Mapping the Pollution in People



human toxome project/chemicals/PFBA (Perfluorobutyric acid)

# PFBA (Perfluorobutyric acid)

Breakdown product of stain- and grease-proof coatings on food packaging, couches, carpets. A 4-carbon version of PFOA; persistent.

PFBA (Perfluorobutyric acid) has been found in 14 of the 75 people tested in EWG/Commonweal studies.

# Results for PFBA (Perfluorobutyric acid)

PFBA (Perfluorobutyric acid) was measured in different units for some of the studies. Overall it was found in 14 of 75 people tested in EWG/Commonweal studies. The bars below are grouped by units:

## IN WHOLE BLOOD (WET WEIGHT)

Showing results from Pollution in Minority Newborns

EWG/Commonweal results

• found in 1 of 10 people in the group

ng/g (wet weight) in whole blood 0.208

PFBA (Perfluorobutyric acid) results

## IN BLOOD SERUM (WET WEIGHT)

Showing results from EWG Study #5, Teflon and mercury in blood in adults and teens

EWG/Commonweal results

• found in 0 of 8 people in the group

found in 0 of 8 people

## IN BLOOD SERUM (WET WEIGHT)

Showing results from EWG Study #6, consumer product chemicals in mothers and daughters, Adult Minority Leader Report, EWG/Commonweal Study #7, consumer product chemicals in adults and teens, Other Body Burden Studies, Dateline NBC Families, Dateline NBC Families, EWG Study #8, chemicals in mother and 2 children, Pets Project

EWG/Commonweal results

- geometric mean: 0.472 ng/mL (wet weight) in blood serum
- found in 13 of 57 people in the group

ng/mL (wet weight) in blood serum

PFBA (Perfluorobutyric acid) results

#### **CHEMICAL INFORMATION**

Chemical Class

Perfluorochemical (PFC)

Chemical SubClass

Perfluorinated carboxylic acid

Manufacturing/Use Status

there are no restrictions on the production/use in the U.S.

Found in these people:

Anonymous Adult 2, Anonymous Adult 3, Anonymous Adult 5, Anonymous Adult 6, Anonymous Teen 1, Anonymous Adult 9, Anonymous Adult 13, Anonymous Adult 10, Anonymous Adult 14, Anonymous Adult 17, Anonymous Adult 20, Cord Blood Sample 13

Found in these locations:

Chicago, IL; Newton, MA; Fredericksburg, VA; New York, NY; Atlanta, GA; Stanford, CA; San Francisco, CA; Palo Alto, CA; Fallbrook, CA

Exposure routes:

Stain- and grease-proof coatings on food packaging, couches, carpets.

#### **SUMMARY**

Perfluorobutyric acid (PFBA) is a breakdown product of stain- and grease-proof coatings on food packaging, couches, and carpets, including Stainmaster. The chemical is part of a family of perfluoroalkyl carboxylates, all with structures similar to the well-known chemical contaminant PFOA, but with carbon chain lengths ranging from 4 to 15 carbons. PFBA is the 4 carbon version of PFOA.

All of these perfluoroalkyl carboxylates are highly persistent. Many of them particularly PFOA - have also been found in human and wildlife blood and tissues from around the globe, even in remote locations such as the arctic (3M 2000; Bossi, Riget 2005; Guruge 2005; Smithwick 2005; Van de Vijver 2005; Lange 2006). The carboxylates with longer carbon chains (particularly those with at least 8 carbons) are found more often in humans and wildlife than those compounds with shorter carbon chains.

While there has been very little research done on the toxicity of PFBA itself, PFOA has been studied extensively. Animal studies have linked PFOA exposure to low birth weight, decreased growth, decreased pituitary size, increased number of dead or cannibalized pups, decreased breastfeeding, decreased liver size, delayed puberty, altered reproductive cycles and hormone levels, decreased kidney size, immune system problems, cancer, and death (EPA 2002; York 2002). In January of 2006, the Environmental Protection

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In January of 2006, the EPA asked eight manufacturers that use PFOA to reduce production 95% by 2010, and to stop using it altogether by 2015. But because PFOA never breaks down, this means that every PFOA molecule on the planet is here to stay; opportunities for humans (and other animals) to be exposed continuously to PFOA will continue even after production ceases. Furthermore, similar action has not been taken on chemicals that break down into PFOA or its related perfluoroalkyl carboxylates, making EPA's action even less effective for actually making meaningful reductions in exposures to these compounds.

The <u>Human Toxome Project</u> is a collaboration of <u>Environmental Working Group</u> and <u>Commonweal</u>.

MAIN | PARTICIPANTS | CHEMICALS | HEALTH EFFECTS | ABOUT



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