Synthetic Organic Chemicals (SOCs)

Synthetic Organic Chemicals are included in EPA's Chemical Contaminant Phase II/V Rule for drinking water. SOCs are man-made, organic (carbon-based) chemicals. They are used as pesticides, defoliants, fuel additives and as ingredients for other organic compounds. Some of the more well-known SOCs are Atrazine, 2,4-D, Dioxin and Polychlorinated Biphenyls (PCBs).

The Federal Safe Drinking Water Act

The Federal Safe Drinking Water Act requires all of the nation's public water supplies to be tested periodically for various potential contaminants. Analysis of SOCs in drinking water is one of several services provided by DEQ's State Environmental Laboratory (SEL).

The purpose of this Fact Sheet is to assist you with interpreting test results. SEL can test for up to 30 SOCs. Table 1 shows EPA's Drinking Water Maximum Contaminant Levels (MCLs) for these chemicals. Drinking water that exceeds any of these MCLs is not considered safe for human consumption.

The unit of measure for synthetic organic chemical analysis is µg/L or microgram per liter of water. One µg/L is equivalent to one part per billion. Tests with concentration results below that lab test's lowest reportable value are indicated by a "<" (less than symbol) followed by that test's lowest level that can be reported. When a result is reported as a "less than", it essentially means that no significant concentration of that contaminant was detected in the sample.

Should you have any questions concerning test results, please contact the SEL at (405) 702-1000 or (866) 412-3057 for assistance.

For additional information on this subject you may contact your local DEQ representative or the Water Quality Division of the Department of Environmental Quality at (405) 702-8100.

Table 1. Drinking Water Maximum Contaminant Levels

Chemical Parameter	MCL (µg/L)
2,4-D	70
2,4,5-TP (Silvex)	50
Alachlor	2
Atrazine	3
Benzo[a]pyrene	0.2
Carbofuran	40
Chlordane	2
Dalapon	200
Dibromochloropropane (DBCP)	0.2
Di(2-ethylhexyl) adipate	400
Di(2-ethylhexyl) phthalate	6
Dinoseb	7
Dioxin (2,3,7,8-TCDD)	0.00003
Diquat	20
Endothall	100
Endrin	2
Ethylene Dibromide (EDB)	0.05
Glyphosate	700
Heptachlor	0.4
Heptachlor epoxide	0.2
Hexachlorobenzene	1
Hexachlorocyclopentadiene	50
Lindane (gamma-BHC)	0.2
Methoxychlor	40
Oxamyl (Vydate)	200
Pentachlorophenol	1
Picloram	500
Polychorinated Biphenyls (PCBs)	0.5
Simazine	4
Toxaphene	3

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