute products according to use, of interest to the most susceptible populations** (food contact materials, toys, childcare products, etc.), and providing **proof of their safety**.

Furthermore, in light of the wide variety of uses for BPA, ANSES affirms the recommendation that it formulated in 2010 regarding labelling to identify items or products on the market containing BPA that may lead to exposure in the most susceptible populations.

Lastly, the Agency will presently send the results of this initial work regarding the health effects of BPA to the relevant European authorities (EFSA, ECHA, etc.) to enable them to examine the relevance of the reference doses used for regulatory purposes.

**The Director General**

Marc Mortureux

**KEYWORDS**

Bisphenol A, health effects, reprotoxicity, development, fertility, neurotoxicity, endocrine disruptor

**ANNEX: LIST OF ENDOCRINE DISRUPTORS AND CATEGORY 3 SUBSTANCES INCLUDED IN REQUEST 2009-SA-0331**