

Preface

The International Project on Vapour-Liquid Equilibria in 1-Alkanol + n-Alkane Mixtures was initiated by the IUPAC Subcommittee on Thermodynamic Tables (now the Subcommittee on Thermodynamic Data) of the Commission on Thermodynamics in 1983 with Dr.H.V.Kehiaian, then its Chairman, as Coordinator.

The purpose was to strengthen international cooperation for the production of "recommended data" which would be universally accepted by the scientific and technological communities. It was decided to concentrate initially on 1-alkanols and n-alkanes and to develop a set of recommended data on low-pressure vapour-liquid equilibrium and related properties for binary 1-alkanol + n-alkane mixtures. In order to realize this objective, groups have been set up to concentrate on the individual properties:

Pure components	Mixtures
Volumetric properties of gases	Vapour-liquid equilibria
Orthobaric densities and compressibilities	Liquid-liquid equilibria
Critical properties	Excess heat capacities and enthalpies
Heat capacities	Excess volumes
Vapour pressure	Activity coefficients at infinite dilution
Enthalpy of vaporisation	Solid-liquid equilibria

In each case, initial compilation of a complete bibliography is followed by the selection of data to form the basis of a preliminary recommendation which is then subject to critical evaluation and consistency tests. Methods of correlation and prediction are applied only after careful evaluation.

A series of Workshops was planned for participants to meet to present papers and to discuss progress. The First Workshop was held in Warsaw in 1984, with subsequent Workshops in Paris in 1985 and Budapest in 1987. The programmes for these meetings included:

- State of the Art Reviews
- Communications on original work
- Working party reports, and discussion, on individual properties:
- Discussion of future activities, especially with regard to increased cooperation and coordination of efforts, and exchange of data

In view of the industrial importance of these, and related, mixtures it was decided to include a special session on Applications in the Fourth Workshop, held in Thessaloniki in 1988. Both commercial and environmental aspects of these mixtures were covered in the talks and discussions, as well as their properties. The selected papers presented here cover topics including industrial processes, the use of oxygenated hydrocarbons in reducing air pollution, recommendations for certain pure component properties, and the results of equations of state calculations and model calculations for both pure compound and mixture properties.

Finally, it is with the greatest pleasure that we thank Professor Vasalos for his invitation to hold the Workshop in Thessaloniki and for his assistance, and all Committee Members, especially Dr.H.V.Kehiaian for his guidance and enthusiasm.

J.H.Dymond
Department of Chemistry
University of Glasgow
Glasgow G12 8QQ
U.K.

C.G.Panayiotou
Department of Chemical Engineering
University of Thessaloniki
540 06 Thessaloniki
Greece