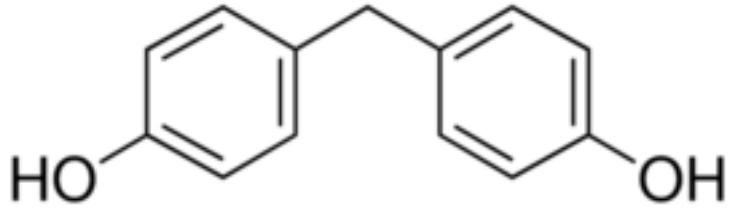

CAS 620-92-8 Bisphenol F (BPF)

Toxicity

EPA classified BPF as a high developmental hazard and a moderate reproductive hazard based on the toxicity closely related analogs. EPA classified BPF as a high hazard for toxicity based on repeated exposures. A study observed decreased body weight, total serum, glucose and albumin in rats fed BPF over 28 days.[1]

In vitro testing has shown BPF to have both estrogenic and anti-androgenic activity. BPF is as potent as BPA in estrogenic activity assays and half as potent as BPA in anti-estrogenic activity assays.[2]

BPF altered behavior of offspring of mice who were fed BPF for 9 days during gestation.[3]

Exposure

BPF was detected through biomonitoring in the urine of U.S. adults between 2010 and 2014.[5]

BPF was detected in residential dust samples in the U.S. A 2006-2010 study detected BPF in 68 percent of the indoor dust samples taken in New York homes.[6] A 2008-2012 Albany, New York study detected BPF frequently in grocery items such as canned goods, meat, fish, seafood, dairy products, vegetables, and fats and oils.[7]

BPF has been detected in sediment, surface water and sewage, however; EPA has characterized BPF to have a low potential for persistence and bioaccumulation.[1,8]

BPF has primarily been used in epoxy resins that line food cans and in polymer plastics.[7] BPF has been used in dental materials, structural adhesives, grouts, coatings, electrical varnishes, industrial flooring, tank and pipe linings, and road and bridge deck sealants.[2] BPF was detected in consumer products including lotions and cosmetics.[9] BPF was detected as a contaminant in food including meat and meat products, dairy products, vegetables, cereals and canned foods.[10,11]

BPF is readily absorbed by oral exposure in rats.[1]

Rats given BPF excreted 43-54 percent of the dose through urine and 15-20 percent through feces. The remaining dose was detected throughout the organs including the liver, digestive tract lumen, placenta, amniotic fluid, uterus and fetuses of pregnant rats.[4]

Other

BPF has been used as an alternative ingredient to BPA.[2-7]

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