St. Louis

Dec.11/51

(Airmail)
Mr. W. E. Hamer, Ruabon
Mr. W. H. Ritchie, Ruabon
Dr. H. R. Newman, Ruabon
Mr. S. M. Kulifay, Krummrich
Dr. D. S. Weddell, St.Louis
Mr. F. T. Marshall, St.Louis

Mr. P. J. C. Haywood

Newport (Airmail)

AROCLORS: TOXICITY

Since writing to you on December 3rd I have come across a letter of mine to Mr. W. M. Cooper, London, June 24/48, (copies to W.D.S., W.H.G., and others), calling attention to an article in the J.T.Baker Company's "Chemist Analyst", Vol.26, No.2, page 33, September 1947.

I attach a copy of this article, and I think you will agree that the warning relates only to really bad exposure, not such as should occur in ordinary analytical work.

On Oct.27/47 Mr. Barbre of the Krummrich plant sent a copy of this Journal to Dr. Jenkins at Anniston for comment. Dr. Jenkins did not make any comments at the time, but the following extract from Mr. Barbre's letter is interesting:

> "During the 11 years of production here only one man evidenced dermatitis. He had also shown similar symptoms in several other departments. When making Aroclor #1270 which is flaked, a noticeable amount of fine fume solidifies in the air. If men are exposed to it during hot humid weather, the skin is irritated, but we have not had any difficulty in curing cases of dermatitis from it".

E. Mather

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MONS 095205

The Chemist Analyst, Vol.36, No.2, page 33,
J.T.Baker Chemical Co., Phillipsburg, N.J.,
September 1947

On the Toxicity of the "Arochlors" (sic)

Robert M. Brown, Chief,
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Dept. of Public Welfare, City of St.Louis, Mo.

A recently published article (Maglio, M.Martin, Chemist Analyst, 35 94 (1946)), has recommended the substitution of one of the "Arochlors" as the melting-point bath liquid in preference to the customary sulphuric acid. As stated in that article "Arochlors" are a group of chlorinated diphenyls produced by the Monsanto Chemical Company.

There is need therefore to give warning. For the toxicity of these compounds has been repeatedly demonstrated, both from the standpoint of their absorption from the inspired air as well as from their effects in producing a serious and disfiguring dermatitis when allowed to remain in contact with the skin. Since these effects have been repeatedly observed, industrial hygienists have taken care to see that the proper controls have been established wherever these products are used. For example, the maximum allowable concentration of chlorinated diphenyl for an 8-hour working day is 1 milligram per cubic meter of air.

It is probable that nothing like an uncontrolled industrial exposure will occur in the laboratory. However, whether an individual is subjected to a possible acute exposure to chlorinated diphenyl, and its serious consequences, will depend upon the size of the melting-point bath, the caution with which it is used, and the temperature to which it may be heated. Likewise, with careless handling of the material and the resulting contamination of the skin, clothing, laboratory towels, work table surfaces, etc. the way is left open for the producing of dermatitis. Scrupulous cleanliness must be insisted upon wherever this material is handled.

The foregoing remarks have been prompted by the belief that in recommending the use of a material with which is associated a potential hazard from the health standpoint, it is very important that the possible consequences be presented together with recommendations for correct handling.

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