



## Frequently Asked Questions (FAQ): Bisphenol A

**Definition:** Bisphenol A (BPA) is a component of plastics that are used in food and drink packaging.

**Background:** Concerns have been raised about its safety and a number of organisations around the world have suggested that its use should be banned for food contact products.

### **1. What is Bisphenol A (BPA)?**

Bisphenol A is a chemical used to make a number of plastics, particularly polycarbonates, polyesters and epoxy resins. Global production is around 3 million tonnes a year.

Bisphenol A is permitted for use in packaging materials under Directive 2002/72 on materials and articles in contact with food.

Polycarbonate is used to make food containers, such as water bottles, tableware (plates and mugs), storage containers and baby feeding bottles. Epoxy resins are used to line food and beverage cans.

In recycling terms polycarbonate is included under raw material number 7 – other plastics.

### **2. Does Bisphenol A pose a health risk?**

Scientists agree that in studies on Bisphenol A in animals, it has been shown to be a chemical which can interact with the hormone system. In particular, it can mimic the sex hormones. However, the levels that are found in food and water are many times less than those used in the experiments. Bisphenol A has been the subject of nearly 1000 scientific papers and on the basis of all this evidence the European Food Safety





Authority has set a Tolerable Daily Intake<sup>1</sup> for Bisphenol A of 0.05 milligram per kilogram bodyweight. It has also carried out studies to estimate how much Bisphenol A people consume and has estimated this to be between 0.00048 – 0.0016 mg/kg bodyweight per day.

### **3. How is it connected to bottled water?**

Polycarbonate is strong, clear and impact resistant which makes it an ideal material for making the 18 litre bottles used for bottled water in coolers. Tiny quantities of Bisphenol A migrate from the bottle into the water. To give an idea of the levels that are found in water, a study by the Food and Drug Administration (FDA) in the USA found only very low amounts ranging from 0.0001 to .0047 parts per million (milligrams per kilogram) in water that had been stored in 22<sup>2</sup> litre polycarbonate bottles for up to 39 weeks.

Even using the worst case from the measurements of the FDA, a 60kg person would have to consume 30 whole bottles (that's 22 litre bottles not 500 ml bottles) of water a day in order to reach their TDI.

### **4. Is Bisphenol A used in vending cups?**

Vending cups are made of polystyrene or paper. Bisphenol A is not used in the manufacture of either type of cup.

On the bottom of the plastic cups you will see that the raw material number is 06 whereas it is 07 for polycarbonate.

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*1 The TDI is an estimate of the amount of a substance, expressed on a body weight basis that can be ingested daily over a lifetime without appreciable risk. EFSA found that intakes of BPA through food and drink were well below the TDI, even for infants and children.*

*2 Bottles differ in size between the USA and Europe - 18 litres in Europe and 6 gallons (22.25l) in the USA*



### **5. What about PLA cups (for cold drinks)?**

PLA cups are made of polylactic acid, not polycarbonate but their raw material number is also 07. Not all plastics labelled with the number 07 are made of polycarbonate. 07 is the raw material number for "OTHER", which includes lots of different materials.

### **6. Is Bisphenol A used in vending machines?**

Some vending machines have components that are made of polycarbonate. Some ingredient canisters are made from polycarbonate. The migration from these canisters into the ingredient has not been measured but will be many times less than the migration into liquid in bottles.

### **7. Are there alternatives to Bisphenol A?**

Research is continuing into alternatives to Bisphenol A but any new material will be subject to rigorous approval procedures that will take many years. Even then it will not be as well understood as Bisphenol A.

Should you have any questions, please contact the European Vending Association

[sd@vending-europe.eu](mailto:sd@vending-europe.eu) or +32 (0)2 650 05 62.

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