Sesquiterpenes and sesquiterpenoids: Exploring combinatorial approaches of chromatographic techniques for their targeted isolation

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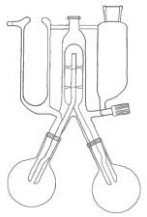
Extraction, Distillation and Characterization[a] 1

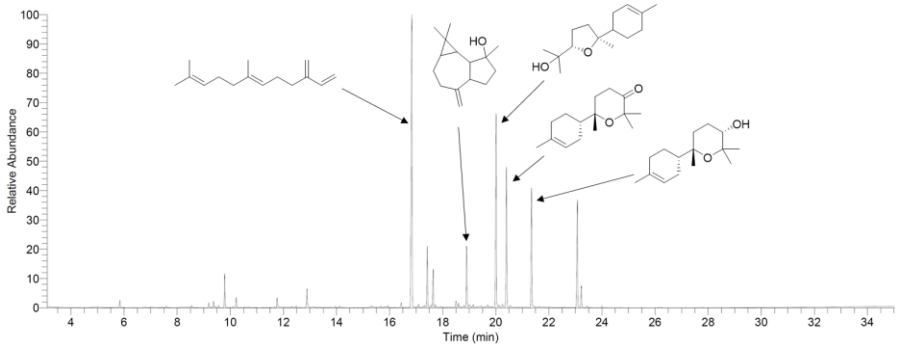
Dried Chamomile Flower Heads (*Matricaria chamomilla* L.)



SAFE Apparatus

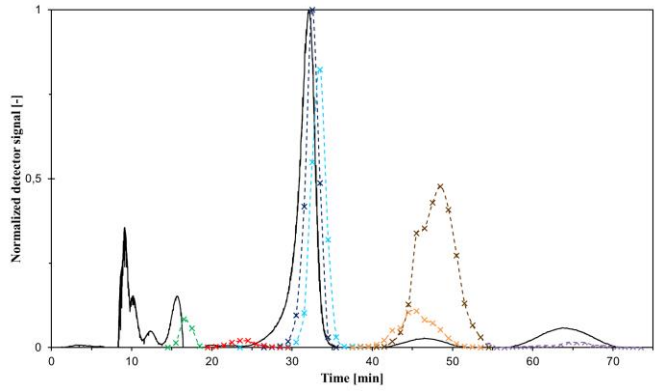
- ✓ Kugelrohr Distillation
- ✓ Steam Distillation
- ✓ Solvent Assisted Flavor Evaporation (SAFE)

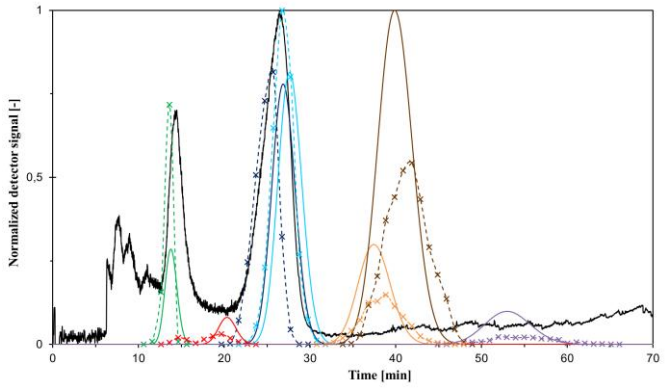
GC-MS (Analysis)



Chromatogram of the chamomile distillate obtained after SAFE distillation (DB-5 column, injection of 2 µL in split mode)

Isolation and Purification[a] 2





GC-MS offline analysis of the CCC and CPC separation using the solvent system Arizona S.

Countercurrent Chromatography (CCC)

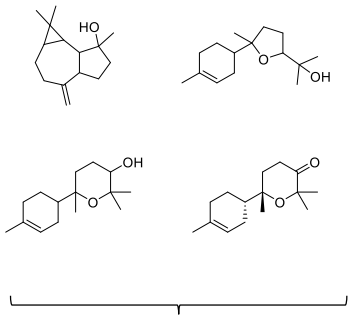
CCC/CPC

- ✓ Size-Exclusion Chromatography
- ✓ Silica Gel Chromatography
- ✓ Preparative two-dimensional Gas Chromatography

Centrifugal Partition Chromatography (CPC)

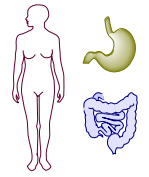
GC-MS (Analysis)

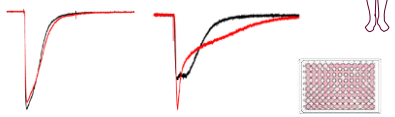
Isolated SQTs: Outlook 3



The isolated sesquiterpenoids will be applied for several biochemical and physiological investigations:

- ✓ GABA Assays
- ✓ Metabolization Assays
- ✓ Transport Studies





References

[a] Slavik et al. **2021**, submitted to *Anal Bioanal Chem*

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