## Pentachlorophenol (PCP) C<sub>6</sub>Cl<sub>5</sub>OH [CAS No. 87-86-5] Reproductive toxicant: Group 2

There have been a limited number of human studies that have reported the reproductive toxicity of pentachlorophenol (PCP)<sup>1, 2)</sup>. However, these studies are considered to be inconclusive because of possible involvement of chemicals other than PCP and the lack of appropriate control groups. In contrast, animal experiments have revealed fetotoxicity and a negative impact on offspring development due to PCP. These effects include abnormality of the skeletal system, reduced body weight, decreased fertility and increased fetal death, increased absorption, and decreased thyroid hormone concentration in offspring of animals treated with PCP<sup>3-7)</sup>. Based on this evidence, PCP is classified as a Group 2 reproductive toxicant.

## References

- Gerhard I, Daniel V, Link S, Monga B, Runnebaum B. Chlorinated hydrocarbons in women with repeated miscarriages. Environ Health Perspect 1998; 106: 675–81.
- 2) Gerhard I, Derner M, Runnebaum B. Prolonged exposure to wood preservatives induces endocrine and immunologic disorders in women. Am J Obstet

Gynecol 1991; 165: 487-8.

- Schwetz B, Keeler P, Gehring P. The effect of purified and commercial grade pentachlorophenol on rat embryonal and fetal development. Toxicol Appl Pharmacol 1974; 28: 151–61.
- Bernard BK, Hoberman AM, Brown WR, Ranpuria AK, Christian MS. Oral (gavage) two-generation (one litter per generation) reproduction study of pentachlorophenol (penta) in rats. Int J Toxicol 2002; 21: 301–18.
- 5) Bernard BK, Hoberman AM. A study of the developmental toxicity potential of pentachlorophenol in the rat. Int J Toxicol 2001; 20: 353–62.
- 6) Welsh JJ, Collins TF, Black TN, Graham SL, O'Donnell MW Jr. Teratogenic potential of purified pentachlorophenol and pentachloroanisole in subchronically exposed Sprague-Dawley rats. Food Chem Toxicol 1987; 25: 163–72.
- Beard AP, Bartlewski PM, Chandolia RK, Honaramooz A, Rawlings NC. Reproductive and endocrine function in rams exposed to the organochlorine pesticides lindane and pentachlorophenol from conception. J Reprod Fertil 1999; 115: 303-14.
- Beard AP, Rawlings NC. Reproductive effects in mink (Mustela vison) exposed to the pesticides Lindane, Carbofuran and Pentachlorophenol in a multigeneration study. J Reprod Fertil 1998; 113: 95–104.