

¿What are PCBs?

Polychlorinated biphenyls (PCBs) are a class of man-made chlorinated organic chemicals that may be present in electrical equipment such as transformers and capacitors.

They pose a risk to health and the environment and have therefore been listed by the Stockholm Convention as Persistent Organic Pollutants (POPs).

CHARACTERISTICS

Once PCBs are released into the environment, they can travel long distances and remain for a long time in the air, water and soil.

PCBs can accumulate in the fatty tissue of animals, such as small fish. The fact that small animals are consumed by larger animals causes PCBs to accumulate with higher concentrations in top predators.

Because PCB are very toxic, can accumulate in animals and can be widely distributed in the environment, we must prevent their further spread to the environment to protect ourselves.



UNITAR



<https://www.pcb.unitar.org/pcb-elearn>

PCB

ENVIRONMENTAL IMPACT

ORIGIN

PCBs were manufactured since 1929 and it is estimated that the worldwide production was approximately 1.5 million tons. However, due to their impact on health and the environment, their manufacture has been banned since the 1980s.

PCBs have been used in various applications due to their thermal and chemical stability. Many PCB-containing equipment and articles manufactured with PCB-containing mixtures are still in use today.



ANIMALS

PCBs can enter small organisms; for example, fish, which are food for larger animals. This means that PCBs can travel from one body to another and at the same time accumulate. Consequently, higher concentrations have been found in predatory animals such as polar bears, seals, whales and birds.

PCBs can cause reproductive problems in fish and other aquatic organisms. It has also been observed that they can have effects such as liver damage, cancer, reproductive and immune system affectation, due to chronic toxicity in birds and marine mammals.



Where are PCBs?

Due to their widespread use and their ability to travel long distances, while persisting in the environment and accumulating from one body to another, they are now distributed all over the planet.

PCBs can be found in deposits containing PCBs, in landfills or in places where spills or accidents with electrical equipment have occurred.

These chemicals, when released into the environment, can be distributed to the air, water, soil and, consequently, reach animals.

AIR

In the air, PCBs are present as solid particles or in vapor form, which can be transported through air currents to locations far distant from where they were released. Once in the air, PCBs can accumulate in leaves, plants and food crops.

SOIL

PCBs can strongly adhere to soil and sediments for months or even years. Airborne PCBs can be washed into the soil by rain, snow or simply by gravity. Also, PCBs in sediments can affect wildlife.

WATER

In water, PCBs can be transported by ocean currents and attach to particles in the water. Heavy PCBs can adhere to sediments on the bottom, while lighter PCBs can evaporate into the air. They can also enter the bodies of small organisms and fish.