A study on the impact of hardening on the typical smell of an aqueous cavity preservation used in cars

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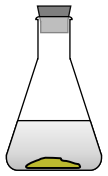
Sample & Sample Workup 1

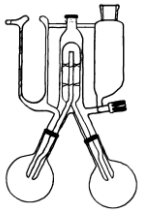
Untreated cavity of vehicle body

Body with aqueous cavity preservation

1) Simulation of the hardening & sensory evaluation

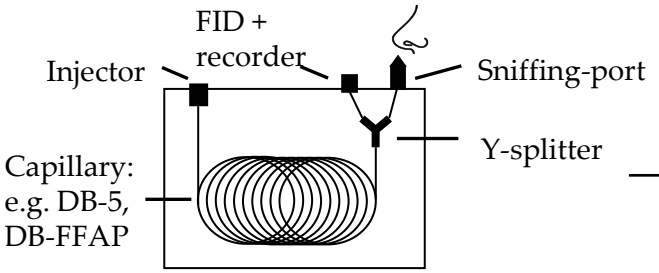
2) Solvent extraction, SAFE and concentration



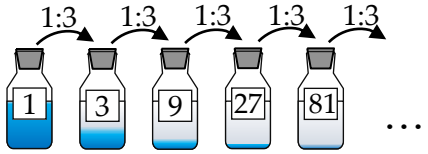


Analysis 2

1) Gas chromatography-olfactometry

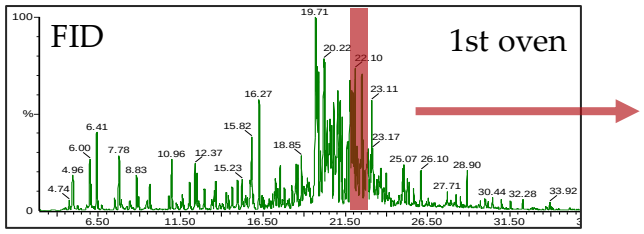


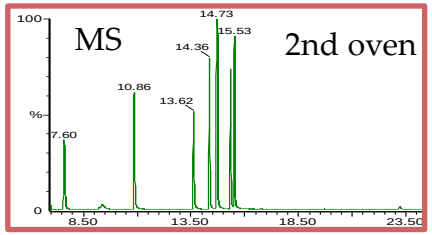
2) Odor extract dilution analysis



	OD 1	OD 3	OD 9	OD 27	OD factor
grassy	✓	✓	✓	✗	9
fatty	✓	✓	✗	✗	3

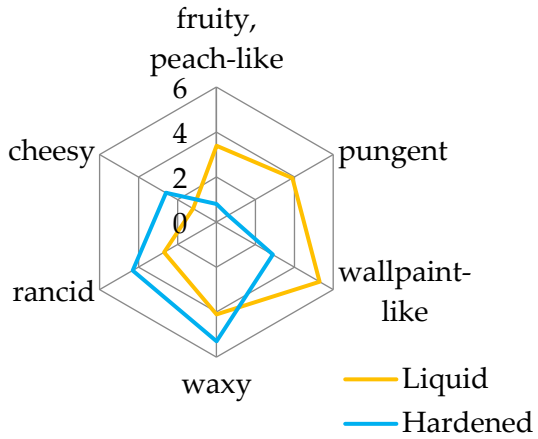
3) Identification with 2D-GC-MS/O





Results 3

Orthonasal sensory evaluation



Odorants

⟶ Twenty odor-active compounds OD > 9

⟶ Identification of lactones and carboxylic acids

⟶ No generation of new odorants to any relevant extent during hardening

References

Buchecker et al. **2021**, Paper in submission

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