

# [Toxicant scavenger hunt](https://assignbuster.com/toxicant-scavenger-hunt/)

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Toxicant Scavenger Hunt Template Use the text, ToxMystery, and the Agency for Toxic Substances and Disease Registry (ATSDR) as resources to provide the necessary details about each toxicant found.
Toxicant
. Acetone
Chlorine
Uranium
Lead-210
butane
Classification of toxicant
Volatile Organic Compound (VOC)
Harmful solvent
Heavy metal (radioactive)
Heavy metal (radiation)
Harmful solvent also, VOC
Source
Best Value Nail Polish Remover
Clorox Bleach
Antique glazed pottery
Cigarette smoke
Oust Air Freshener and Disinfectant spray
Location in house or room
Bathroom/bedroom
Bathroom/kitchen
Kitchen/garage
All rooms
All rooms
Effect on plants and humans
Humans will experience the symptoms of exposure, however, plants changes the acetone into CO2 and saved for normal plant functions. (National Library of Medicine, 2013)
High levels of chlorine fumes are detrimental to human beings. Like humans plants are pretty tolerant of chlorine, however, it large doses it can be unhealthy. (National Library of Medicine, 2013)
The reaction to uranium may not be immediate; it can be a build up over time. Radiation in plants is very dangerous. It can corrupt proper growth and development. (National Library of Medicine, 2013)
Exposure to cigarette smoke s quite common, however, in large concentration in can be quite dangerous for one’s health, Like uranium radioactive substances cause developmental flaws and in growth. (National Library of Medicine, 2013)
Long term effects of human exposure include CNS depression and Sensitizing of the myocardium. Along with pulmonary and hypertensive potentials. In plants there appears to be o direct effect of the butane on the plants, however, the butane particles build up in the soil and prevent the plants from absorbing the proper nutrients.
Routes of exposure
Inhalation, ingestion, or through the skin.
Primarily inhalation, also, ingestion.
General exposure and physical contact
Inhalation and ingestion are most common
Inhalation; through skin, digestion
Distribution
Passive diffusion (Heinrich-Ramm, Jakubowski, Heinzow, Molin Christensen, Olsen & Hertel, 2000)
Passive diffusion
Passive diffusion
Passive diffusion
Passive diffusion(Heinrich-Ramm, Jakubowski, Heinzow, Molin Christensen, Olsen & Hertel, 2000)
Toxic response
Irritation to eyes, nose, throat, and lung aggravation. (ATSDR, 2013)
High exposure levels can cause headache, vomiting, chest tightness, pneumonia, lung collapse, and, even, death. (ATSDR, 2013)
Liver damage, kidney damage, and even death. (ATSDR, 2013)
Can cause eye and throat irritation. Ti can also cause muscle and joint pain, as well as, negative reproductive issues. (ATSDR, 2013)
The toxic response to butane includes dizziness, delirium, fatigue, mental impairments, slurred speech, and intoxicated behavior.
Elimination
The body breaks down the Acetone quickly, separating into glucose and fats, the latter saved for normal body functions. The remainder is reduced to CO2 and expelled in our breath (National Library of Medicine, 2013)
The elimination of chlorine from the body occurs through regular metabolism and exhalation.
Does not leave the body easily. It can be stored in the body
Like other heavy metals they tend not to be removed during normal detoxification and it can build up and be stored in the body. (U. S. Department of Health and Human Services, 2013)
Elimination of butane from the body is mostly through exhalation.
Use the text, ToxMystery, and ATSDR as resources to provide the necessary details about each toxicant found.
Toxicant
. mercury
Formaldehyde
Carbon monoxide
Piperonyl butoxide
Cadmium
Classification of toxicant
Heavy metal
VOC
VOC
pesticide
Radioactive (heavy metal)
Source
Johnson and Johnson Thermometer
Palmolive liquid hand soap; aromatherapy
Car exhaust; cigarette smoke
Raid: Ant and Roach Spray
Castrol GTX Motor Oil
Location in house or room
bathroom
Bathroom/kitchen
Garage, all rooms
Kitchen/garage
garage
Effect on plants and humans
Like heavy metals its tendency to remain in the body and build up to toxic levels over time. Plants do not appear in the research to have any extreme reaction to the mercury. (National Library of Medicine, 2013)
In humans the toxin builds up in the lungs causing shortness of breath, among other breathing problems. Most plants have little reaction. They metabolize it quickly and release it into the air. (National Library of Medicine, 2013)
Most people handled general average exposures to carbon monoxide. However, in large doses it is quite dangerous and is designated a contributory carcinogen In plants carbon monoxide is far less dangerous than it is for humans. Plants quickly convert carbon monoxide into CO2 and use it for photosynthesis processes. (National Library of Medicine, 2013)
Despite its ability to kill insects, this pesticide is not as harmful to humans as other chemicals in the environment. It, also, has been designed for indoor and outdoor use, so it is safer under normal exposures for pets, plants, and human beings. (National Library of Medicine, 2013)
In humans it can causes several unpleasant symptoms. It is also a human carcinogen. (National Library of Medicine, 2013) In plants exposure to cadmium can cause limited development, stunted growth, and disruption to, both, photosynthesis and nutrient absorption. (Benavides, Gallego & Tomaro, 2005)
Routes of exposure
Ingestion and through skin
Primarily through inhalation, but ingestion and skin contact is not impossible.
Primarily inhalation
Primarily inhalation; indigestion.
Physical exposure
Distribution
Passive diffusion
Passive diffusion (Heinrich-Ramm, Jakubowski, Heinzow, Molin Christensen, Olsen & Hertel, 2000)
Passive diffusion (Heinrich-Ramm, Jakubowski, Heinzow, Molin Christensen, Olsen & Hertel, 2000)
Passive diffusion
Passive diffusion
Toxic response
The highest levels of exposure can lead to “ mercury poisoning.” Which will include symptoms like nausea, vomiting, diarrhea, weight loss, and can contribute to kidney damage, brain damage, and death, (ATSDR, 2013)
Aside from the shortness of breath, Formaldehyde is considered a human carcinogen, meaning cancer causing. It also may cause menstrual issues in some women. (ATSDR, 2013)
If exposed too often or too long to carbon monoxide gas the result may nausea, headaches, vomiting, dizziness, and, possibly, convulsions, coma, and death. (ATSDR, 2013)
If exposed to high and extremely concentrated doses it can be unhealthy. Modern research has questioned whether or not it could still be a human carcinogen. It can cause headaches, vomiting, and nausea. (ATSDR, 2013)
In human beings it causes irritated stomach, anemia, discoloration of teeth; it can, also, cause kidney disease and cancer. (ATSDR, 2013)
Elimination
Again, mercury, like many heavy metals, can be difficult to remove from the body, but mercury is one of the few that can not only be removed through feces and urine, bit, also, sweat. (U. S. Department of Health and Human Services, 2013)
Through metabolism or excretion (Heinrich-Ramm, Jakubowski, Heinzow, Molin Christensen 4, Olsen & Hertel, 2000).
Through metabolism and/or excretion (Heinrich-Ramm, Jakubowski, Heinzow, Molin Christensen 4, Olsen & Hertel, 2000).
Many pesticides do not leave the body but reside in the bones where they are stored. Therefore this is a long term problem as reaction may not be immediate in any way.
Like other heavy metals it can avoid elimination and store in the body. It is. like mercury, can be excreted from the body through sweat, as well as, through feces and urine. (U. S. Department of Health and Human Services, 2013)
References
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