THERMINOL®
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PROPOSED METHOD FOR THE DETERMINATION OF THERMINOL 66 IN LIGHT HYDROCARBON SAMPLES

SCOPE

This method is for the determination of Therminol 66 in light hydrocarbon samples to levels of 2ppm when looking at the absorbtivity of neat liquid in a 2cm. path length cell. Samples containing other UV absorbing impurities may interfere with this analysis, giving higher values.

EQUIPMENT/REAGENTS

1. Spectrograde hexane
2. UV visible spectrophotometer such as Cary Model 714.
3. Quartz cell of 2cm path length.
4. Appropriate volumetric glassware for sample dilution, if dilution is necessary.

EXPERIMENTAL

1. Dilute accurately weighed sample with spectrograde hexane to a specific volume (or run neat sample).
2. Measure absorption from 400 to 210 nm (using hexane as a reference) in a suitable pathlength cell and record absorbance at 249 nm.

   An absorptivity of 35.6 liters/gm-cm was obtained on Therminol 66 in the Monsanto laboratory.

$$\%\ \text{Therminol 66 in Sample} = \frac{(\text{Absorbance})(\text{Volume of Dilution, in Liters})(100)}{(35.6)(\text{Cell Path})(\text{Sample Weight, in g})}$$

NOTE: Any samples containing other UV absorbing impurities may interfere with this analysis giving high values.

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3. Calculate the concentration of Therminol 66 as follows:

$$\text{Sample Concentration} = \frac{\text{Sample Area}}{\text{Standard Area}} \times \text{Standard Concentration}$$

NOTE: Components having the same retention time as Therminol 66 components will interfere with the analysis.

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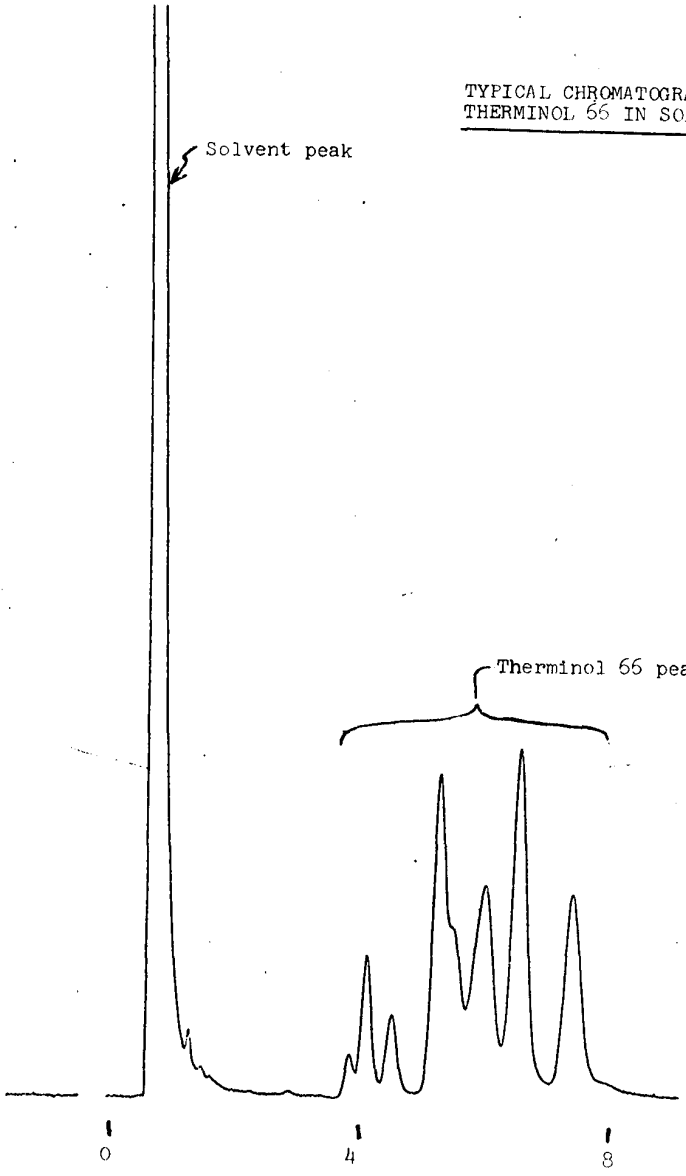
TYPICAL CHROMATOGRAM
THERMINOL 66 IN SOLVENT



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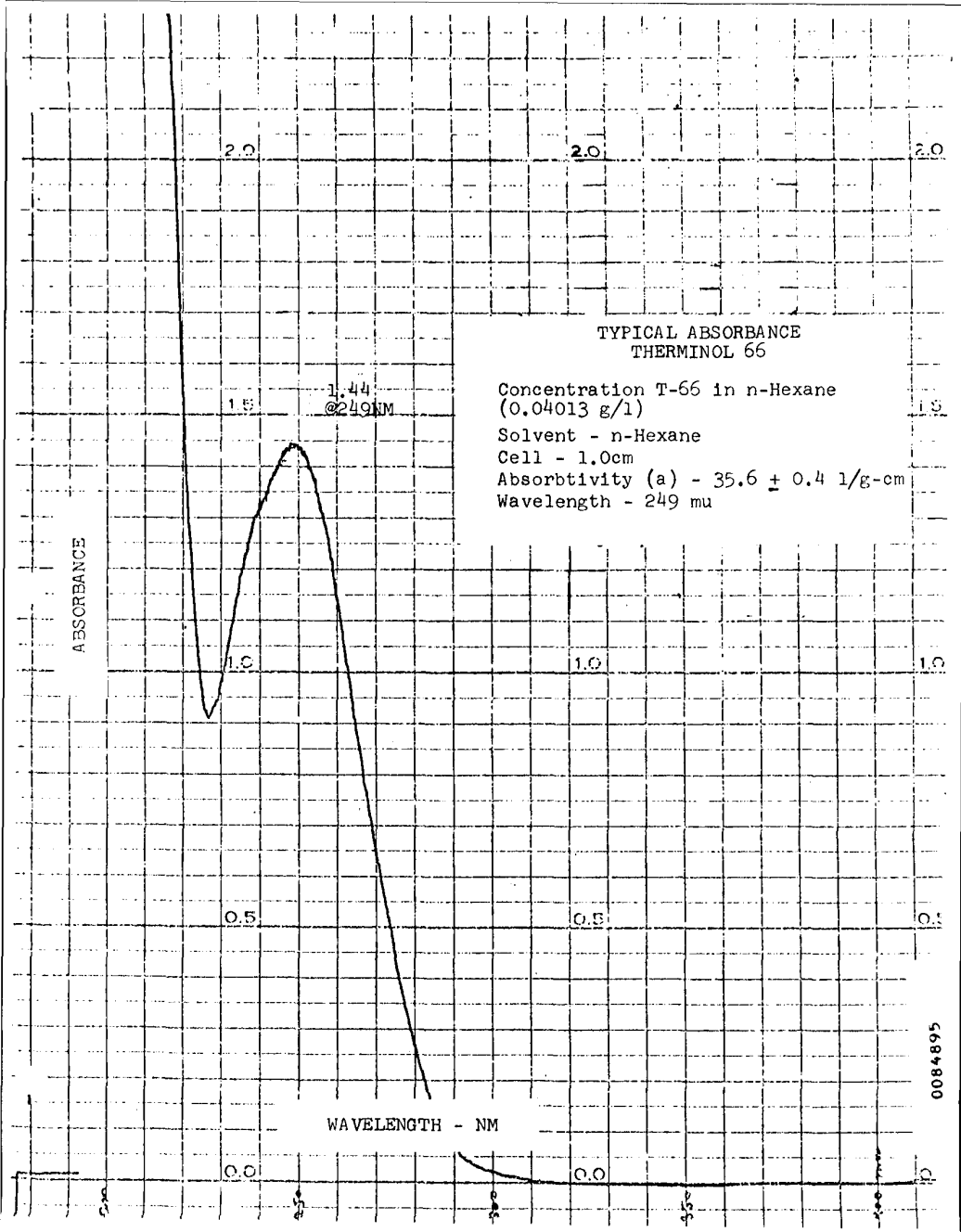

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