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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:

- Encapsulated inside polymer agglomerates
- Adsorbed on the surface of single particles

The impinger method measures vaporous C-8 and C-8 adsorbed on particle surfaces. It does not measure C-8 encapsulated inside polymer agglomerates. The new method, however, measures vaporous, adsorbed, and encapsulated C-8. The question arises: Which sampling method yields results which more accurately represents employee exposure? We currently don't know the answer. Tim Pastoor, a Haskell Laboratory Toxicologist, mentioned he could design a test which will answer the above question. Since the possibility does exist that C-8 encapsulated in polymer can be released and absorbed in the body, I recommend such a test be designed.

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A second question that came up is: Do blood C-8 levels reflect C-8 levels in body tissues?

According to Tim Pastoor, 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 the blood protein albumin. Albumin acts as a C-8 scavenger. 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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