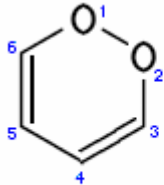




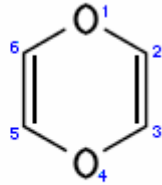
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1,2-dioxin



1,4-dioxin

What is Dioxin

There are two variants of dioxins. They are heterocyclic compounds bearing the chemical formula $C_4H_4O_2$. Because of their extreme importance as environmental pollutants, current scientific literature uses the name **dioxins** commonly for simplification to denote the chlorinated derivatives of dibenzo-*p*-dioxin, more precisely the polychlorinated dibenzodioxins (PCDDs). Dioxins are a global health threat because they persist in the environment and can travel long distances.

Health Effects in Human

Dioxins build up primarily in fatty tissues over time (bioaccumulate), so even small exposures may eventually reach dangerous levels. Dioxins are absorbed primarily through dietary intake of fat, as this is where they accumulate in animals and humans. In humans, the highly chlorinated dioxins are stored in fatty tissues and they are neither readily metabolized nor excreted. The estimated elimination half-life for highly chlorinated dioxins (4-8 chlorine atoms) in human ranges from 7.8 to 132 years. At very low levels, near those to which the general population is exposed, dioxins have been linked to immune system suppression, reproductive disorders, reduced sex organ size and a variety of cancers.

Where are the Sources?

Incineration or burning of waste created by human produce dioxin in the ashes and waste water. The largest contributor is household waste followed by medical waste. The main source from both is the same chlorinated compound from polyvinyl chloride (PVC) popularly called the plastic material. PVC gloves alone will contribute 194,000,000 kilogram of PVC material consumed in the USA each year (Based on 2006 statistic of 19.4billion pairs of plastic gloves at an average weight of 5gm/glove).

Environment Protection – Who is Responsible?

It starts from you, not the person next to you. By eating good nutritional food and eating well, you do your part. Eat all and reduce waste. Staying healthy also help reduce hospital waste. Consume only what you need and pick only from the list of most environmental friendly products. Likewise when you select gloves, you should choose the environmentally friendly natural rubber latex gloves and not synthetics such as PVC which contribute to dioxin generation.

Prepared By
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18th December 2007

Additional Reading:

1. <http://en.wikipedia.org/wiki/Dioxin>
2. <http://www.latexglove.info/environment.php>
3. The Greening of Healthcare <http://www.utne.com/2002-11-01/The-Greening-of-Health-Care.aspx>
4. <http://www.noharm.org/us/pvcDehp/issue>
5. <http://www.noharm.org/>