

## EFRA statement on NIEHS study

In response to a recent study released by the *National Institute of Environmental Health Sciences* (NIEHS) suggesting that certain flame retardants can mimic estrogen, the European Flame Retardant Association (EFRA) issued the following statement:

The crystallographic methodology used in this study, while perhaps offering insight into how estrogen mimicking might occur, provides no evidence that TBBPA, which is known to be quickly metabolized, actually comes in contact with the relevant proteins in the human body. It is unclear why NIEHS chose to use this approach, when the US Environmental Protection Agency has spent many years identifying three tests for estrogenic activity as part of a Congressionally mandated program for screening substances for potential hormonal activity.

Furthermore, TBBPA went through an 8-year EU Risk Assessment which concluded that TBBPA is safe for use in all its applications and has no significant endocrine potential<sup>[1]</sup>. This conclusion was also confirmed by the Scientific Committee on Health and Environmental Risks (SCHER). In addition, TBBPA was among the substances examined for its potential role in endocrine disruption as part of an EU project<sup>[2]</sup>. EU scientific experts have reported that initial results show “no major endocrine effects” from TBBPA. There are many studies by different laboratories and researchers on TBBPA, including studies that have looked at the potential endocrine activity of TBBPA. The weight of accumulated evidence confirming the absence of endocrine disrupting properties of TBBPA is strong and supported by a number of scientific studies<sup>[3] [4] [5] [6] [7]</sup>. As for BDE-47 derivate investigated in the study, its parent compound BDE-47 itself was restricted in May 2009 under the UNEP Stockholm Convention for Persistent Organic Pollutants and has not been made by any EFRA members for nearly a decade”.

EFRA, as one of the organisations which represents a significant portion of the industry in Europe, is strongly in favour of thorough sound scientific assessment of all chemical substances including those used as flame retardants. EFRA is therefore concerned that the authors refer to ‘flame retardants’ as if they represent a single class of substances.

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<sup>1</sup> EU Risk Assessment Report (2006) available at: [http://www.bsef.com/uploads/library/final\\_tbbpa\\_human\\_health\\_report.pdf](http://www.bsef.com/uploads/library/final_tbbpa_human_health_report.pdf)

<sup>2</sup> According to the WHO definition, an endocrine disruptor is “an exogenous substance or mixture that alters function(s) of the endocrine system and consequently causes adverse health effects in an intact organism, or its progeny, or sub-populations”. The WHO definition is the most widely accepted definition and used in scientific literature.

<sup>3</sup> EU Risk Assessment Report (2006) available at: [http://www.bsef.com/uploads/library/final\\_tbbpa\\_human\\_health\\_report.pdf](http://www.bsef.com/uploads/library/final_tbbpa_human_health_report.pdf)

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<sup>5</sup> Scientific Opinion on Tetrabromobisphenol A (TBBPA) and its derivatives in food (2011) available at: <http://www.efsa.europa.eu/en/efsajournal/doc/2477.pdf>

<sup>6</sup> The WHO report mentions thyroid non-significant receptor binding, with no physiological or endocrine effects. The full report entitled “Endocrine disruptors and child health: Possible developmental early effects of endocrine disruptors on child health” is available at: [http://apps.who.int/iris/bitstream/10665/75342/1/9789241503761\\_eng.pdf](http://apps.who.int/iris/bitstream/10665/75342/1/9789241503761_eng.pdf)

<sup>7</sup> Brominated flame retardants in environmentally relevant test setup, FIRE project, CREDO Research Cluster, January 2006

In fact, flame retardants include a diverse group of substances with a range of physical and chemical properties. Even for the group of brominated flame retardants, which are the focus of the NIEHS analysis, the physical structure and chemical properties vary widely.

*About EFRA:*

*EFRA (the European Flame Retardants Association) brings together the major companies which manufacture flame retardants in Europe. EFRA covers all types of flame retardants: chemicals based on bromine, chlorine, phosphorus, nitrogen and inorganic compounds. EFRA is a Sector Group of Cefic, the European Chemical Industry. [www.flameretardants.eu](http://www.flameretardants.eu)*