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Comments: I searched through the document entitled “Draft Report on Carcinogens Background Document for Formaldehyde” and found an important error. The document incorrectly states and assumes throughout that "formalin contains approximately 37% formaldehyde gas by weight”. This is incorrect.
Formaldehyde (CAS# 50-00-0) is an anhydrous aldehyde gas that reacts almost instantaneously with water to produce methylene glycol (CAS#463-57-0). Therefore formalin is actually 37% methylene glycol. Not only do these two substances have different chemical abstract numbers, one belongs to the chemical family of “glycols” and is a liquid, while the other is an “aldehyde” and is a gas.
Chemical equilibrium(1) data reported in the literature indicate that there is approximately 466 ppm free formaldehyde in equilibrium with methylene glycol in 37% formalin at room temperature; making is significantly different than the value reported in this document.
The incorrect belief that formaldehyde simply dissolves into water to create formalin is a widespread misunderstanding in the scientific and medical communities as proved by the fact that most analytical test methodologies incorrectly claim to measure formaldehyde, when actually these methods are also measuring paraformaldhyde oligomer (CAS#30525-87-4), trioxide cyclic trimer (CAS#110-88-3) and methylene glycol and some of these test methods actually generate the very formaldehyde they are reporting to find. However, there are test methods which seem to measure only free formaldehyde in solutions.(2)
I would like very much to discuss this with you further. I’m adding these comments because I believe it's important that scientists and other researchers understand this important information and I hope you will include it in your document.
Respectfully Yours,
Doug Schoon, MS
President
Schoon Scientific

References
1. Kinetics and chemical equilibrium of the hydration of formaldehyde, Winkleman, et al, Chemical Engineering Science, 57 (2002) 4067-4076
2. Non-Destructive Method for Determining the Actual Concentration of Free Formaldehyde in Personal Care Formulations Containing Formaldehyde Donors, Tallon, M., Merianos, J.J., Subramaniam, S., SOFW- Journal, 135, 5-2009, 22-32