Aroclor

Monsanto

FROM (NAME & LOCATION): J. P. Mieure - T2F

DATE : August 18, 1976 cc: R. E. Keller - T1B

SUBJECT : Mallory's PCB Measurement Problem

REFERENCE :

TO : D. Wood - B2SD

This note documents my 8/18/76 phone conversation with Roy Davidson of P. R. Mallory. Roy was preparing spiked water samples of Aroclor 1016 to determine the precision and accuracy of their PCB measuring technique. However, the extracts of these samples gave gas chromatograms with peaks having different relative intensities than the original standard. He wanted to know how to correct this anomaly.

The answer was fairly simple. He was preparing his water samples by spiking Aroclor 1016 from hexane solution into an empty volumetric flask, allowing the hexane solvent to evaporate and then adding water to dissolve the PCB's. However, PCB's don't readily dissolve under these conditions; the lower chlorinated isomers dissolved to a greater extent than the higher chlorinated ones, resulting in a distorted chromatogram.

I recommend that he prepare his spiking standards in acetone solvent and always spike into water, never into an empty container. These two modifications should solve his problems.

Jim

J. P. Mieure

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