

OZONE EFFECTS ON CONTAMINANTS IN POTABLE WATER

No	Contaminants	Probable Health Effects	OZONE TREATMENT & Effects
1	Chloro benzene	Irritation to Respiratory System, CNS Depression	Destroyed by Ozone
2.	Carbon Tetra Chloride	CNS Depression, GI Effects on Liver & Kidney damage, coma & Health	Caused by Chlorination Removed by Ozone
3	1,1,1, Trichlor ethylene	Depression of CNS, Unconsciousness, Death	Removed by chlorine
4	Dieldrin	Poisoning of nervous and muscular System , carcinogenic	Removed by ozone
5	Lindane	Liver damage, Anemia, Leukemia	Removed by Ozone
6.	DDD	Convulsions in man	Removed by ozone
7	1,1,2 TRICHLORETHANE	Liver & Kidney damage	Removed by Ozone
8	Vinyl Chloride	CNS Depression, dulling of Visual & auditory reponses , possible death	NO Effects
9	Barium	Stimulant action on muscles & nerve Block	No Effects
10	Sodium Sulfite	Diarrhea	Oxidized by Ozone
11	Benzene	Cancer, Leukemia, anemia	Removed by ozone
12	Propyl benzene	CNS Depression, . Anorexia, Muscular Weakness, possible effects on liver, bone marrow & Heart	Destroyed by ozone
13	THMs	Effects on Nervous Systems & Muscles , Loss of Consciousness, carcinogenic	Destroyed by ozone
14	Zinc Sulfate	Laxative effect	No Effects

OZONE EFFECTS ON CONTAMINANTS IN POTABLE WATER ...2

15	Nickel	Hyperglycemia, GI & Nervous disorders	No effects
16	.Xylene	Mucous membrane irritant , lung congestion, impairment of kidney functions	Removed by ozone
17	Alkanes	Transient Depression of Nervous System	Removed by ozone
18	Asbestos	Possible cancer	No effects
19.	Copper	GI Irritant, Infant fatality, Wilson's disease	No Effects
20.	Zinc	Muscular Stiffness & Pain, loss of appetite, nausea	No effects
21	Lead	Damage to Nervous System, Kidneys, Reproductive Systems	No effects
22	PCBs	Damage to Skin & Liver, nausea, loss of weight, jaundice, coma, death	No effects
23	1,1,Dichloroethane	CNS depression, Liver damage,	Destroyed by ozone
24	1,2,Dichloroethane	Nausea, mental confusion, liver & kidney damage	Destroyed by ozone
25	Trichloroethylene	CNS depression, Loss of Coordination and consciousness, carcinogen	Destroyed by ozone
26	Tetrachlorethylene	CNS effects, Animal carcinogen, anesthesia, death	Destroyed by Ozone
27	Pentachlorphenol	Loss of appetite, respiratory difficulties, anesthesia, coma, death	Destroyed by ozone
28	Arsenic	Malignant tumor of skin & Lungs, cramps, spasms, effects on CNS	No effects

OZONE EFFECTS ON CONTAMINANTS IN POTABLE WATER3

29	Chromium	Kidney damage	Removed by ozone
30	Cadmium	Bronchitis, anemia, GI upsets	Removed by ozone
31	Mercury	Kidney Impairment	Removed by ozone
32	Cyanide	Effects on respiratory system & CVS	Removed by ozone
33	Aluminium	GI Irritation, rickets, Skeletal pain, muscle weakness	No effects
34	Toluene	Narcosis, eye and respiratory irritation	Destroyed by ozone
35	Chloroform	Liver, kidney & heart effects, Carcinogenic	Destroyed by ozone
36	Ethylene Di bromide	Decreased Fertility	Removed by Ozone
37	Toxaphene	Possible liver damage	Destroyed by ozone
38	Aldrin	Proven cases of death, poisoning of nervous & muscular systems	No effects
39	Heptachlor	Possible tumor induction,	Destroyed by ozone
40	Sulfate	Laxative action	No effects
41	Benzo (A) Pyrene	Carcinogenic	Removed by ozone
42	Benzindine	Carcinogen	Removed by ozone
43	DDT	Carcinogen	Removed by ozone
44	DDE	Carcinogen	Removed by ozone
45	Selenium	Carcinogen , irritation in mucous membranes, dermatitis	No effects

Notes: 1 Few Compounds like Zinc, Selenium have been found useful in minute quantities if not supplemented by Normal food intake
 2. The effects of ozone on these compounds are based on Ozone Chemistry involving multiple chemical reactions . Complete removal will depend on allowing ozone to complete its reactions.

Compiled by OTSIL from References:

1. Drinking water & Health, National academy & Sciences, safe Drinking water Committee 1977, Australia
2. Carcinogenic Hazards of Organic Chemicals In Drinking water – R.H.Harris, T.Page, and N.A.,Reiches, 1977
3. Contamination of Ground water by Toxic Chemicals, US Council on Environmental Quality, January 1981