Date: 3/9/53 Material: Aroclors, Pyranols Method No. 10,620-53
By: SE,NPA: Inerteens,Tri-Tetrachlorobenzene W.G.K. Dept. No. 233/246
SMK Blends
Test: Moisture (H_2O Water Content) Page: 1 (of 3 pages)

Introduction:

Because of the varying solubility of Aroclors, Pyranols, Inerteens, and Tri-tetrachlorobenzene Blend, different proportions of a mixed solvent are required. However, the analysis itself is the same for all listed products.

Procedure:

1. Determine moisture (water content) in Aroclors, Pyranols, Inerteens, and Tri-tetrachlorobenzene Blend using Karl Fischer (K. F.) reagent. Apply the "Dead Stop" method described in General Method No. 7, (Method No. 10,100) with the following modifications:

2. Place the solvents, in the proportions indicated below, into the titration flask:

Material	Anhydrous Benzene	Anhydrous Methanol
Pyranol 1478	0 ml.	300 ml.
Pyranol 1488	100 ml.	200 ml.
Pyranol 1467	100 ml.	200 ml.
Pyranol 1470	100 ml.	200 ml.

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Pyranol 1481	100 ml.	200 ml.
Pyranol 1499	100 ml.	200 ml.
Inerteen F.O.P.C.	100 ml.	200 ml.
Tri-Tetrachlorobenzene Blend	100 ml.	200 ml.
All Aroclors	110 ml.	190 ml.

3. Titrate the solvent with the K. F. reagent until it is "blanked".

NOTE: The solvent is "blanked" when the tube shadow remains fully open (ca. 100°) for 30 seconds.

4. Refill the burette with K. F. reagent to the zero mark.

5. Weigh on a beam balance a 100 (± 0.05) g. sample, by difference, into the "blanked" solvent and allow the material in the flask to mix well.

6. Titrate the solution with K. F. reagent to the end-point described in Step 5. Record the volume of K. F. reagent used.

Calculation:

$$\% \text{ Moisture (H}_2\text{O)} = \frac{\text{ml. K.F. Reagent} \times \text{H}_2\text{O factor} \times 100}{\text{Sample Weight}}$$

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* If required by a specification, report as "Water Content" in p.p.m. equivalent to percent moisture.

The method is precise to ± 5% of the water present.

Report the result to the nearest 0.0005% or equivalent p.p.m.

NOTE: 1 ppm is equivalent to 0.0001%.

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