

Le patchouli et son huile essentielle : une matière première méconnue ?

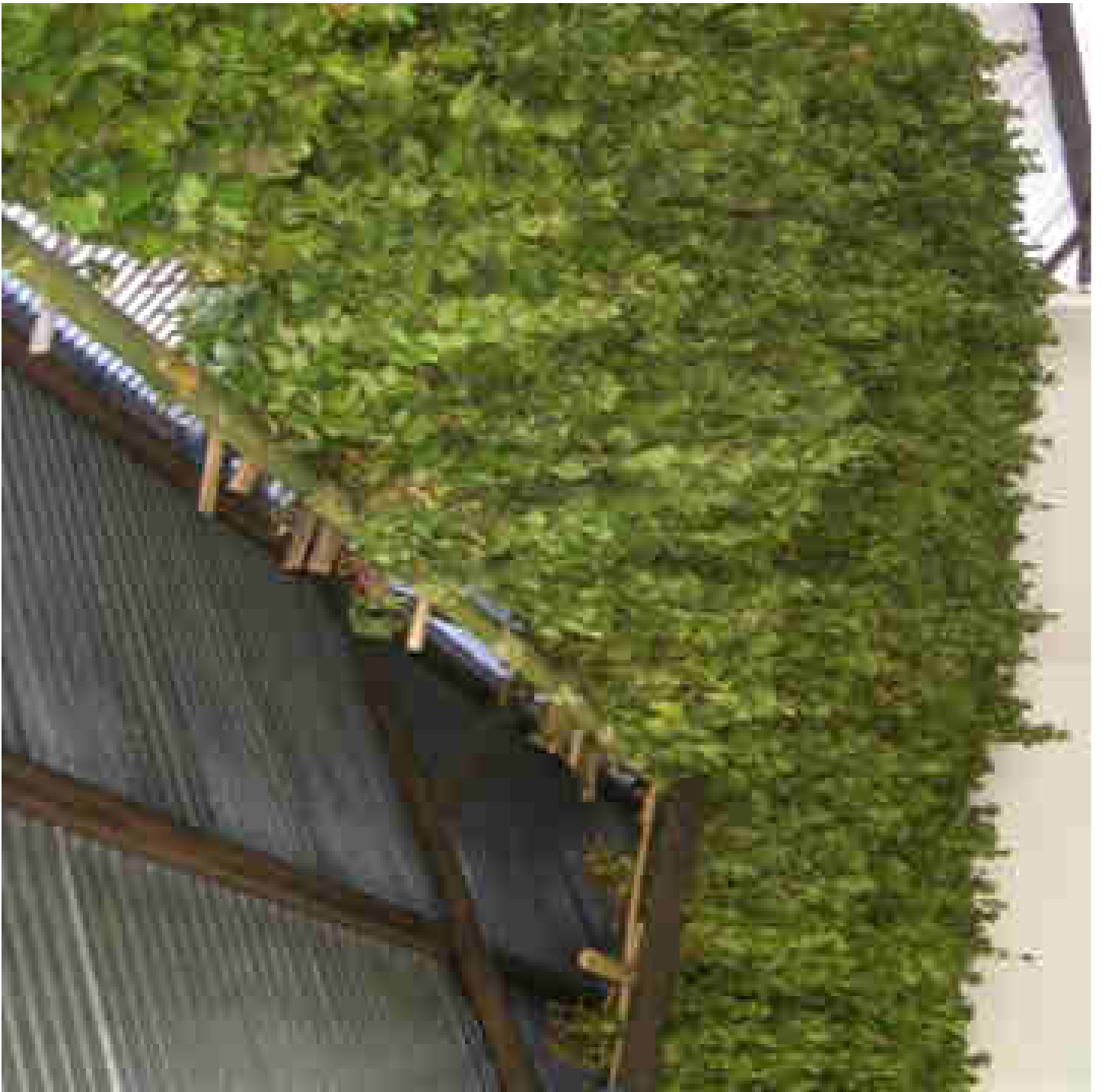
Daniel JOULAIN

CECM, Marseille 16 juin 2017



Pogostemon cablin (Blanco) Benth. (Lamiaceae)

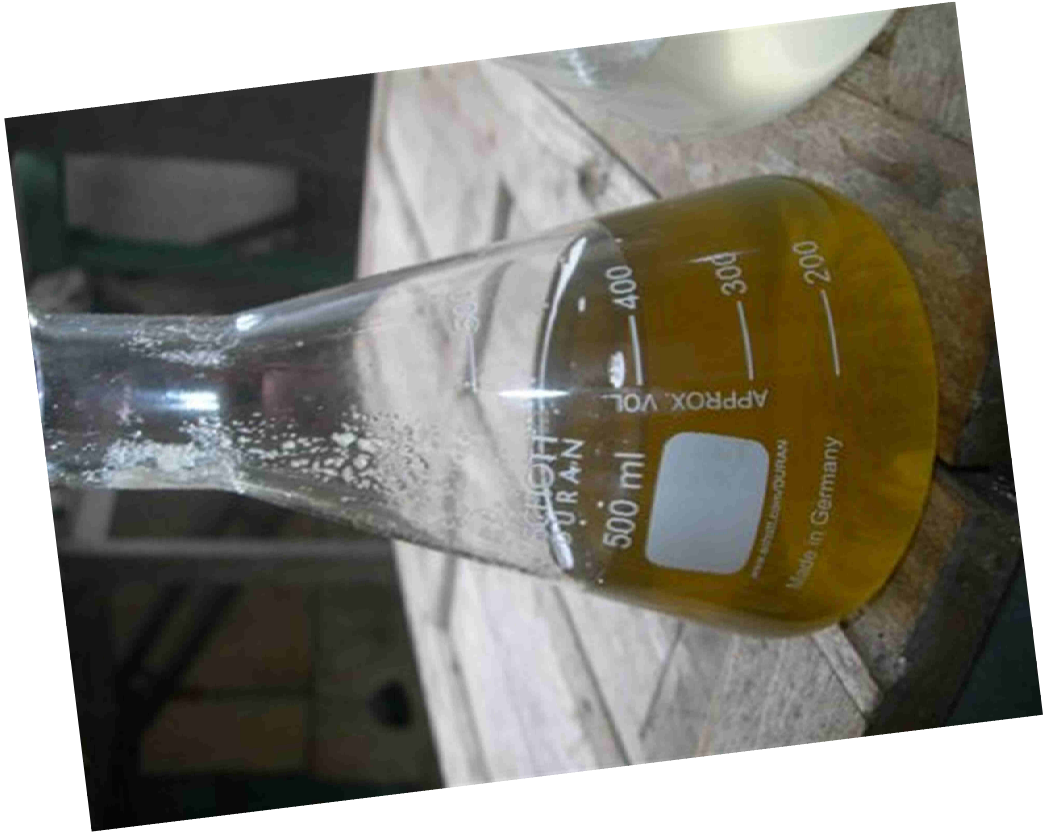












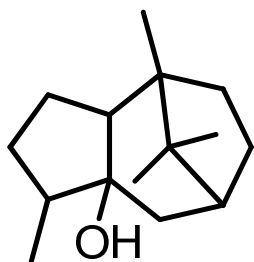
le patchoulol

cristaux

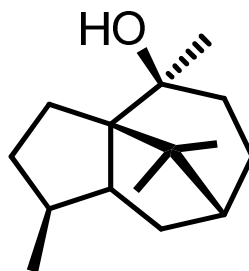
C₁₅H₂₆O

Gal
CRAS, 1869

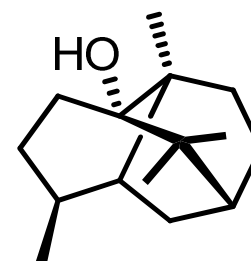
de Montgolfier
CRAS, 1877



Treibs
1949



Büchi et coll.
1961, 1962



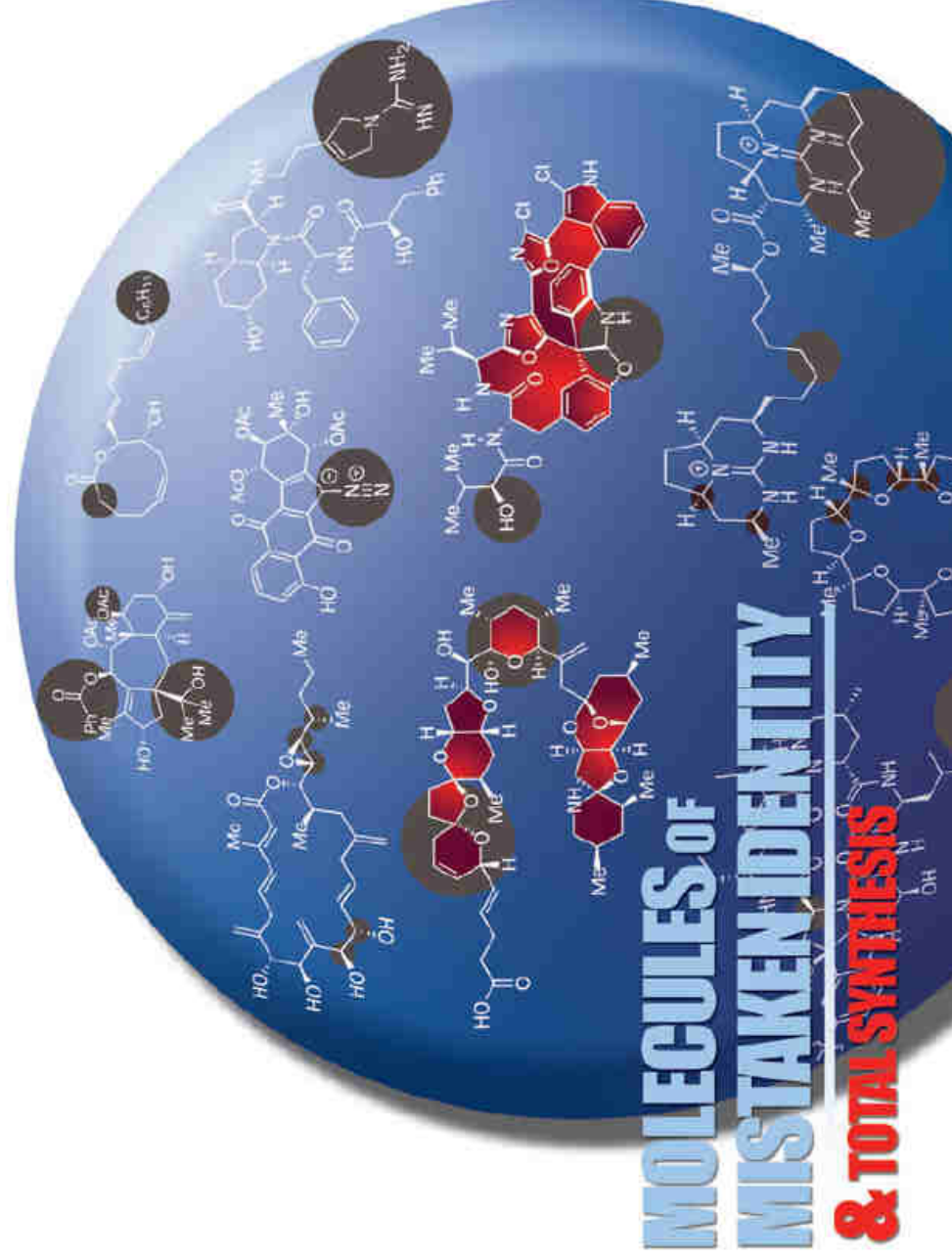
Dobler et coll.
1963

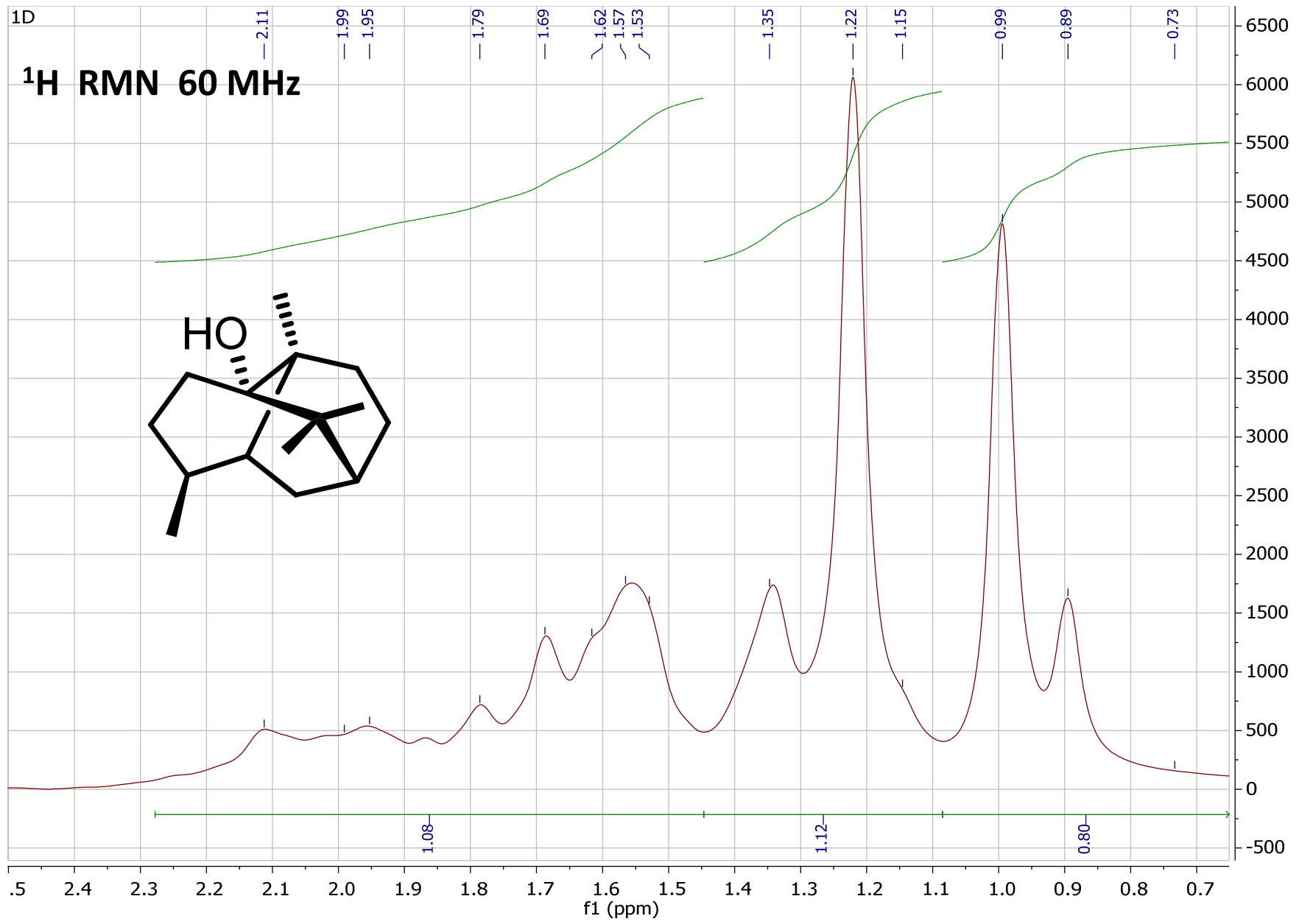
Chasing Molecules That Were Never There: Misassigned Natural Products and the Role of Chemical Synthesis in Modern Structure Elucidation

K. C. Nicolaou and Scott A. Snyder*

Keywords:

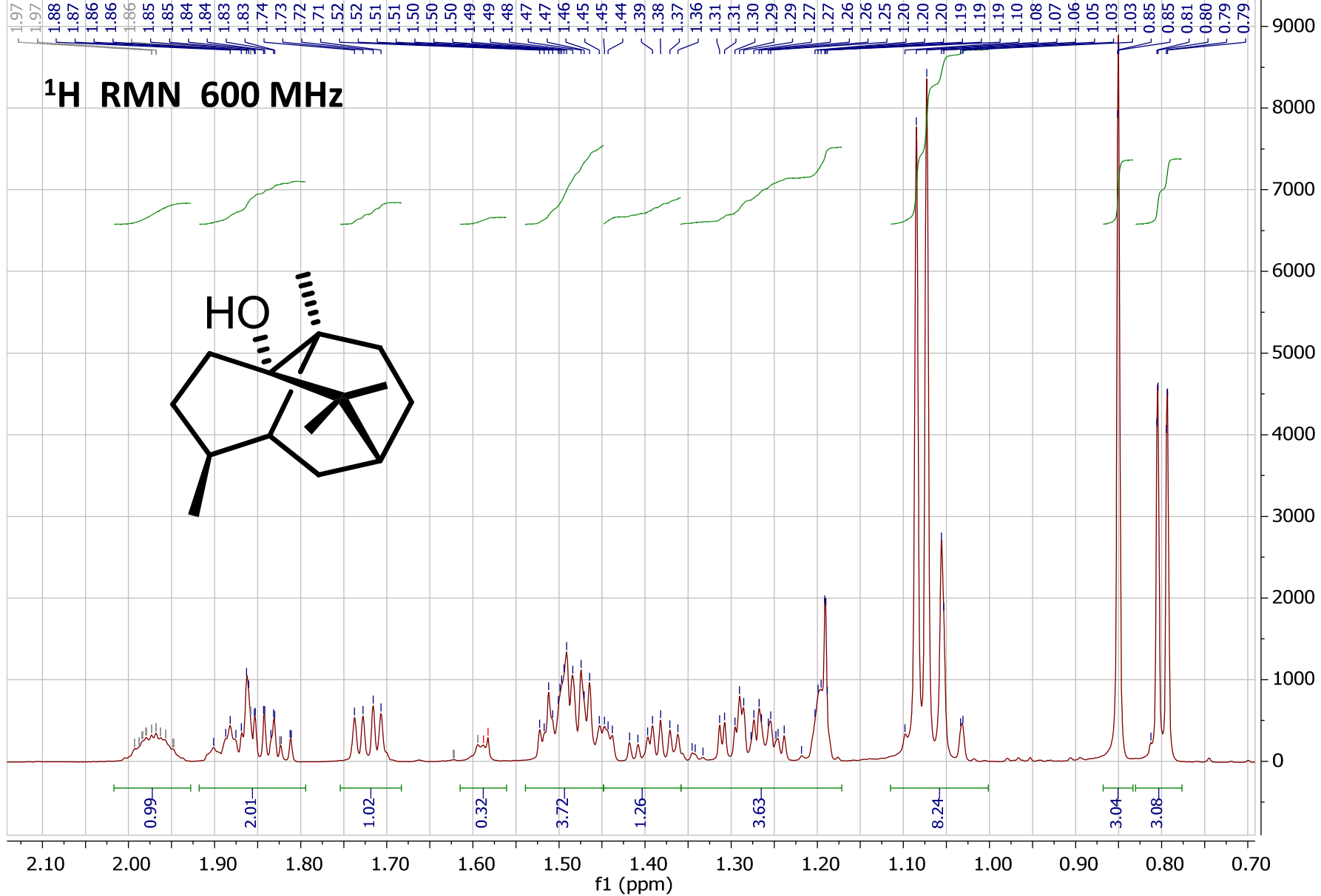
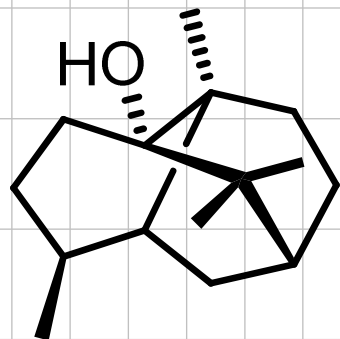
azaspiracid; 1 · diazoniamide A · natural products · revised structures · total synthesis





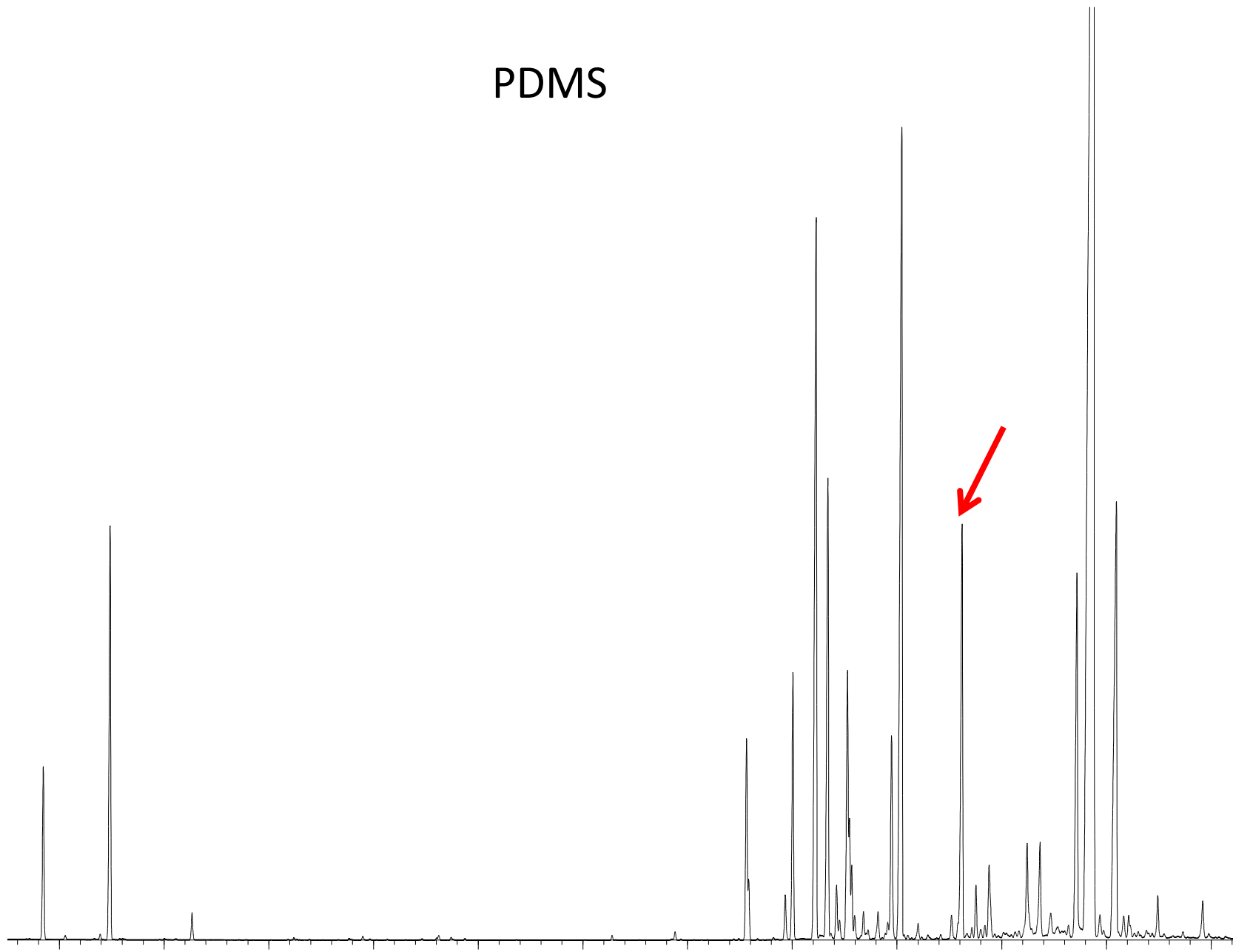
AK-Patchoulol 170426.1.fid

^1H RMN 600 MHz

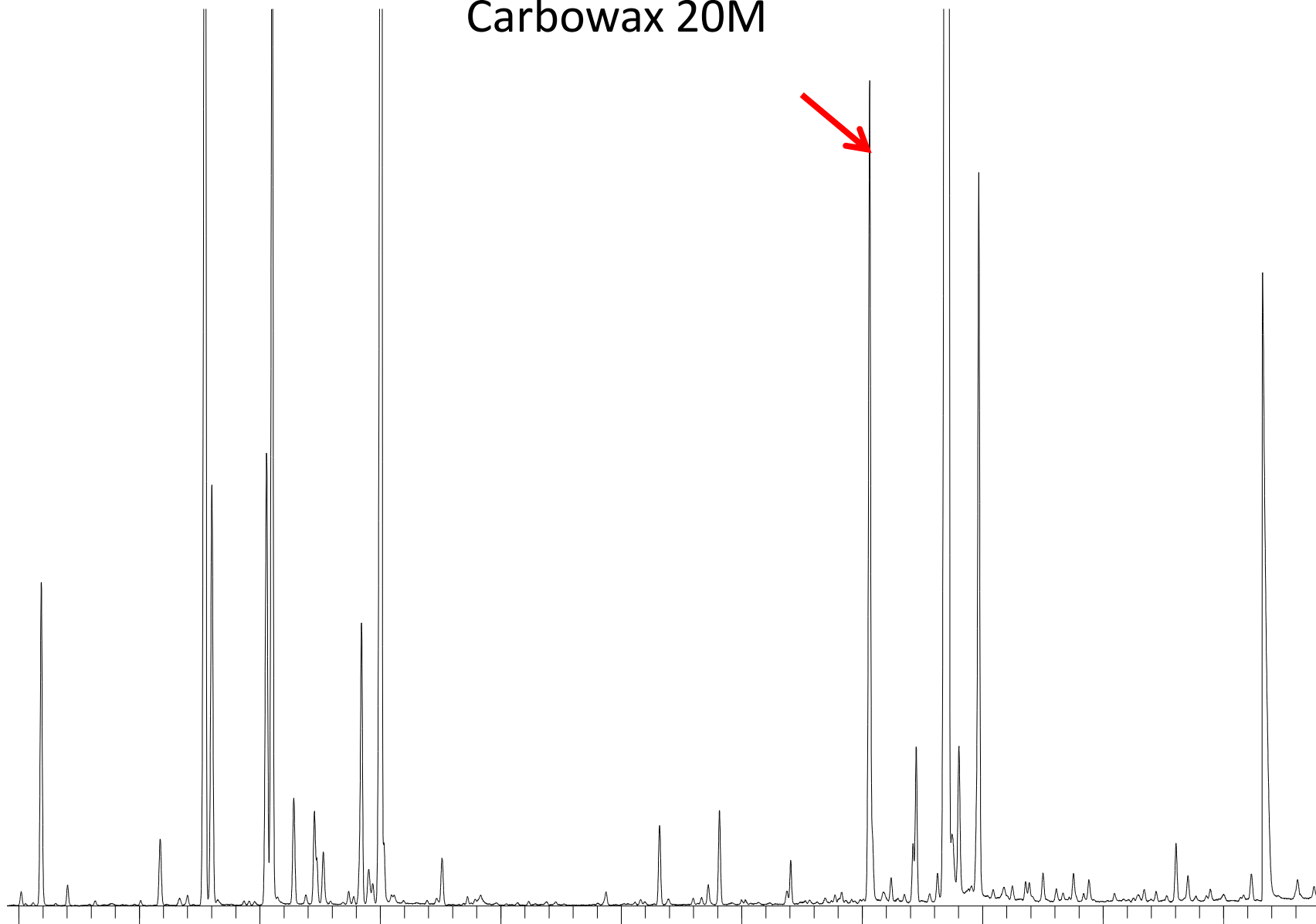


le norpatchoulénoI

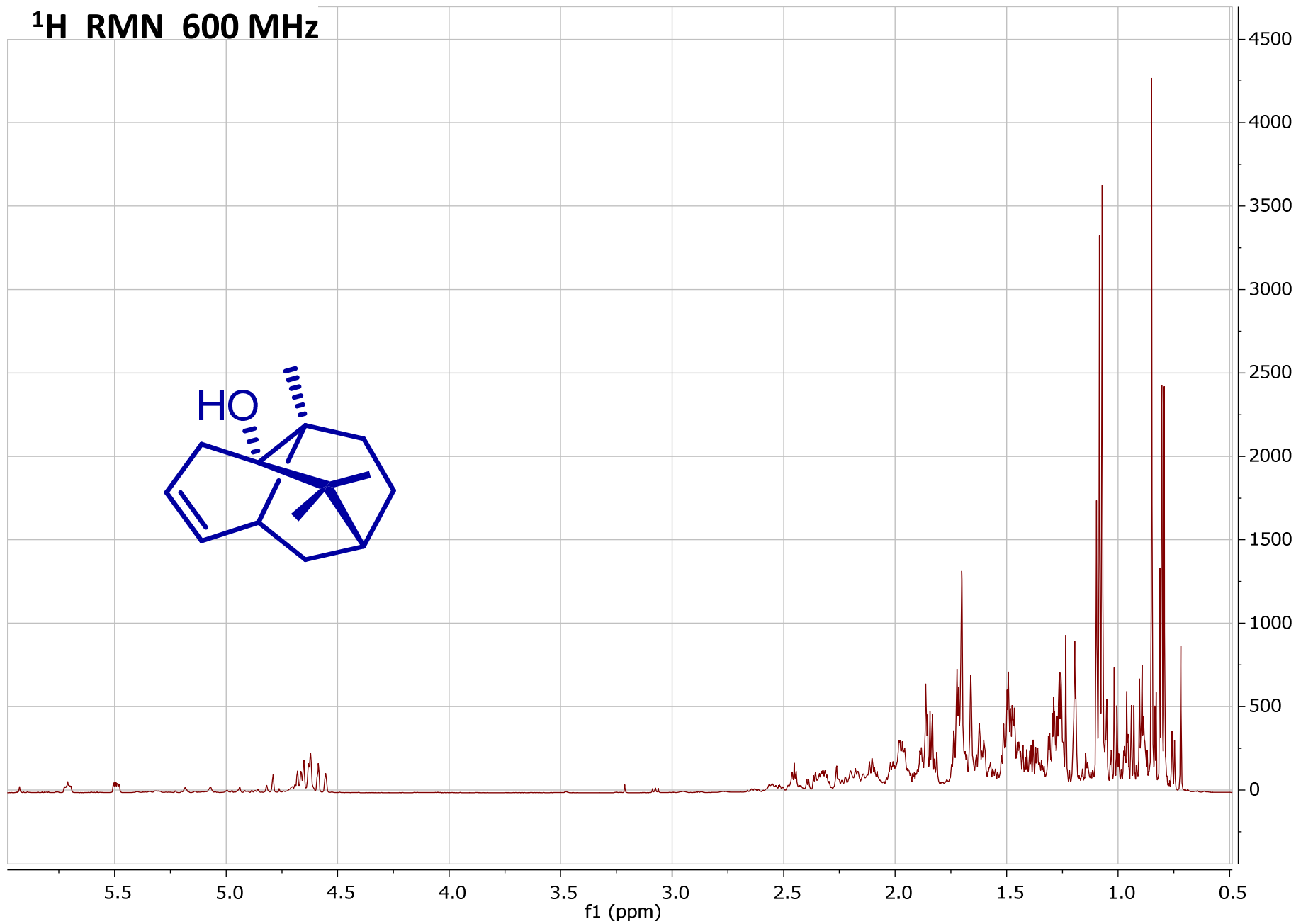
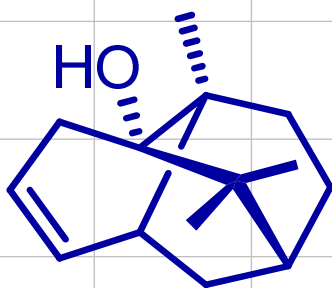
PDMS



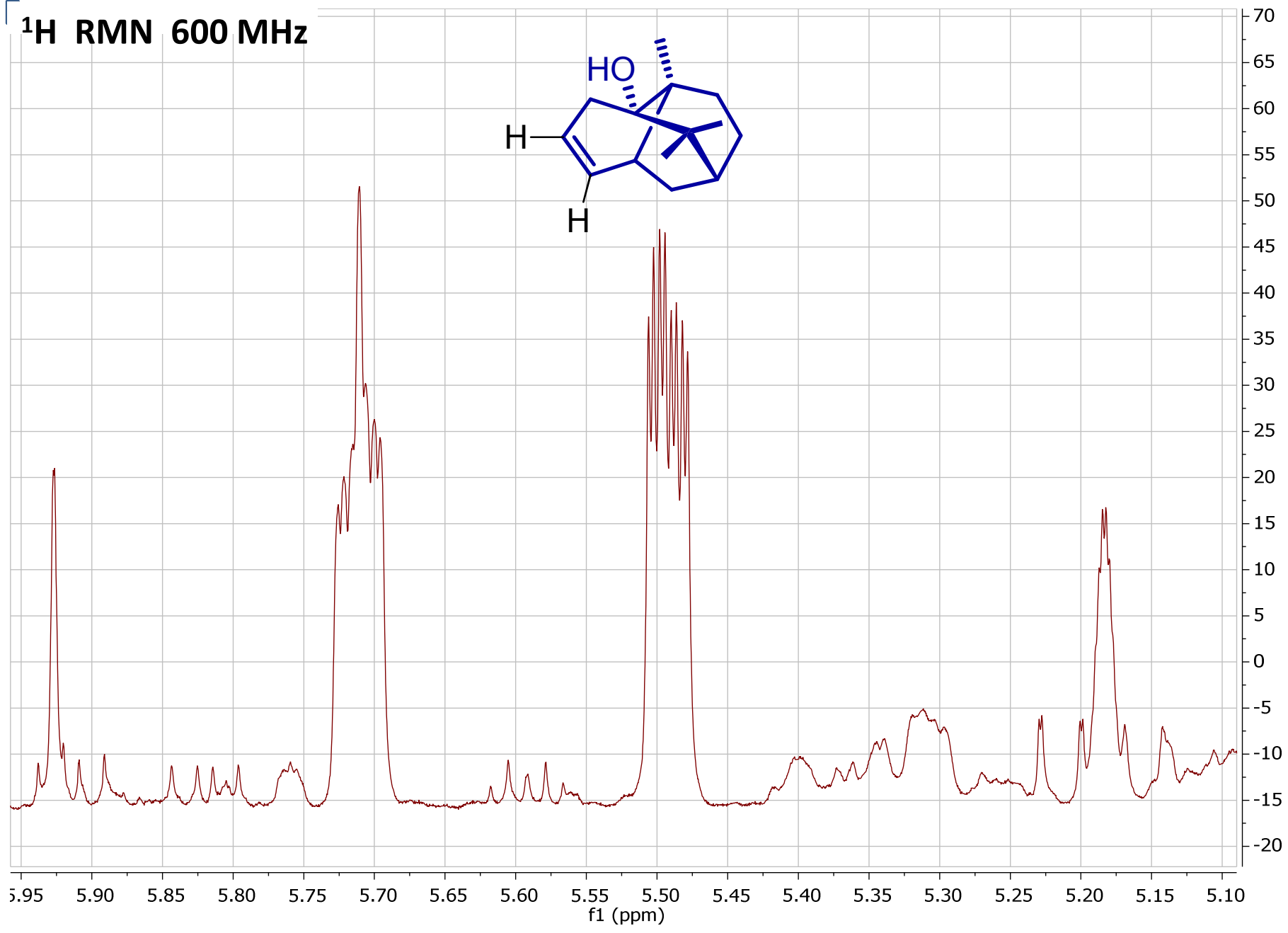
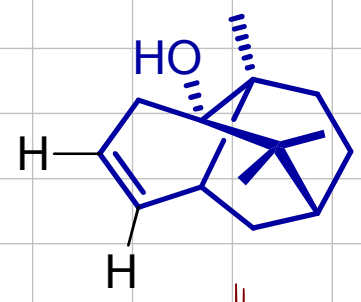
Carbowax 20M



^1H RMN 600 MHz

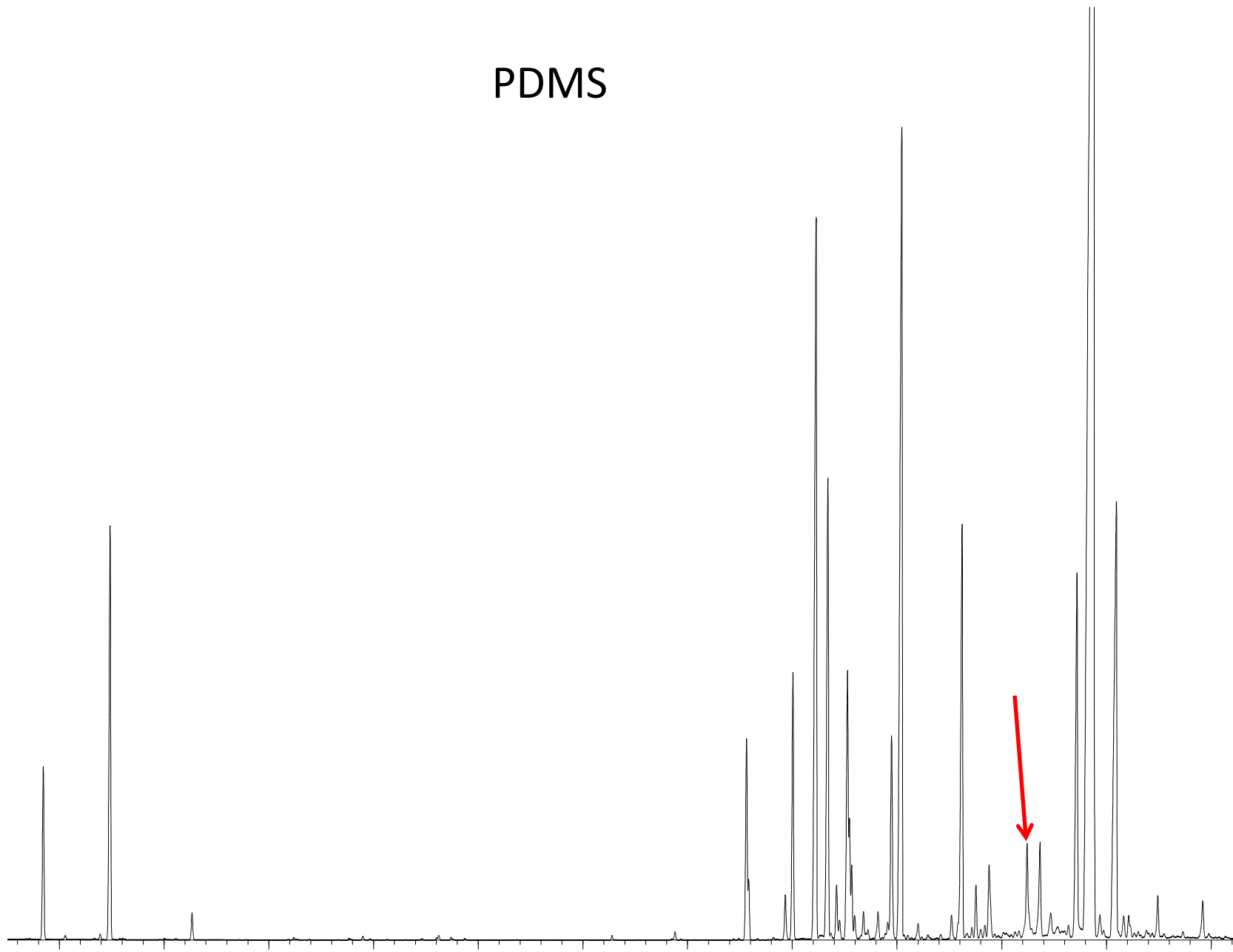


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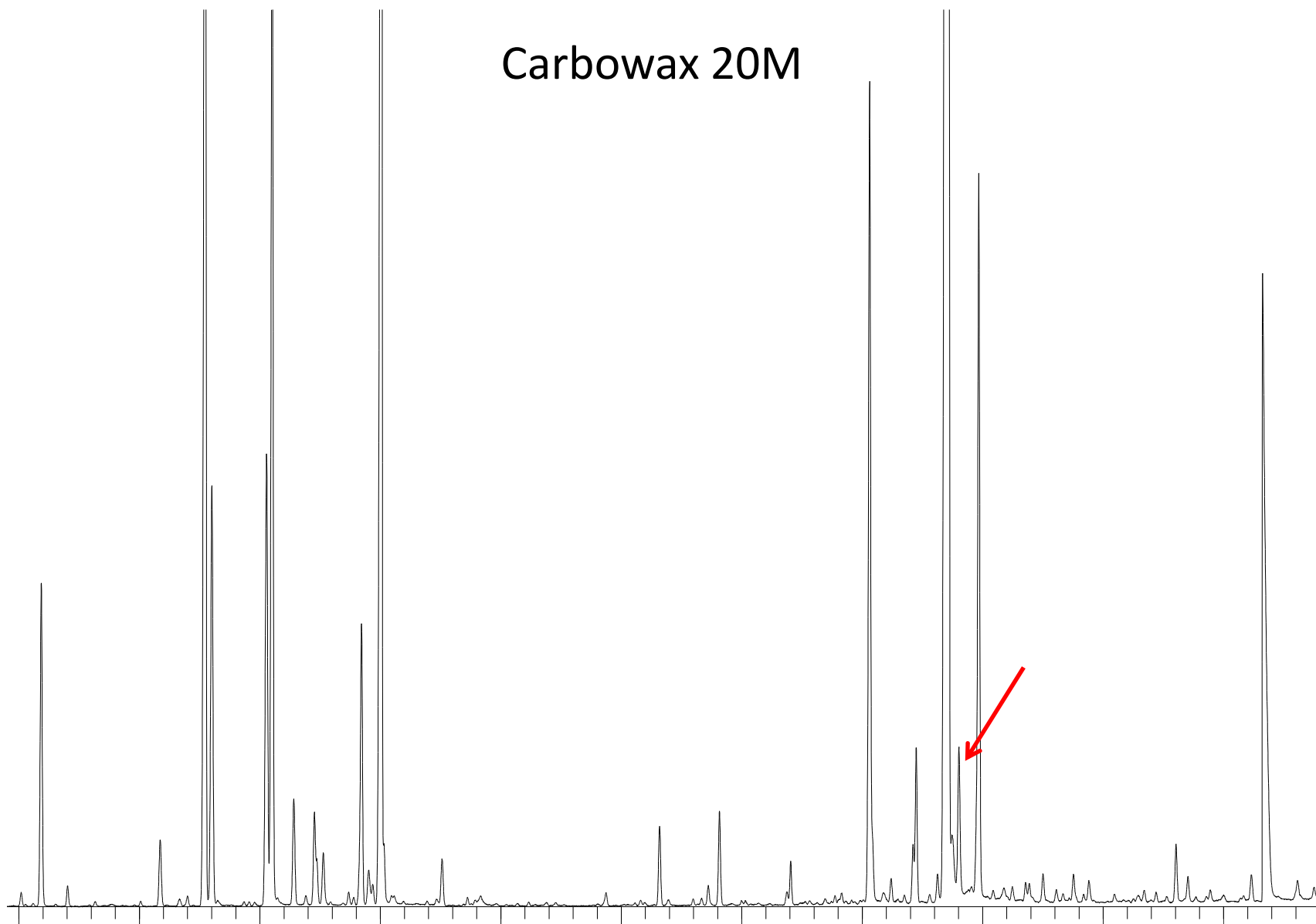


le tétracyclonorpatchoulol

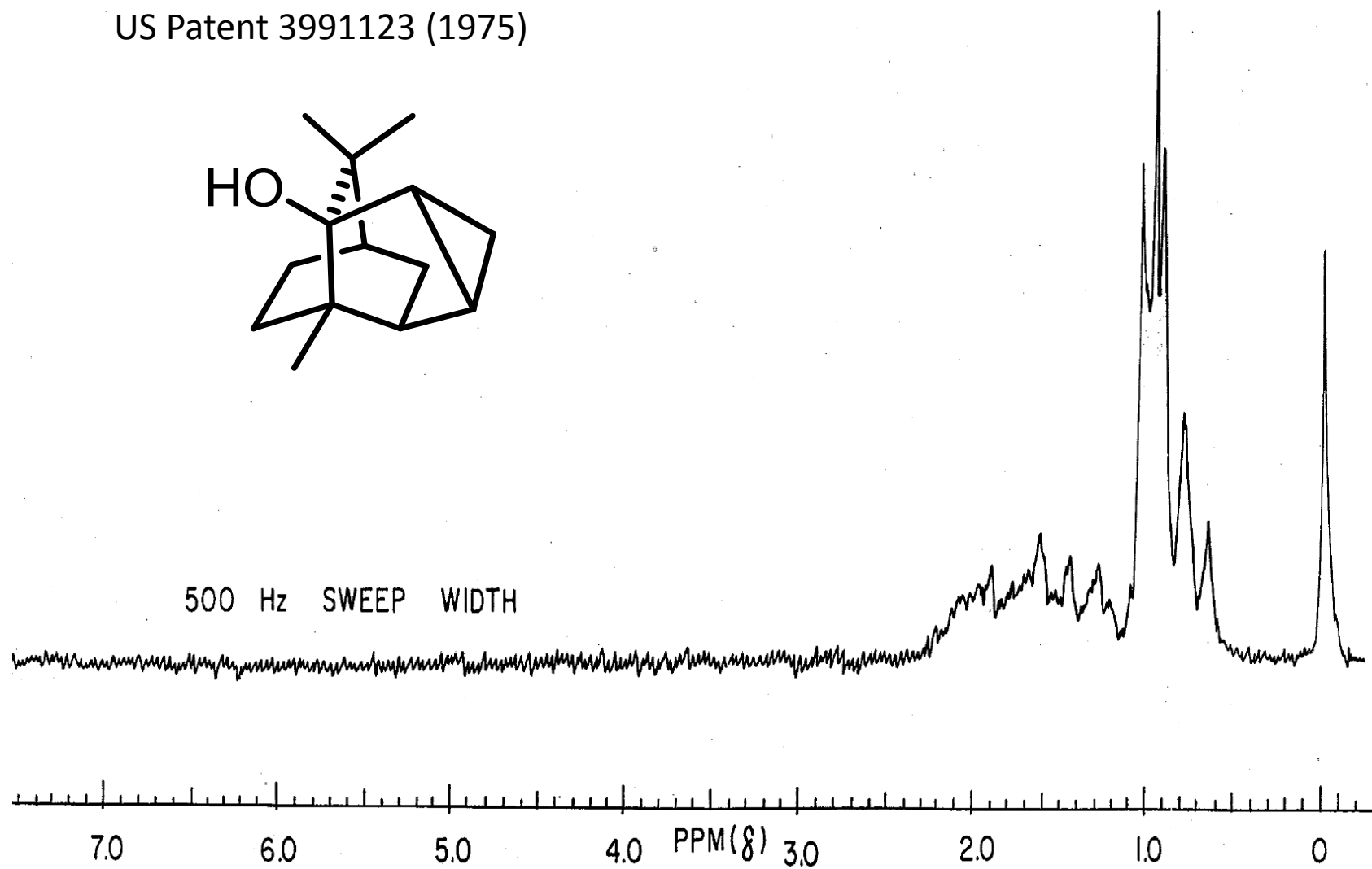
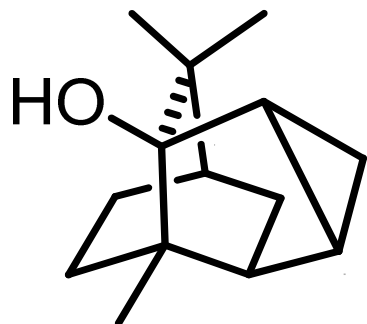
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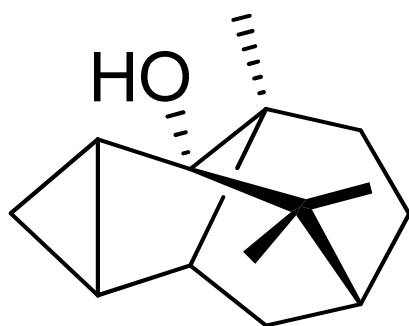


Carbowax 20M

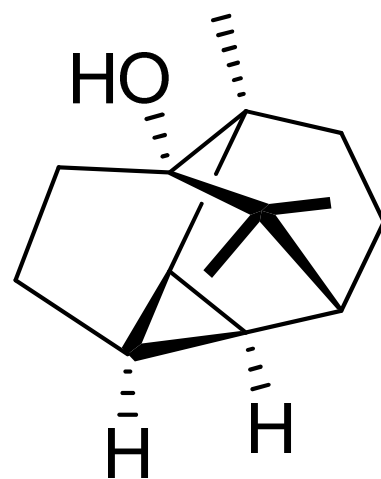


US Patent 3991123 (1975)





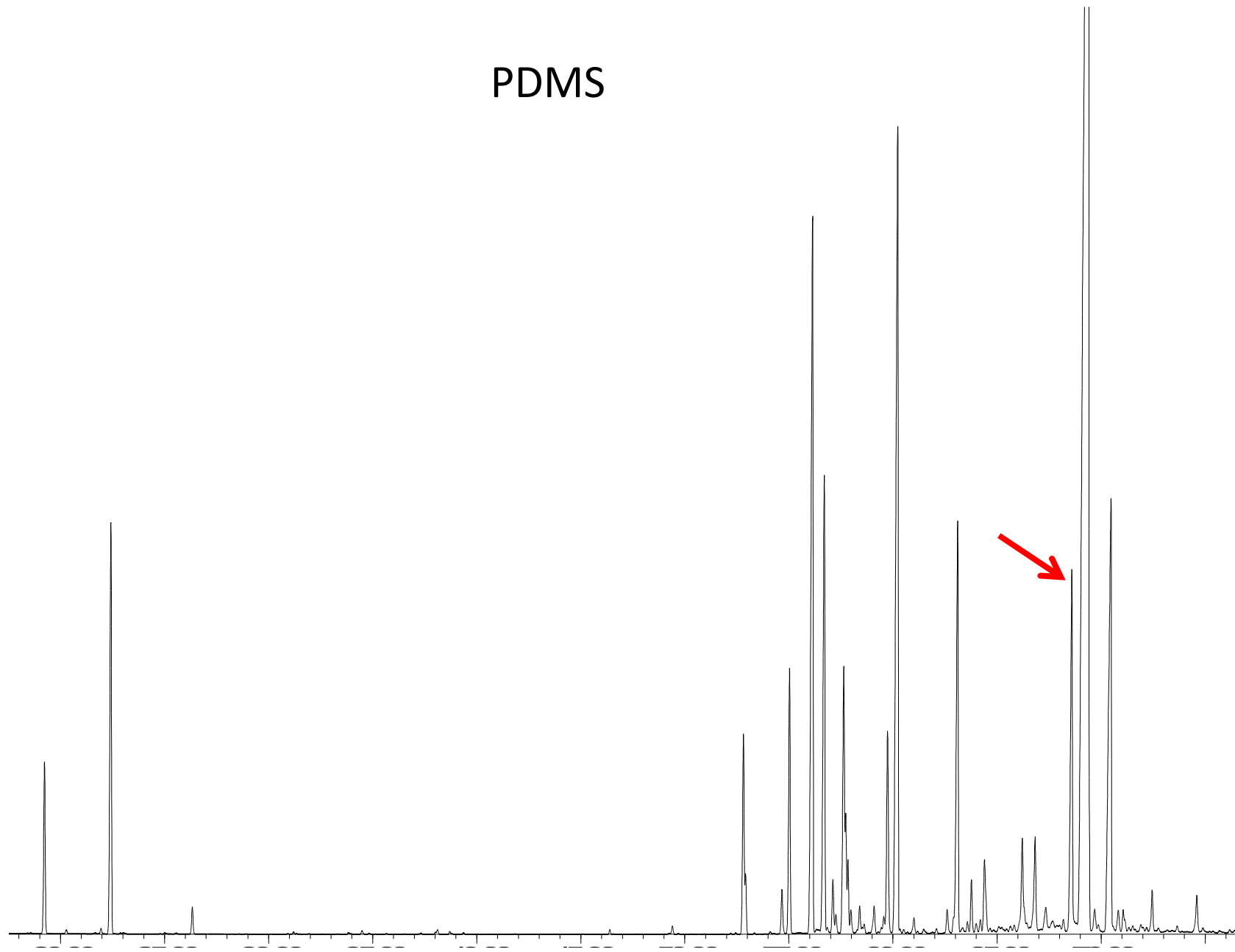
IFF (1975)



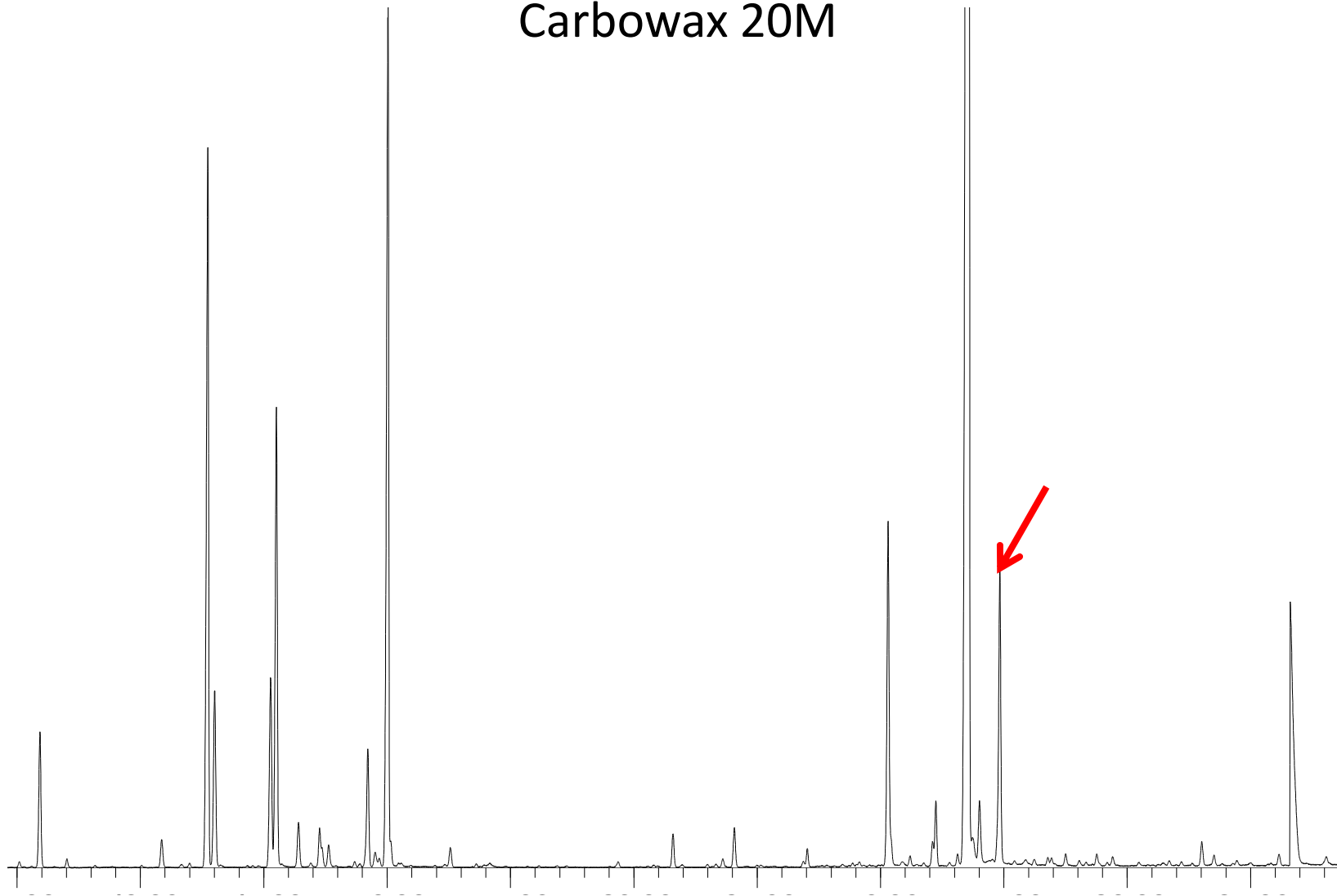
Takasago (2014)

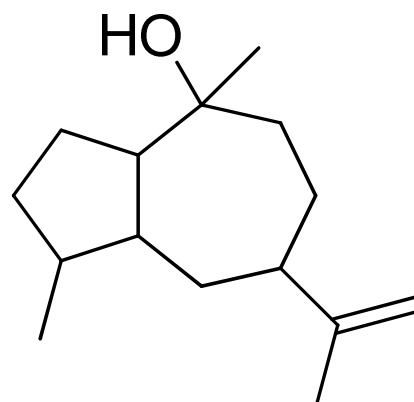
le pogostol

PDMS

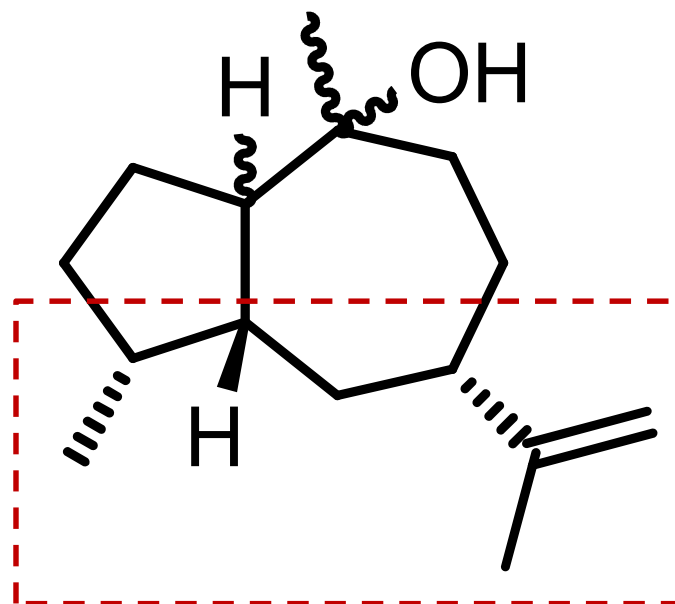


Carbowax 20M

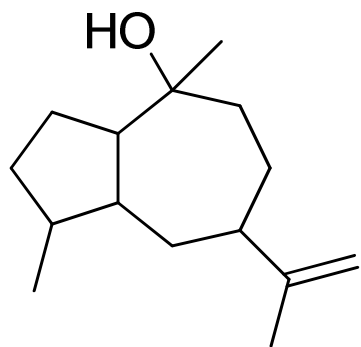




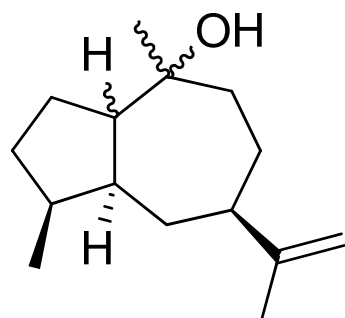
Hikino (1958)



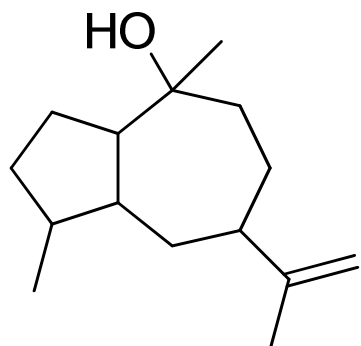
P. Teisseire, P. Maupetit, B. Corbier, *Recherches*, 1974, **19**, 8-35



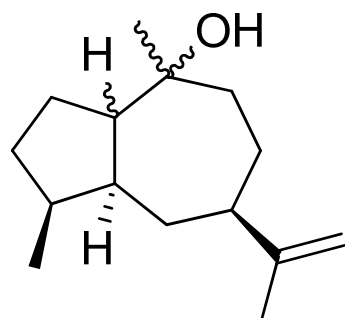
Hikino (1958)



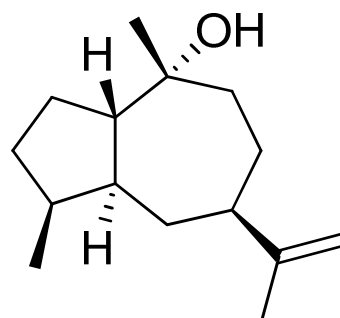
Teisseire (1974)



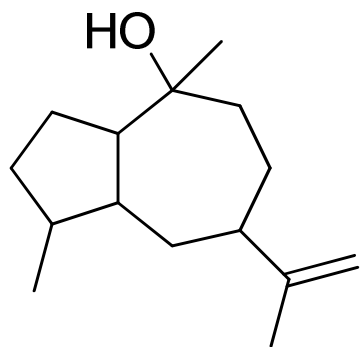
Hikino (1958)



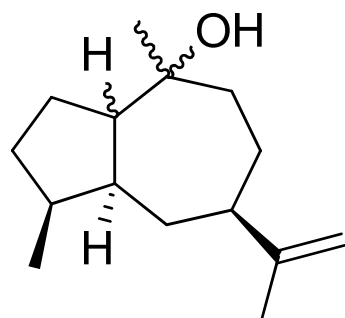
Teisseire (1974)



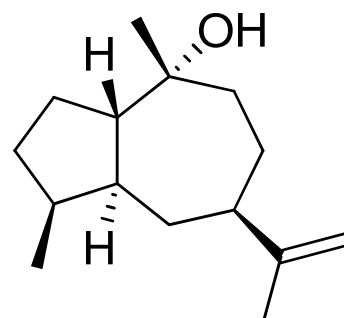
Weyerstahl (2000)



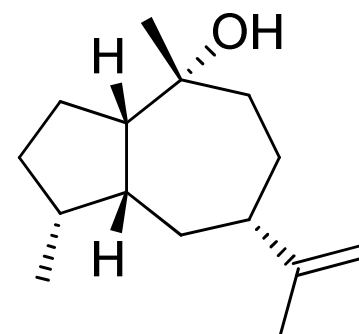
Hikino (1958)



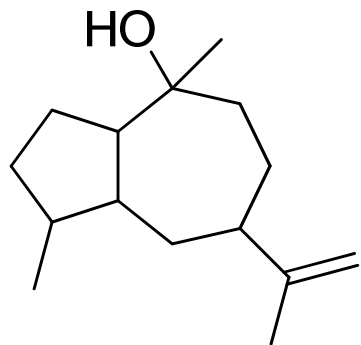
Teisseire (1974)



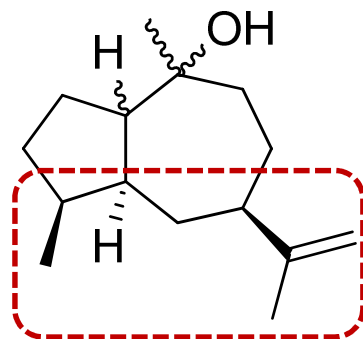
Weyerstahl (2000)



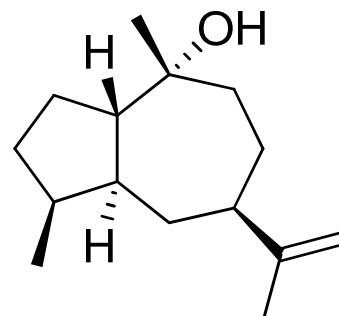
Amand (2012)



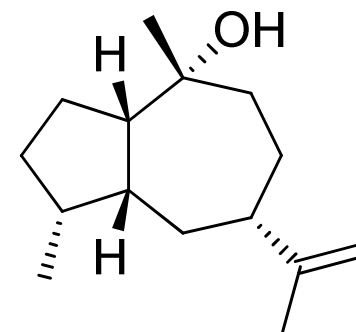
Hikino (1958)



Teisseire (1974)

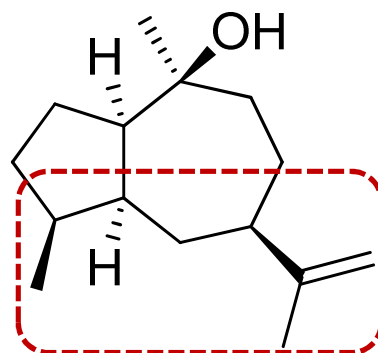


Weyerstahl (2000)



Amand (2012)

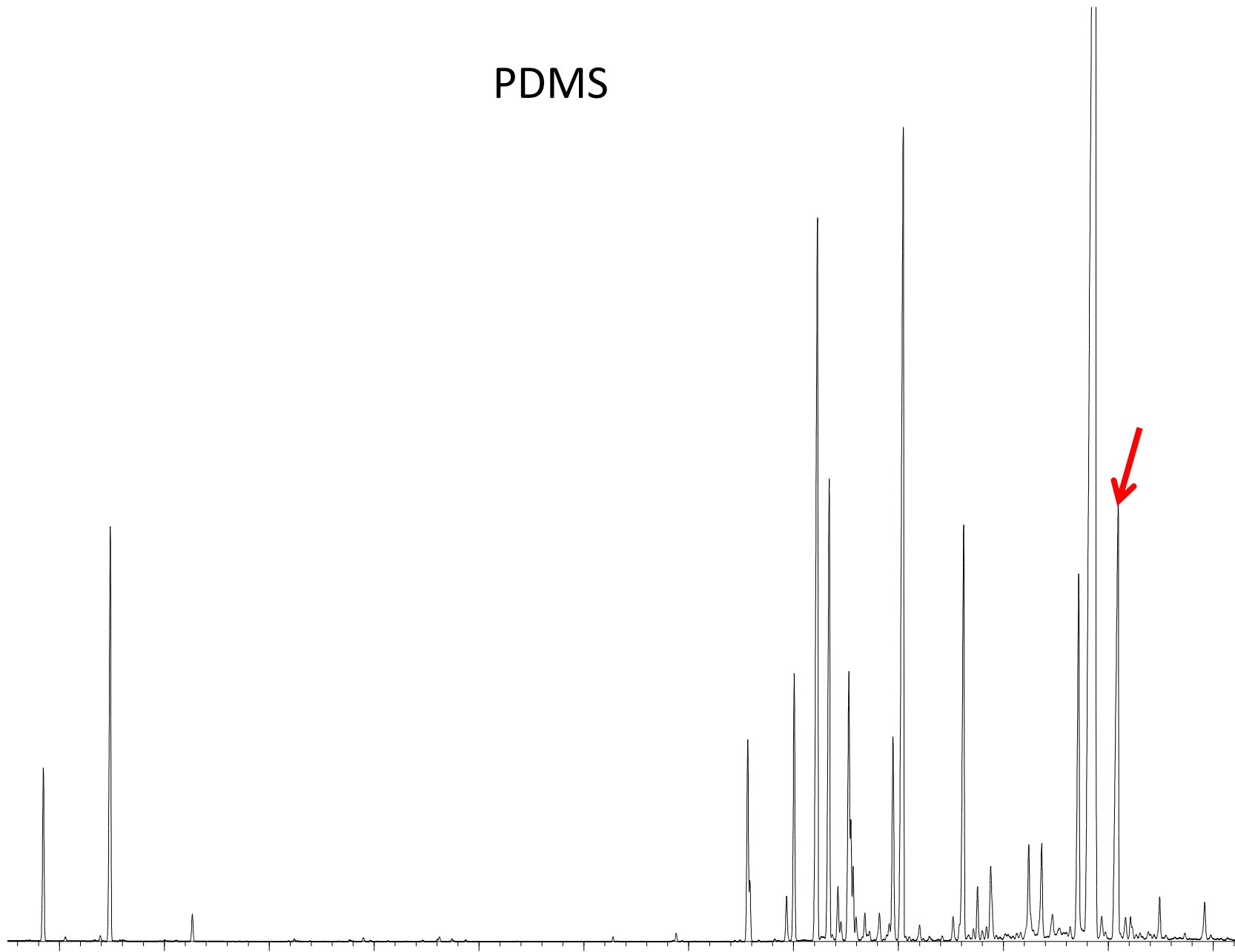
pogostol



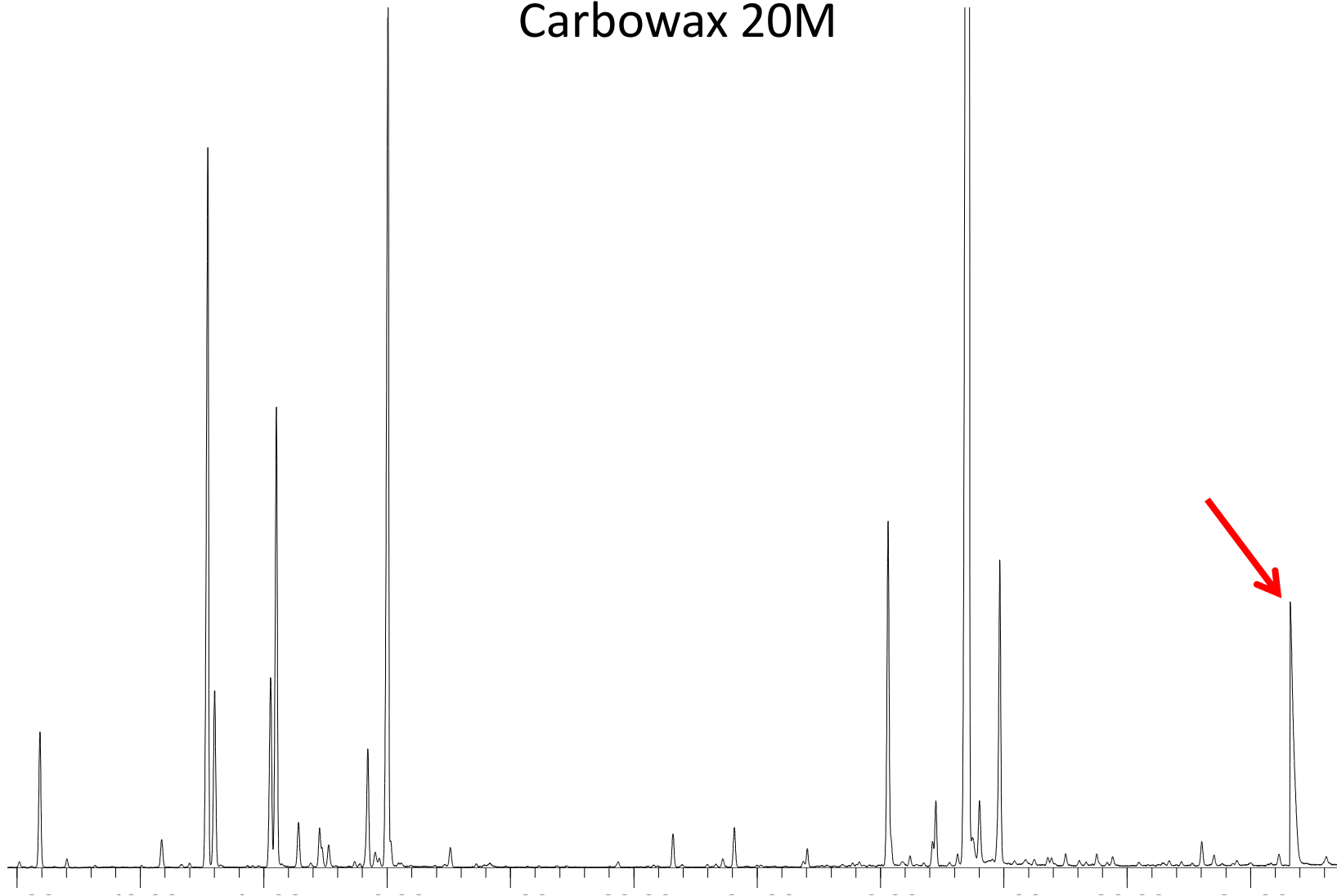
ten Have (1992)
van Beek (2017)

la pogostone

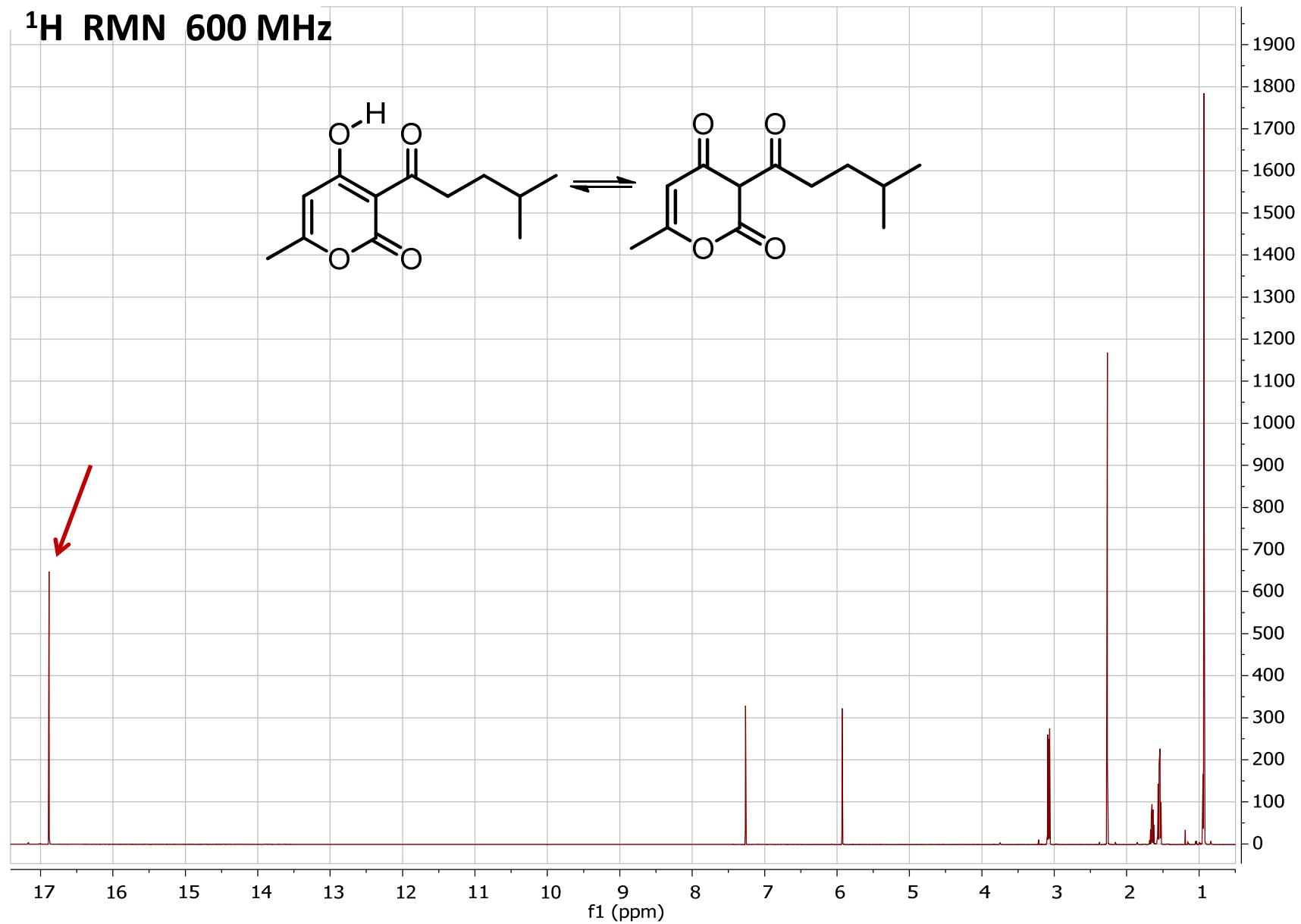
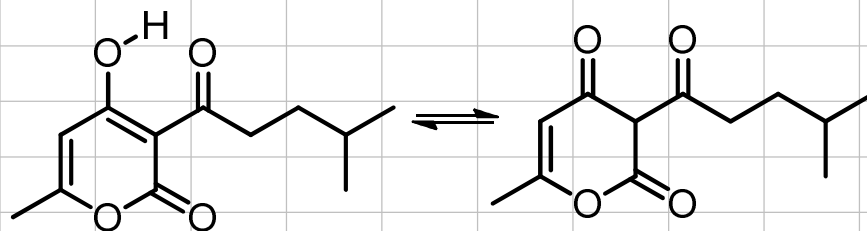
PDMS



Carbowax 20M



¹H RMN 600 MHz

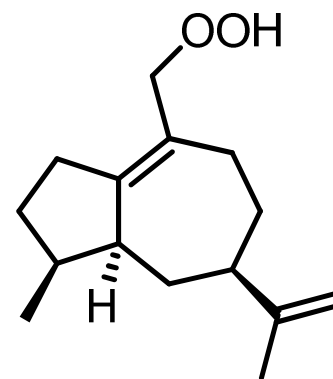
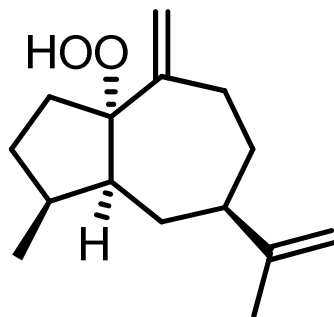
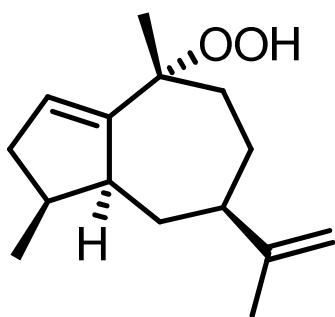


« Fermentation »

- Déshydratation

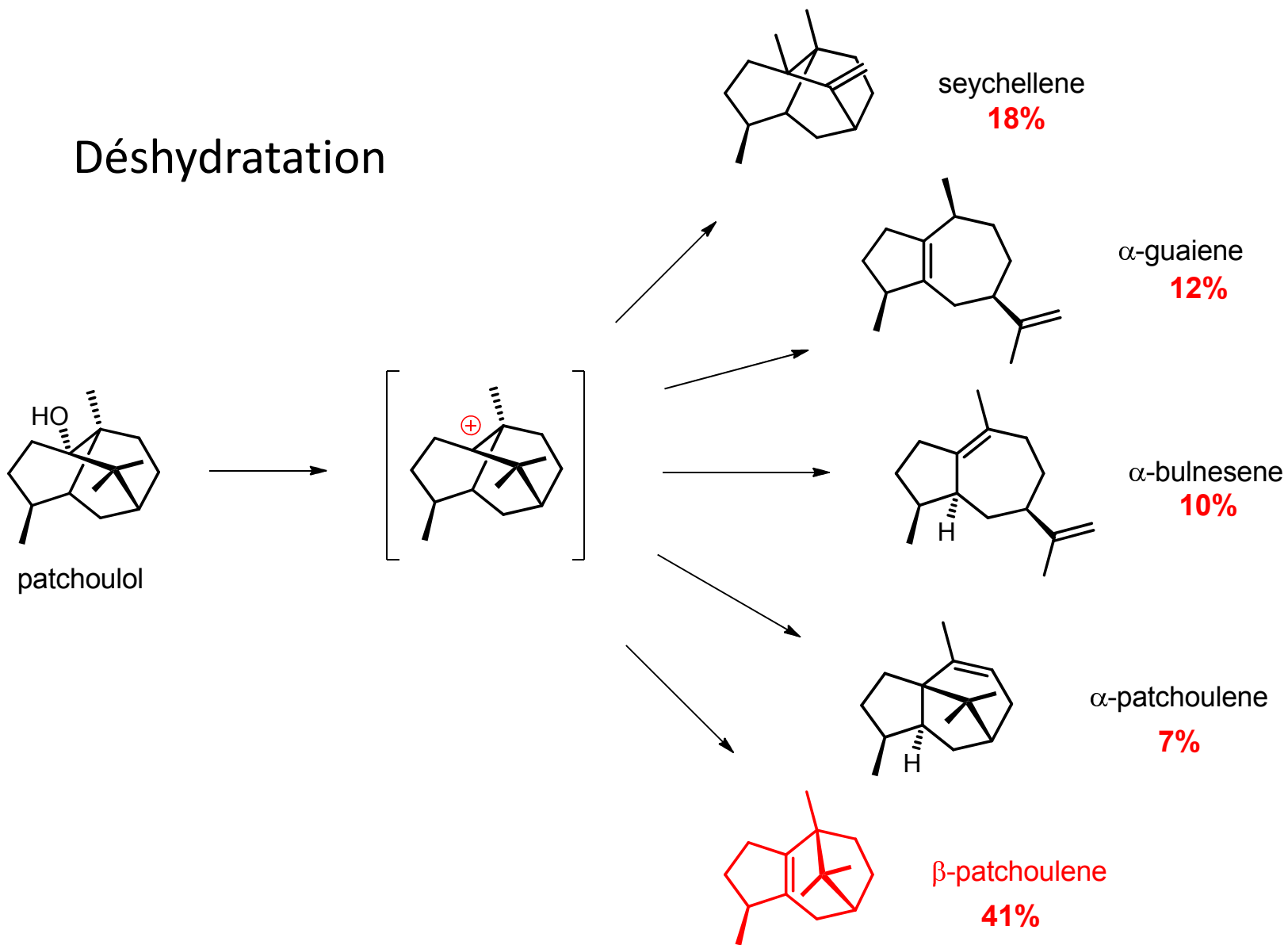
- Oxydation

Fermentation ?



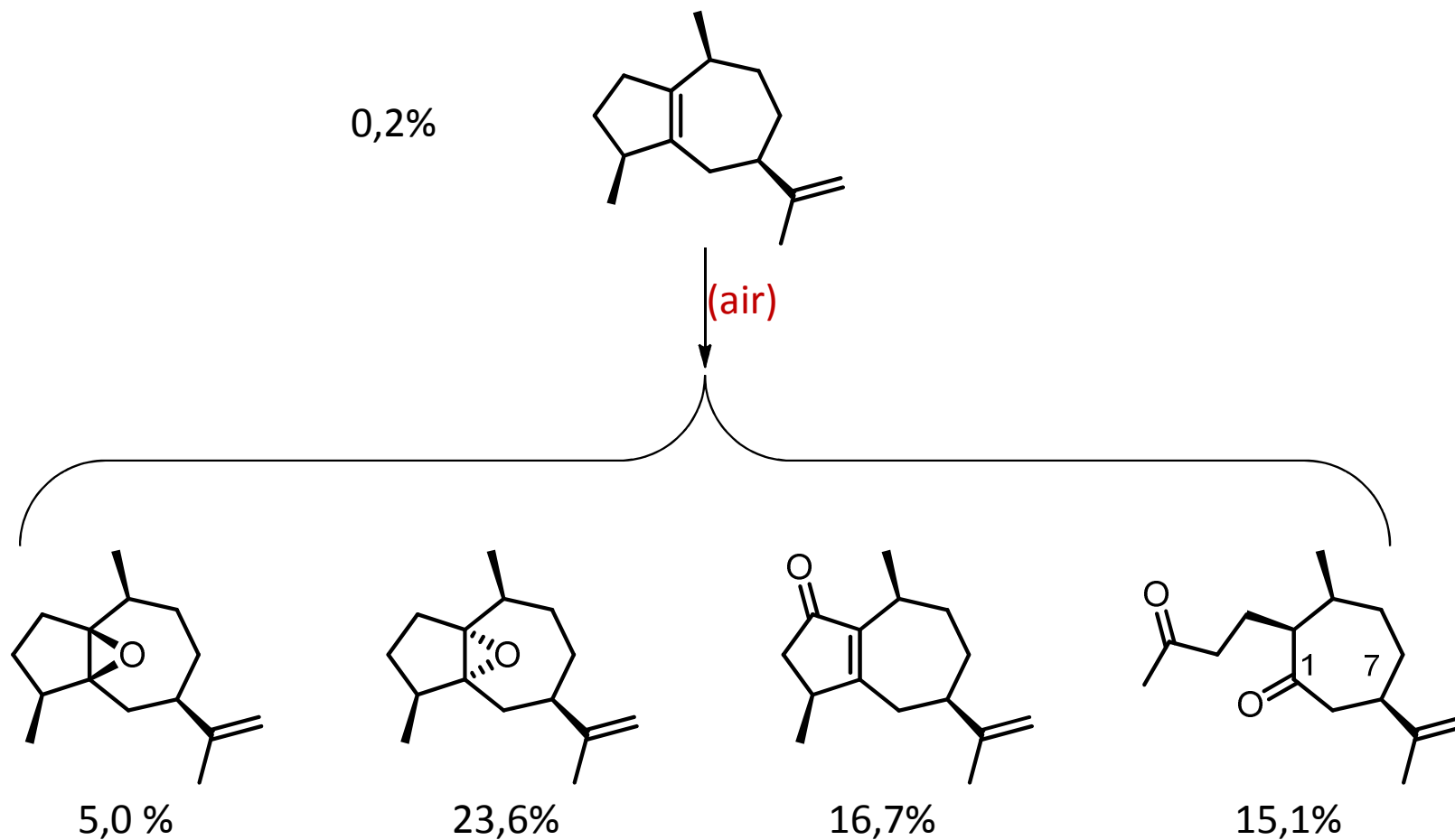
Kiuchi et coll. *Chem. Pharm. Bull.* 2004

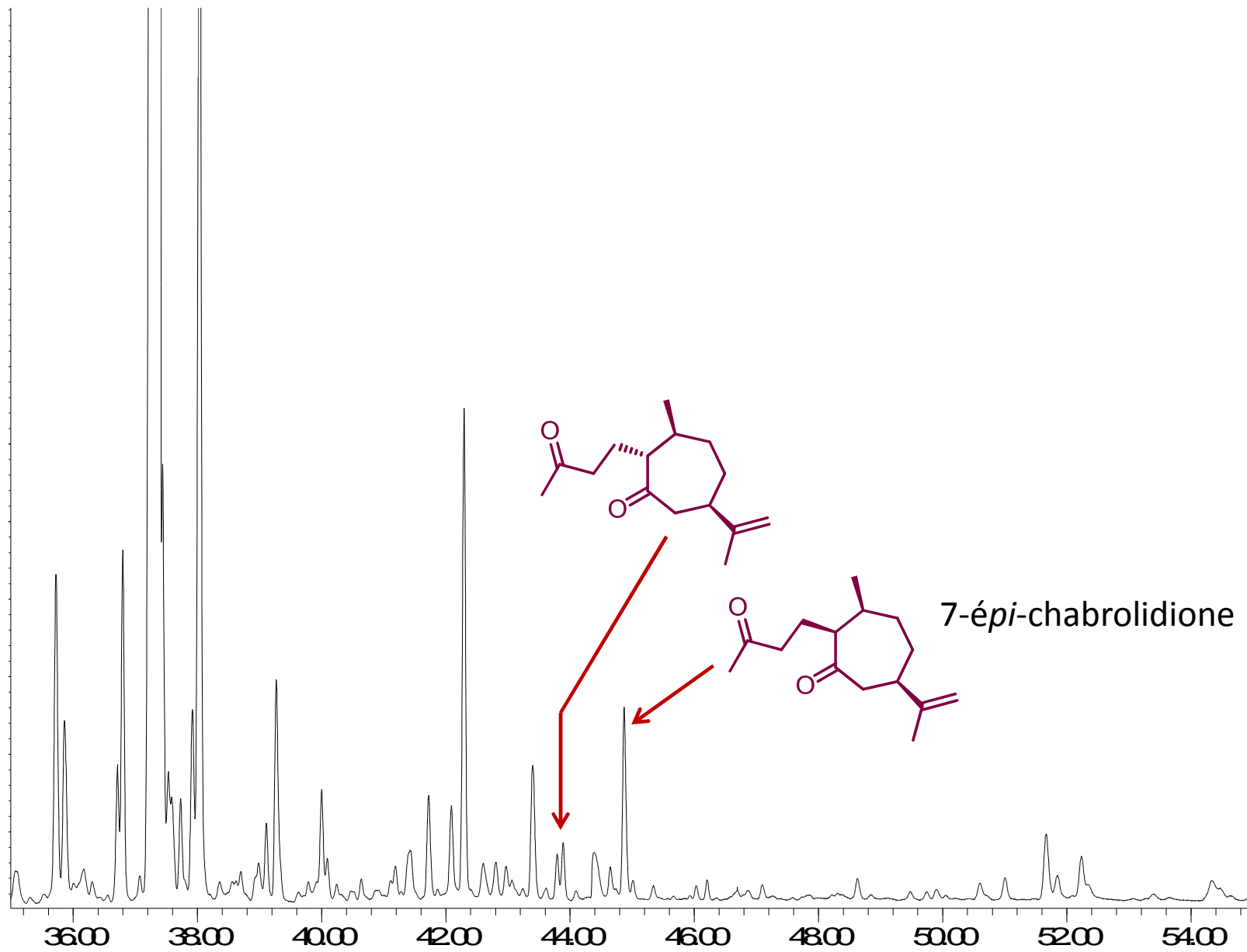
Déshydratation

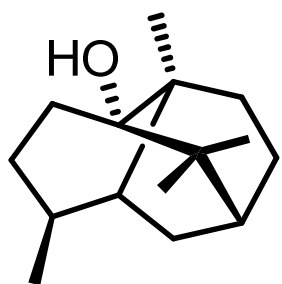


Oxydation de l' α -guaiène par l'air après 29 jours

[Huang et coll. *J. Agric. Food Chem.*, 2014, **62**, 10809]



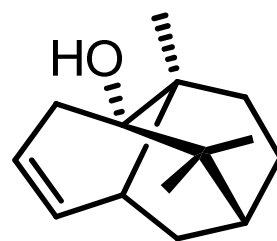




Norme ISO (%): 27-35

Concentration (%): 11-72

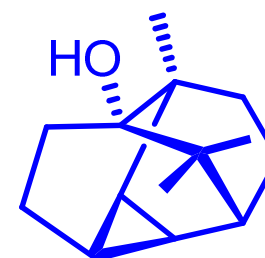
Seuil de détection : **0,93**
(ng/L)



0,35-1,0

0,11-4,0

2,8



ND

≈ 0.001

1,0

