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C-8 Air and Blood Sampling

The new C-8 air sampling method is yielding higher C-8 results than the impinger method for areas which contain airborne Polymer Particles. These Polymer Particles contain C-8 in two different forms:

- ① Encapsulated inside Particle agglomerates
- ② Adsorbed on the surface of single particles

The impinger method is not measuring C-8 adsorbed on the outside or encapsulated inside Polymer Particles. The question is: Which sampling method yields results which most accurately represents employee C-8 exposure? According to a Haskell Laboratory Toxicologist, the new C-8 method would be more accurate. He mentioned that C-8 contained on the Polymer Particles would eventually be desorbed either in the respiratory tract or the gastrointestinal tract. Once the C-8 is desorbed off the polymer, it can be absorbed into the blood.

A second question that came up is: Do blood C-8 levels reflect C-8 levels in the body tissues? According to the same Toxicologist, the answer is yes. This is true as long as the blood albumin is not saturated with C-8. Approximately 98 to 99% of C-8 in blood is trapped by a blood protein called albumin. Albumin acts as a C-8 scavenger. The albumin can hold only so much C-8 before it's saturated. Once it's saturated, additional C-8 coming into the body is free to enter body tissues.

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