

CONTENTS

1. Trends in Gas Chromatography	1
SESSION 1-Chairman-Dr A. J. P. Martin	
2. The Thermodynamics of Gas-Liquid Chromatography	5
3. Factors Determining Column Efficiency in Gas-Liquid Partition Chromatography	15
4. The Concentration Factor in Vapour Phase Partition Chromatography	35
5. A Basis for the Comparison and Choice of Solvents in Vapour Phase Partition Chromatography	52
SESSION 2-Chairman-Mr C. S. G. Phillips	
6. Factors Affecting Katharometer Sensitivity and Column Efficiency in Vapour Phase Partition Chromatography	63
7. Factors Affecting Thermal Conductivity Detectors in Vapour Phase Partition Chromatography	74
8. Micro Vapour Phase Chromatography-Effect of Column Temperature	87
9. An Evaluation of some polyglycols used as Stationary Phases for Gas-Liquid Partition Chromatography	98
10. A Preliminary Study of some Factors influencing the Order of Elution of Halogenated Methanes, the Degree of Separation, and the Reproducibility of Retention Volumes in Gas-Liquid Partition Chromatography	115
11. Detection of Vapours in Flowing Gas Streams	127
SESSION 3-Chairman-Dr A. T. James	
12. A New Detector for Vapour Phase Partition Chromatography	131
13. Properties of the Martin Gas Density Balance and Possible Modifications Thereof	146
14. The Hydrogen Microflare Detector Using Nitrogen as a Carrier Gas	154
15. A Comparison of Detection Methods for Gas Chromatography including Detection by Beta Ray Ionization	169
16. A Thermal Conductivity Detector for use at High Temperatures in Vapour Phase Chromatography	185
17. A Large Scale Analytical Gas-Liquid Partition Chromatographic Unit	194
SESSION 4-Chairman-Prof. R. M. Barrer	
18. Some Problems Encountered with the Application of Vapour Phase Chromatography to Kinetic Studies	213
19. Vapour Phase Chromatography at High Temperatures	222
20. The Concept of the Chromatographic Spectrum of Gases and Volatile Materials	235
21. Vapour Phase Chromatography on Zeolites	247

22. The Application of gas Chromatography to Organic Fluorine Chemistry	256
23. The Construction of an Apparatus for Studies in Vapour Phase Chromatography at Temperatures up to 300°C	266
General Discussion	277

SESSION 5-Chairman-Dr A. I. M. Keulemans

23. Apparatus for Vapour Phase Chromatography with Ancillary Unit for the Determination of <i>iso</i> Propyl Nitrate in Heavy Oils	281
24. The Analysis and Control of Refinery Gas Steams using the Chromatographic Technique (Jan'ak Method)	291
26. Practical Notes on Gas-Liquid Chromatography as Applied to the Estimation of Volatile Fatty Acids	304
27. The Analysis of Fatty Acids and Fatty Alcohols by Vapour Phase Chromatography	316
28. Vapour Phase Chromatographic Analysis of Chlorinated Hydrocarbons and Hydrocarbon Gases	332
29. The Application of Vapour Phase Chromatography to the Examination of Samples Taken from Internal Combustion Engines by an Open-hole Technique	346

SESSION 6-Chairman-Mr N. H. Ray

30. Chemical Engineering Design of a Unit for continuous Gas Chromatography (Hypersorption)	359
31. Vapour Fractometry (Gas Chromatography) Part II. A Powerful New Tool in Chemical Analysis	377
32. The Quantitative Analysis of Mixtures of Chlorofluoromethanes	388
33. Application of Gas-Liquid Partition Chromatography to Solvent Analysis	395
34. The Use of Gas-Liquid Chromatography in the Determination of the Distribution of Aromatic Compounds in Coal Tar Naphthas	413
35. Gas Chromatographic Separation of Hydrogen Isotopes	422
35. The Quantitative Separation of Mixtures containing vinyl Acetate and Bromotrichloromethane by Vapour Phase Chromatography	428
General Discussion	432
CLOSING ADDRESS	435