

The Phenol Myth

Myth # 1 Phenols are Non-toxic

The fact that phenols are in 70% of disinfectant products, does not make them safe. The directions for phenol use state gloves and masks should be worn. The Material Safety Data Sheets (**MSDS**) available from the disinfectant formulators are often sketchy with critical information omitted. The real source of information, and that which is scrutinized by the EPA is the original raw material manufacturer's MSDS. The most common phenol, synthetic o-phenyl phenol, has an **MSDS** sheet that is straightforward and frank. O-phenyl phenol is considered "An immediate health hazard. A delayed health hazard and is highly toxic on an acute basis, to aquatic life." This **phenol** has a TLV (Threshold Limit Value) of **2 ppm** (parts per million) In perspective, **Dental Mercury** has a TLV of 50 ppm. **Dental Tray Material** has a Lethal Concentration (LC50) of 7,094 ppm, compared to **o-phenyl phenol**, which is toxic at the 36 ppm level ! Taken from the Merck Chemical Index, quotes such as "carbolic acid", "poisonous and caustic", "causes necrosis of mouth and gastro-intestinal tract" are all in the description of Phenols.

Myth # 2 Phenols are effective

Clinical Research Associates (CRA) wrote in January 1995 "Inability to inactivate non-enveloped viruses is the major weakness of Phenolic-based disinfectants that has been well described in the literature for many years, **but at this point has been continuously ignored by disinfectant manufacturers and distributors**". **Green Team (ethanol)** products are the **only fast-acting disinfectants that work without Phenols**. Studies at Loma Linda University in California have also shown phenols to be generally **ineffective**. Further studies at Micrylium Laboratories have shown that on soft surfaces such as vinyl or naughahyde the kill time of phenols is **three times** longer than their label claim.

Myth # 3 Phenols are economical

Dilutable products such as Phenols give users the **false impression** of being less costly. There are immediate and long term consequences and costs associated with Phenol use. Immediate: To meet the kill times stated on the label, dilution must be made with **distilled or deionized water**. Using **tap water** introduces ions which react with the phenols to **inactivate** them. When pricing phenols, include the cost of the correct water type. Long Term: Phenol product labels indicate areas to be cautious of. Phenols etch glass, hence everything from mouth mirrors to fibre optics to intra oral camera lenses are at risk. Vinyl and naughahyde chairs become brittle with phenol exposure. Plumbing pipe (commonly black ABS type) can be totally destroyed after years of phenol use. Take a moment to add up the thousands of dollars of damage that phenols may cause in your clinic. Most municipalities will not allow Phenols into their sewers in quantities of more than 1 part per million. What is cost of having a licenced waste management company dispose of your Phenol?