## Para-Chloroaniline





#### **Summary of Health Effects**

Para-chloroaniline can cause spleen and liver cancers in animals and may cause cancer in humans. It may also lower the ability of a blood protein to deliver oxygen inside the bodies of humans and animals.

#### How is para-chloroaniline used?

*Para*-chloroaniline is used to manufacture dyes and pigments and other chemicals.<sup>1,2</sup>

### **Toxicity: What are its health effects?**

Para-chloroaniline is classified as possibly carcinogenic to humans by the International Agency for Research on Cancer. 1 It is included on California's Proposition 65 list as a carcinogen. 2

Evidence for its carcinogenic activity is based on animal studies, which documented tumors of

the spleen and liver after exposure to parachloroaniline.<sup>1</sup> Methemoglobinemia (excess methemoglobin in the blood) is associated with exposure to para-chloroaniline and its breakdown products.<sup>1</sup>

Para-chloroaniline is metabolized similarly in humans and animals.<sup>1</sup>

# Exposure: How can a person come in contact with it?

A person can come in contact with *para*-chloroaniline by breathing in contaminated air, eating and drinking contaminated food and water, or from skin contact.<sup>3</sup>

The 2014 National Health and Nutrition Examination Survey (NHANES) report did not include data for para-chloroaniline.

#### References

- 1. World Health Organization, International Agency for Research on Cancer (1993). *IARC Monograph on the evaluation of carcinogenic risks to humans, volume 57: Occupational exposures of hairdressers and barbers and personal use of hair colourants, some hair dyes, cosmetic colourants, industrial dyestuffs and aromatic amines.*Retrieved from monographs.iarc.fr/ENG/Monographs/vol57/mono57-21.pdf
- 2. California Environmental Protection Agency, Office of Environmental Health Hazard Assessment. *List of chemicals known to the state to cause cancer or reproductive toxicity*. Retrieved May 25, 2018, from <a href="mailto:oehha.ca.gov/proposition-65/proposition-65-list">oehha.ca.gov/proposition-65/proposition-65-list</a>
- 3. U.S. Department of Health and Human Services (1986). *Hazardous Substances Data Bank (HSDB) for 4-chloroaniline (CASRN: 106-47-8)*. Retrieved from toxnet.nlm.nih.gov/newtoxnet/hsdb.htm