



# TOXAPHENE

## ENVIRONMENTAL HEALTH – CONTAMINANTS FACT SHEETS

### WHAT DO WE KNOW ABOUT TOXAPHENE?

Toxaphene is a persistent organic pollutant (POP). It is made by humans and does not occur naturally in the environment. Toxaphene is made up of a complex mixture of chemicals. It was used as an insecticide on crops and livestock (to control ticks, mites, etc.). It was easy and cheap to make, and so it became the most produced organochlorine insecticide in the world. It has been banned in Canada since the 1980s.

Toxaphene is very stable and lasts a long time in the environment. It can travel long distances in the air from the region where it was made.

POPs (such as toxaphene) can build up in animal tissues over time through a process called bioaccumulation (see *Contaminants Overview fact sheet* –

<http://www.hss.gov.nt.ca>). This means that older animals tend to have higher levels of POPs than younger animals. POPs tend to be found at higher levels in animals that eat other animals and in smaller amounts in animals that eat plants. This is due to a process called biomagnification (see *Contaminants Overview fact sheet* – <http://www.hss.gov.nt.ca>). Marine mammals tend to have the highest levels of POPs.

Toxaphene levels have been declining in fish and some beluga in the north. Toxaphene levels have not changed significantly in ringed seal. There is limited information on toxaphene levels in other animals in the north.

### HOW DOES TOXAPHENE AFFECT HUMAN HEALTH?

If a person is exposed to POPs, many factors will determine whether any harmful health effects will occur and what the type and severity of those health effects will be. These factors include the dose (how much), the duration (how long), the route or pathway by which you are exposed (breathing, eating, drinking, or skin contact), the other chemicals to which you are exposed, and your individual characteristics such as age, gender, nutritional status, family traits, life-style, and state of health.

After being exposed to toxaphene, most (about 90%) of the toxaphene that enters the body is excreted within 2 days. A small amount may remain in the fatty tissues of the body.

High levels of toxaphene could damage the nervous system, the liver, lungs and kidneys, and may cause death.

It is not known whether toxaphene would cause cancer in people. Animal studies indicate high levels of toxaphene can cause cancer in the liver of mice and possibly the thyroid of rats.

### ARE TRADITIONAL FOODS SAFE TO EAT?

Traditional foods provide many essential nutrients that can lower the risk of chronic diseases. Marine mammals tend to have the highest levels of POPs, particularly in the fatty

tissues. However, most people do not need to be concerned about contaminated-related effects from traditional food consumption. Generally, the benefits of eating traditional foods outweigh the risks from contaminant exposure