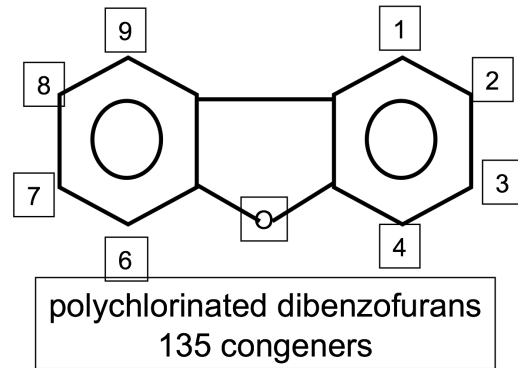
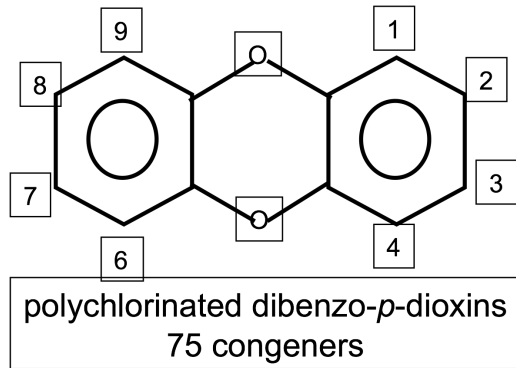


Polychlorinated dibenzo-*p*-dioxins, with potentially 75 different chlorinated molecular configurations (congeners), and **polychlorinated dibenzofurans**, with potentially 135 congeners, are by-products of natural and anthropogenic combustion and chemical manufacturing activities. These compounds are often collectively referred to as “**Dioxins**” or **Dioxin/Furans**” (DF).



Polychlorinated biphenyls (PCBs) with 209 possible congeners, were manufactured from 1929 to 1977 as industrial fluids and plasticizers. These compounds are refractory to degradation in the environment, tend to be hydrophobic and strongly partition into lipids. The tendency to absorb into lipids and fats has been used in modeling biological and environmental behavior of these molecules as partitioning coefficients in octanol-water phases (K_{ow} ; <http://environ.nosc.mil/Projects/REEFEX/index.html>). PCB contamination derives from industrial use, spillage, and disposal of these synthetic compounds, mostly in freshwaters and estuaries, though some marine disposal has been suspected. PCBs are also known to be deposited from the atmosphere (i.e., Park et al., 2001), but this flux is relatively minor compared to past direct discharges to aquatic systems (i.e., Howell et al., 2007).

