

## CLASSIFICATION OF ALIPHATIC HYDROCARBONS FORMED AT TEMPERATURE-PROGRAMMED CO-PYROLYSIS OF TURKISH OIL SHALES OF KEROGEN TYPES I AND II

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*Temperature-programmed co-pyrolysis of Göynük and Beypazari oil shales was investigated with the aim to determine volatile product distribution and product evolution rate of co-processing. A series co-pyrolysis operation was performed using three total carbon ratios. A fixed-bed reactor was used to pyrolyse small samples of oil shale mixtures under an inert gas (argon) flow. A special sampling technique was used for collecting organic products formed at different temperature and time intervals. The co-pyrolysis products were analyzed by capillary gas chromatography and the total product evolution rate was investigated as a function of temperature and time. n-Paraffins and 1-olefins in aliphatic fraction of pyrolysis products were classified by their carbon number. In addition, the recovery of total organic carbon as an organic volatile product was determined. The effect of co-processing was determined comparing the results with the data of their separate pyrolysis. The effect of oil shale kerogen type on co-pyrolysis operation was also investigated. Conversion into volatile hydrocarbons was found to lower with increasing Beypazari oil shale share in the mixture while the amounts of C<sub>1</sub>-C<sub>15</sub> hydrocarbons and coke to increase in the presence of this oil shale.*

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