

Monsanto

INDUSTRIAL CHEMICALS CO.

FROM (NAME & LOCATION):

R. H. Munch, So. 2nd, St. Louis, Mo.

DATE : June 20, 1972 cc: W. R. Richard - T3A
P. B. Benignus - B2SC
SUBJECT : Higher Boiling Homologs J. Savage - B2SL
in Aroclor 1016 H. J. Horner - WGK
REFERENCE : S. Kuster - WGK
TO : Bob McCutchan R. E. Keller - T1B
WGK E. Emery - T3E
H. S. Bergen - B2SL

Before plant production of Aroclor 1016 started, the Physical Chemistry Group of the Research Department developed a method for determining Higher Boiling Homologs to be used to determine whether or not these had been reduced to the specified level. This method was Physical Chemistry Method 71-11, Job No. 1348522. At the time, it was thought that this method gave a reasonably good value for the penta and hexachloro biphenyls left in the Aroclor 1016. However, because it was recognized that the method was empirical we were careful to specify penta and hexachlorobiphenyls in terms of this method.

Recent analytical research here and in Europe has shown that if combined gas chromatography - mass spectroscopy is used the values for penta and hexa obtained would be roughly 3 to 4 times those given by the simple empirical plant control method. Since the combined GLC-MS method requires 150M worth of equipment, a highly skilled operator and about a day to carry out, we cannot use this method routinely. Therefore we have chosen to continue to use the simple method and the same specification limit and change the designation of the material measured from penta and hexachloro biphenyls to "Higher Boiling Homologs" as defined by this method.

In view of the above facts, several changes should be made in method T-2302. The major one is to change penta and hexachlorobiphenyls in the title and body of the method to "Higher Boiling Homologs". A second one is that the integrator for the GLC must be a Disc Integrator or standardized against a Disc integrator if an electronic integrator or computer is used for integration. This was specified in the original suggested specification for Aroclor 1016.

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To: Bob McCutchan

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Finally reference should be made, as was done in Method 71-11A, to the fact that standard samples of Aroclor 1016 and Aroclor 1242 are available for comparison and standardization of the method.

The changes suggested above plus those made in the new Finished Product Specification for Aroclor 1016 should make everything consistent.


R. H. Munch

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L. H. Murch
Res 2

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