

SUPPLEMENTARY MATERIAL TO  
**Significance of infrared spectroscopic branching factor for investigation of structural characteristics of alkanes, geochemical properties and viscosity of oils**

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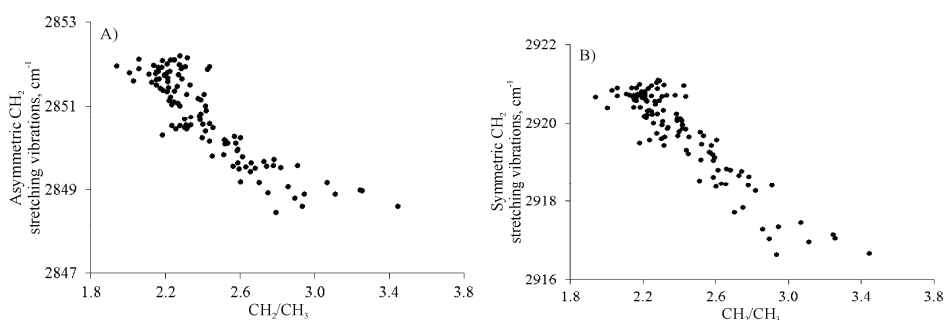


Fig. S-1. Peak positions depending on the  $\text{CH}_2/\text{CH}_3$  branching factor for the studied oils: (A) asymmetric  $\text{CH}_2$  and (B) symmetric  $\text{CH}_2$ .  $\text{CH}_2/\text{CH}_3$  – the branching factor (the ratio of methylene and methyl group peak heights at  $2917\text{--}2921\text{ cm}^{-1}$  and  $2951\text{--}2954\text{ cm}^{-1}$ , respectively in the IR spectra).

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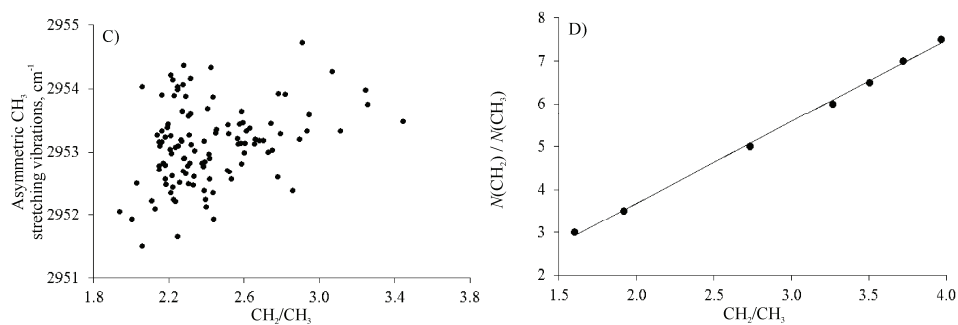


Fig. S-1. (Continued) Peak positions depending on the  $\text{CH}_2/\text{CH}_3$  branching factor for the studied oils: (C) asymmetric  $\text{CH}_3$  stretching vibrations and (D) correlation diagram of the methylene to methyl group number ratio,  $N(\text{CH}_2)/N(\text{CH}_3)$  vs.  $\text{CH}_2/\text{CH}_3$ .  $\text{CH}_2/\text{CH}_3$  – the branching factor (the ratio of methylene and methyl group peak heights at 2917–2921  $\text{cm}^{-1}$  and 2951–2954  $\text{cm}^{-1}$ , respectively in the IR spectra).

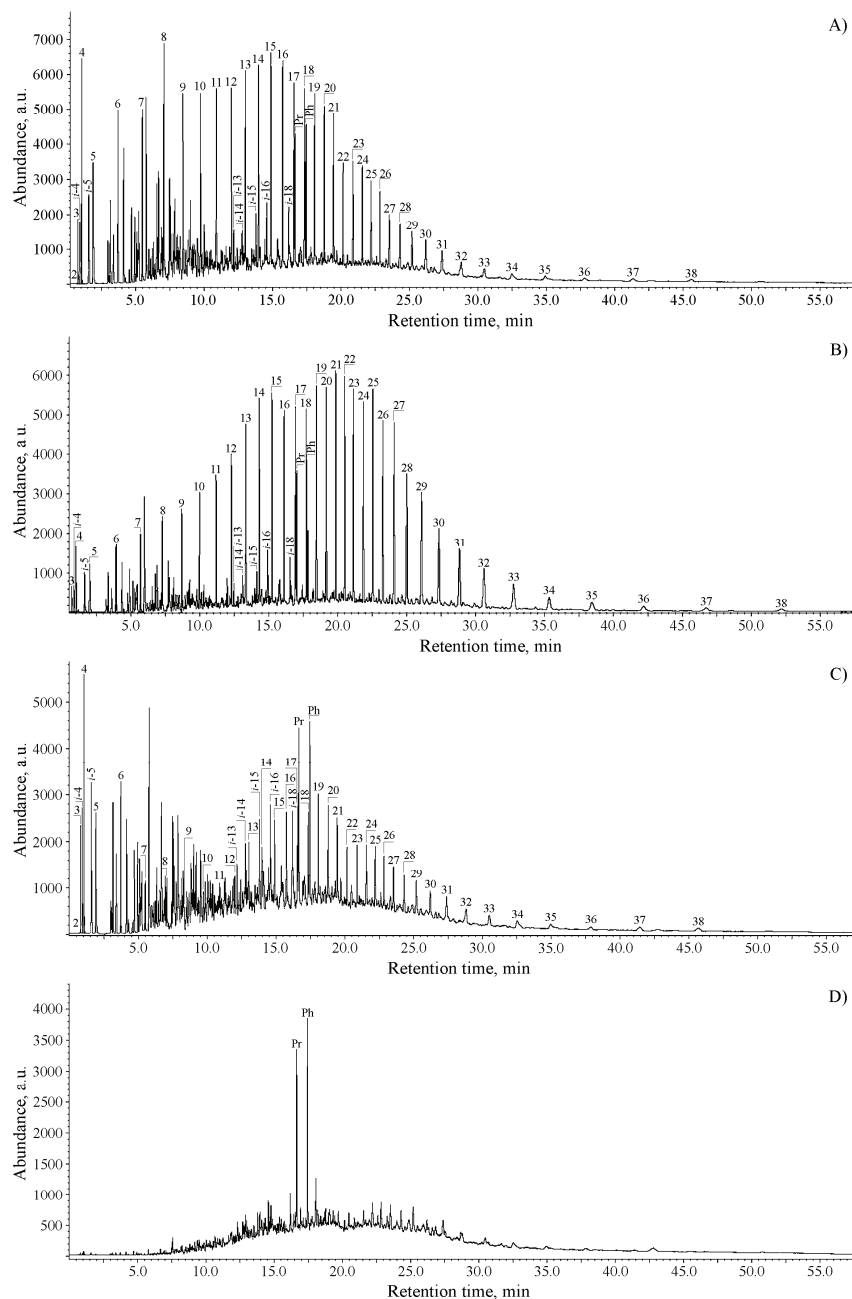


Fig. S-2. Typical gas chromatograms for the studied set of oils: (A) Elemir - 042 (group I), (B) Idoš - 019 (group III), (C) Kikinda - 152 (group VI) and (D) Jermenovci - 045 (group VIII). *n*-Alkanes are labeled according to their carbon number; Pr – Pristane; Ph – Phytane; *i*-*x* – regular isoprenoid, where *x* represents its total number of carbon atoms.