



## Chemical Analysis of The Diethyl-Ether Extract of *Microbiota Decussata*

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The GC, GC-MS, and NMR techniques were utilized to examine the phytochemical composition of *Microbiota decussata*. A comparative analysis was performed with a previously published study conducted by Raldugin et al. in 1981.<sup>1</sup> In contrast to the findings of the Russian group, our sample did not contain hedycaryol, which was identified as the major alcohol component. Instead, thujopsan-2 $\alpha$ -ol dominated most of the sesquiterpenol-containing chromatographic fractions, comprising approximately one-third of the total extract mass. Furthermore, whereas Raldugin and colleagues could not detect any diterpenoids, we isolated totarol, constituting 10% of the extract, along with minor quantities of ferruginol. The most polar compound, microbiotol, accounting for 5% of the extract, was thoroughly examined using NMR and chiral GC to determine its relative and absolute configurations.

**Keywords:** *Microbiota decussata*, thujopsan-2 $\alpha$ -ol, totarol, NMR, GC-MS

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### References

1. Raldugin, V.A., Storozhenko, V.G., Rezvukhin, A.I., Pentegova, V.A., Gorovoi, P.G., Baranov, V.I. Terpenoids from plants of the family Cupressaceae. I. Sesquiterpene alcohols from the needles of *Microbiota decussata*. *Chem. Nat. Compd.* **1981**. 17, 124–129. DOI: 10.1007/BF00634727