

Egy új szerves molekula előállítása

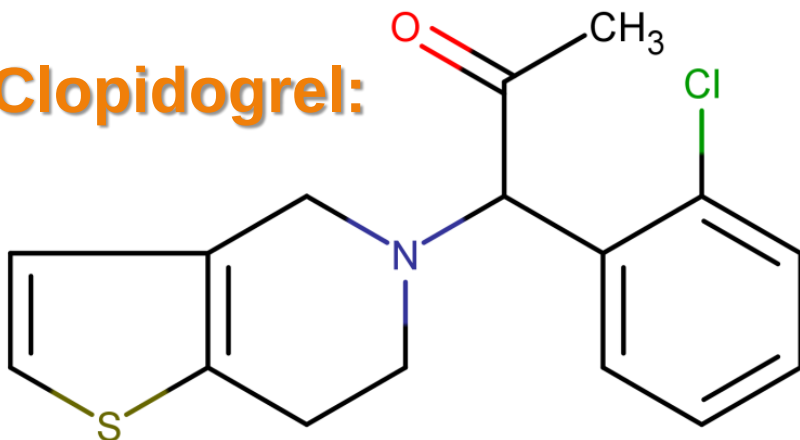


Készítette: Stenczel Tamás Károly ,
Borsodi Levente

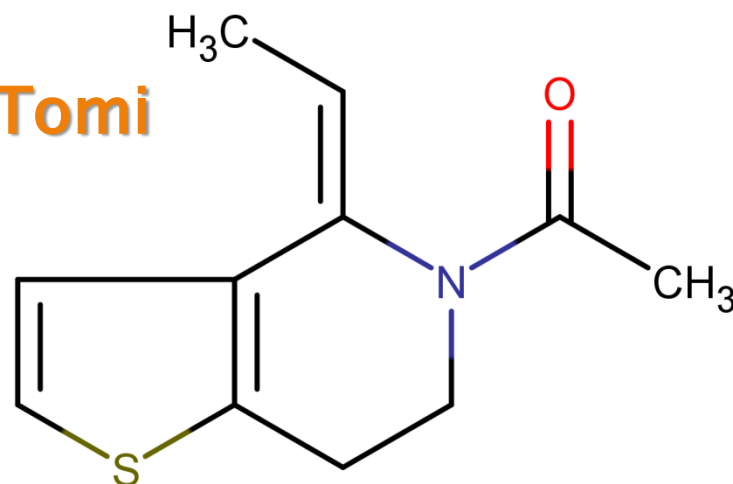
Témavezetők: Ábrányi–Balogh Péter és Szilágyi Bence
MTA Természettudományi Kutatóközpont
Szerves Kémiai Intézet

Cél:

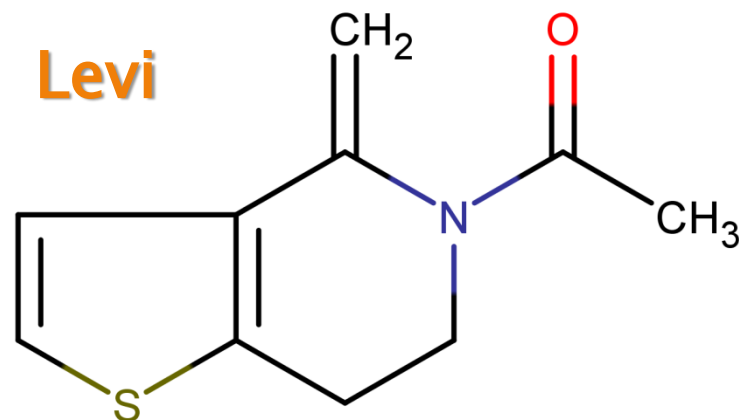
Clopidogrel:



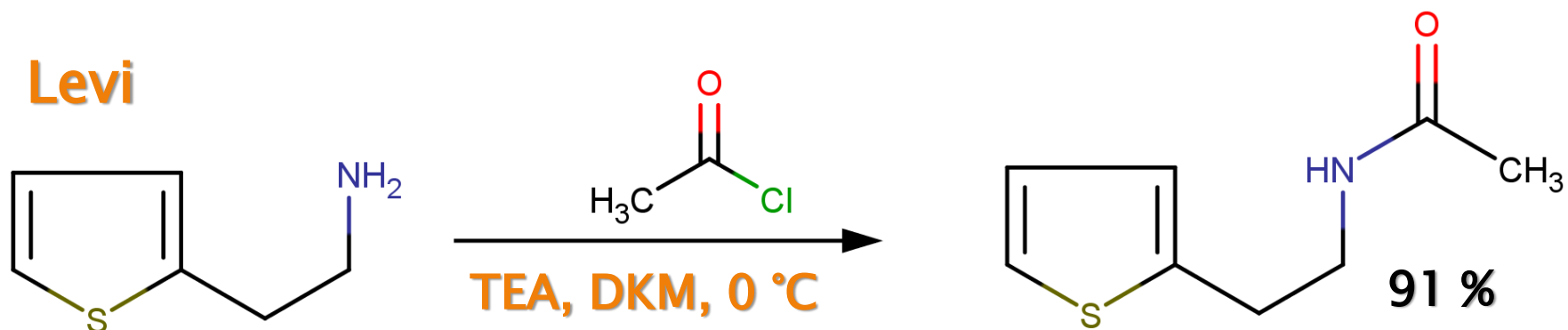
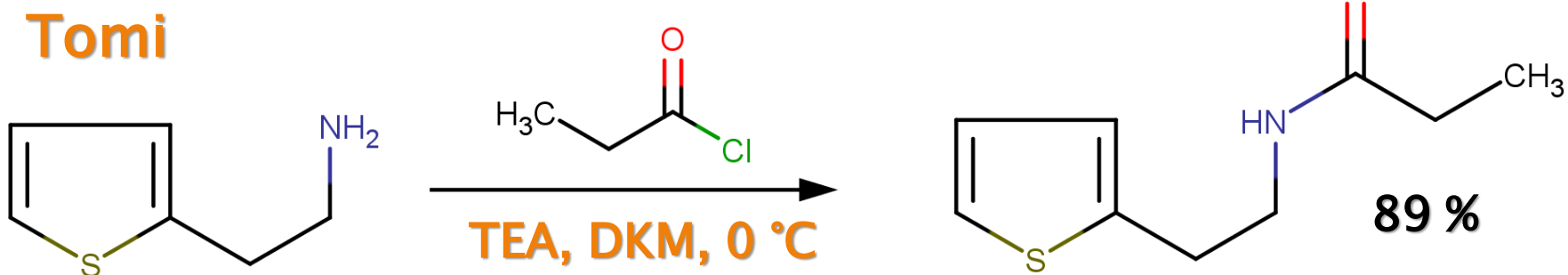
Tomi



Levi



- ▶ Vérlemezke-aggregáció gátló
- ▶ 2009 óta generikus gyógyszer
- ▶ Agyér , koronaér betegség



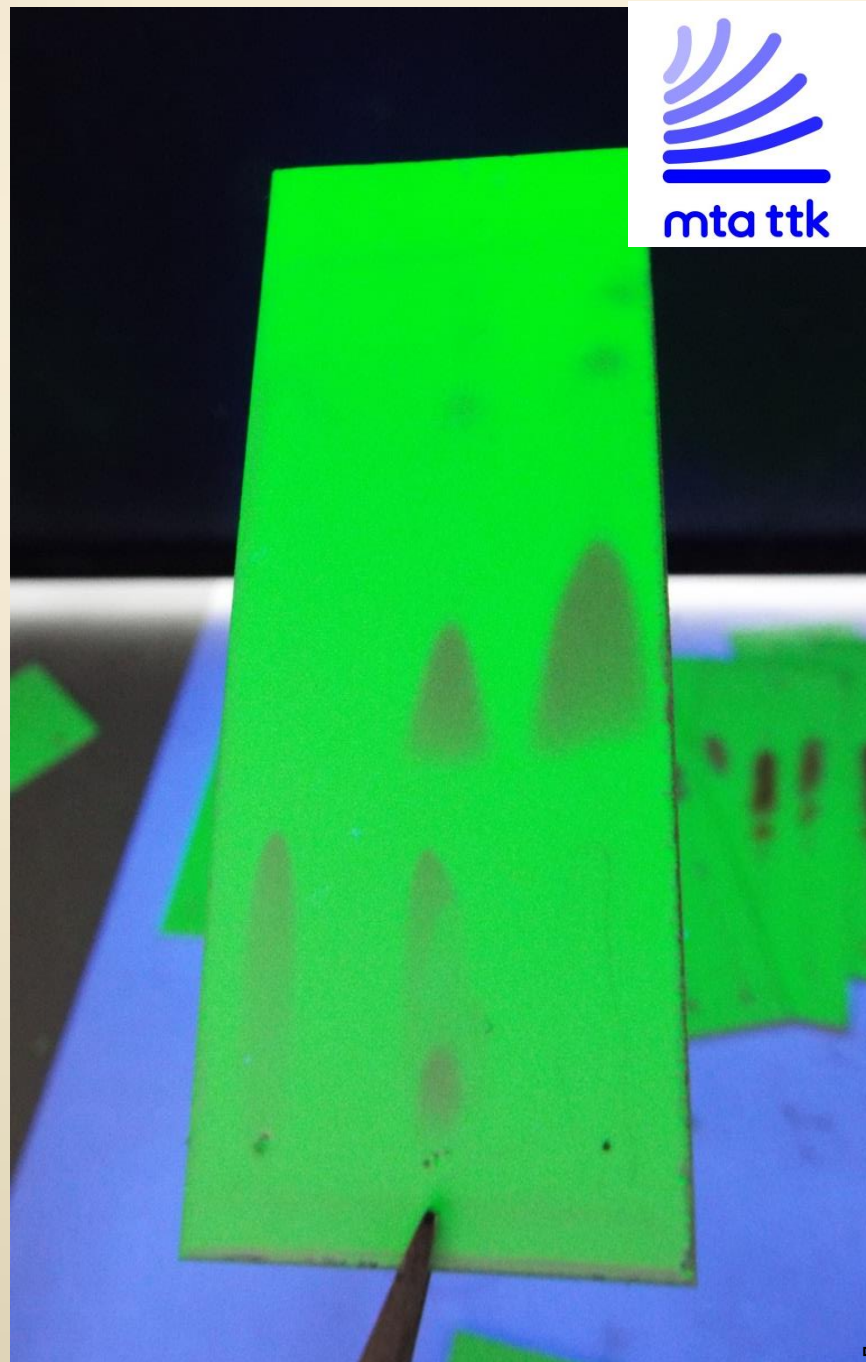
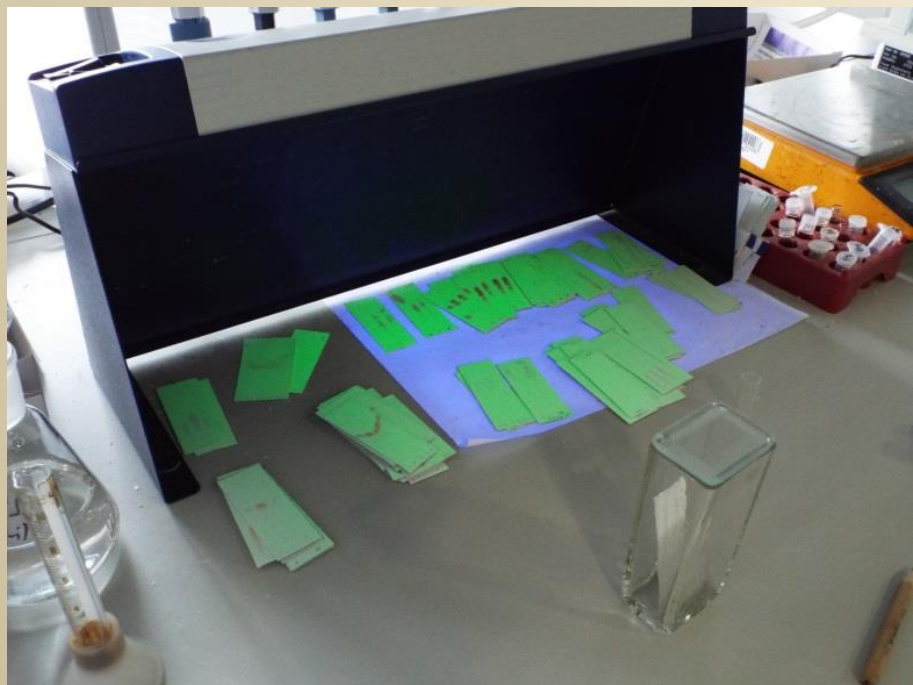


20 ml DKM
Savklorid



VRK:

Diklórmétán – Metanol
19:1

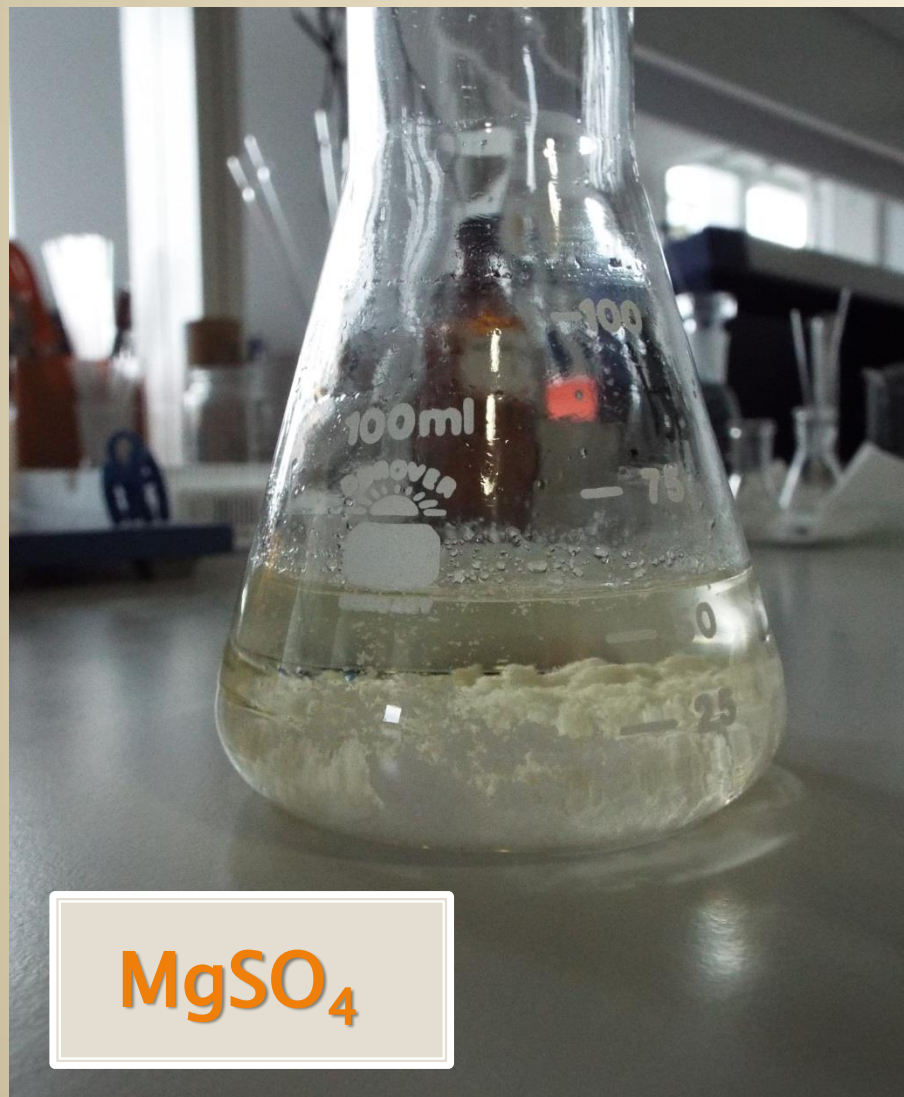


Extrakció



Kétszer 40 ml víz

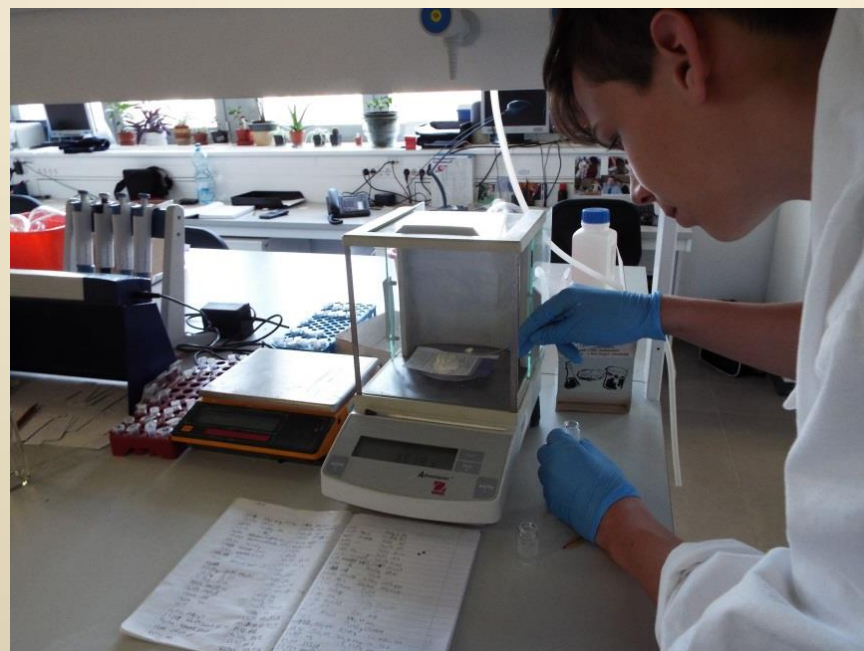
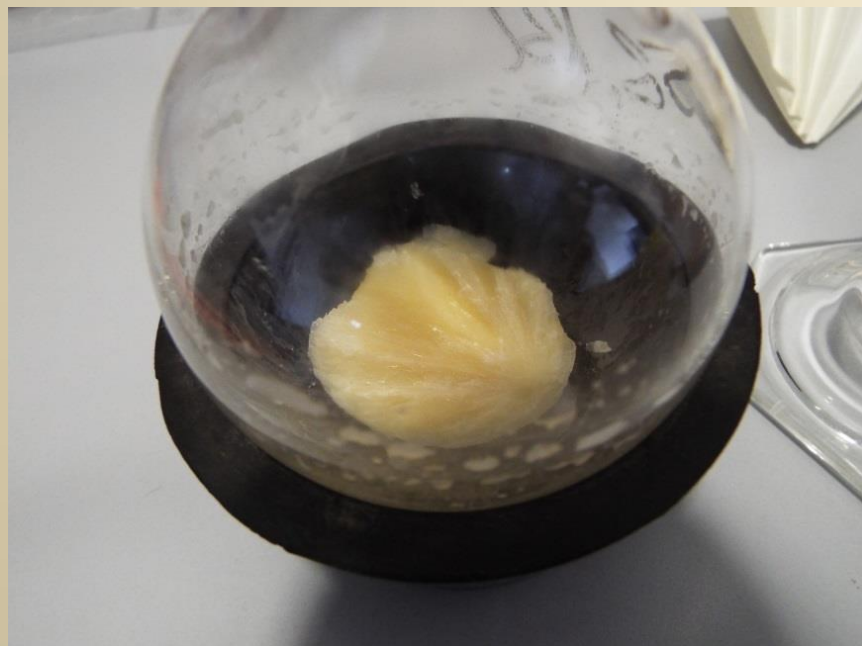
Szárítás



Bepárlás:



Átkristályosítás

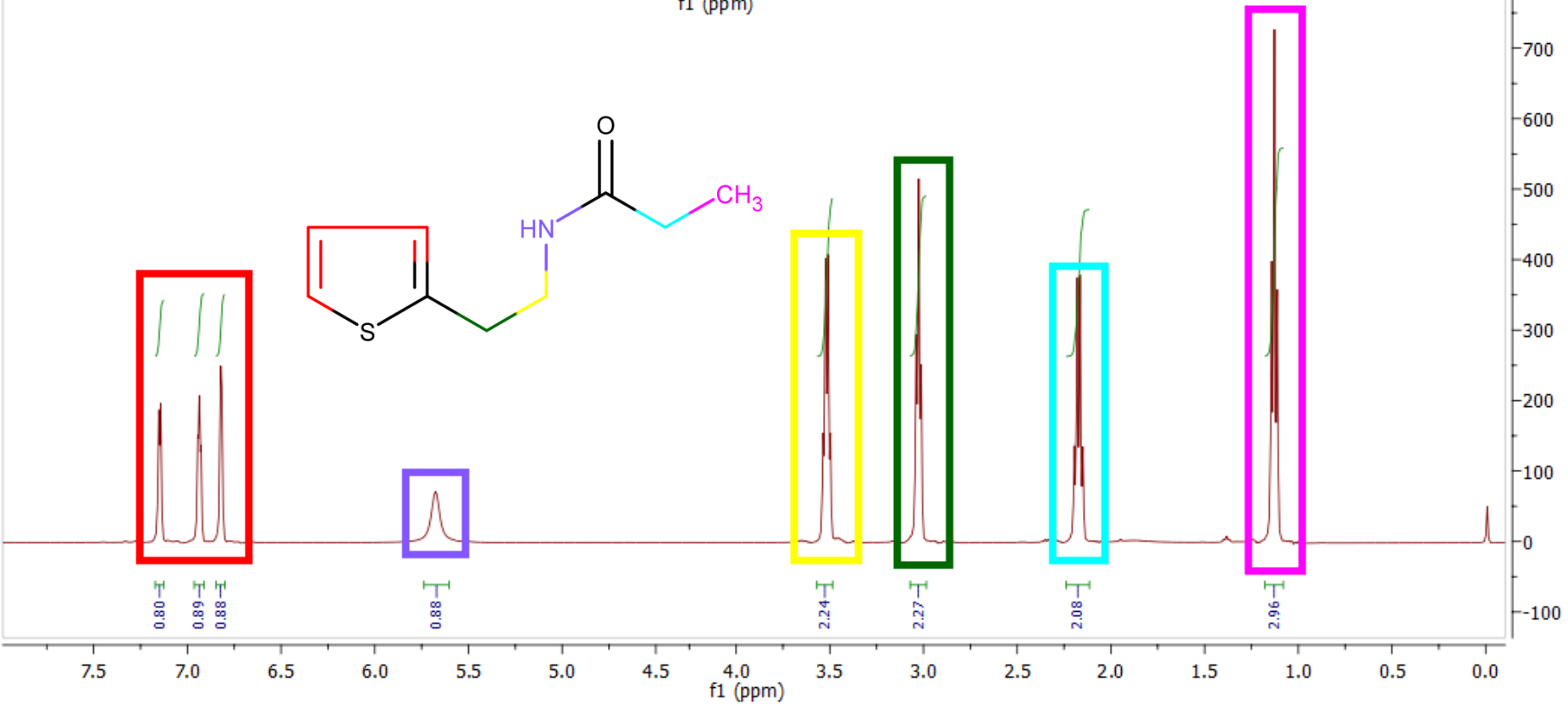
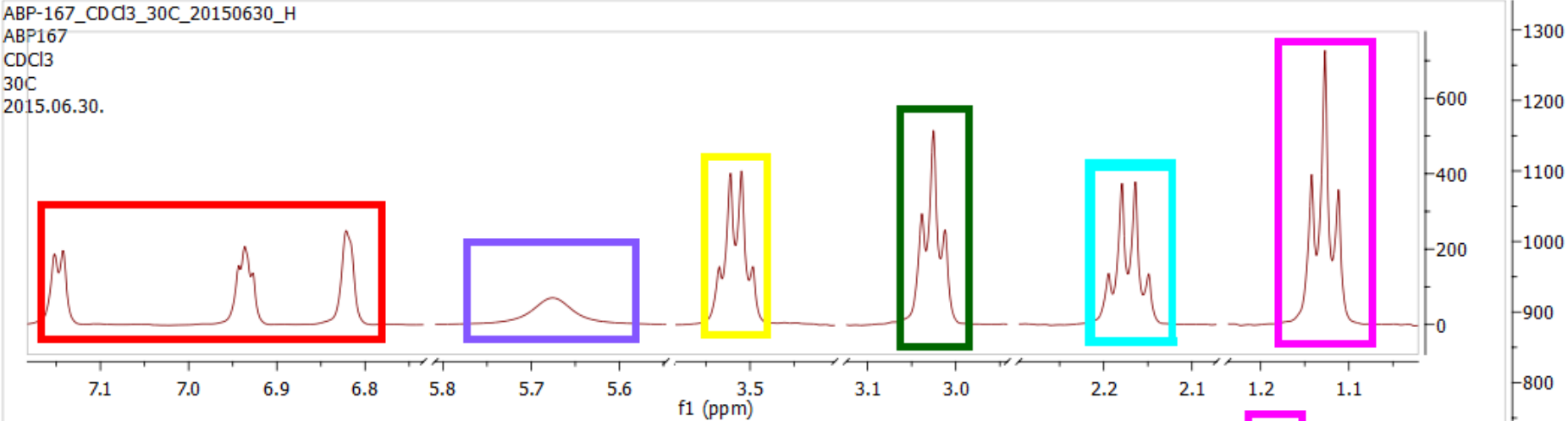


NMR:



► Molekula szerkezeti vizsgálata

ABP-167_CDCl3_30C_20150630_H
ABP167
CDCl3
30C
2015.06.30.

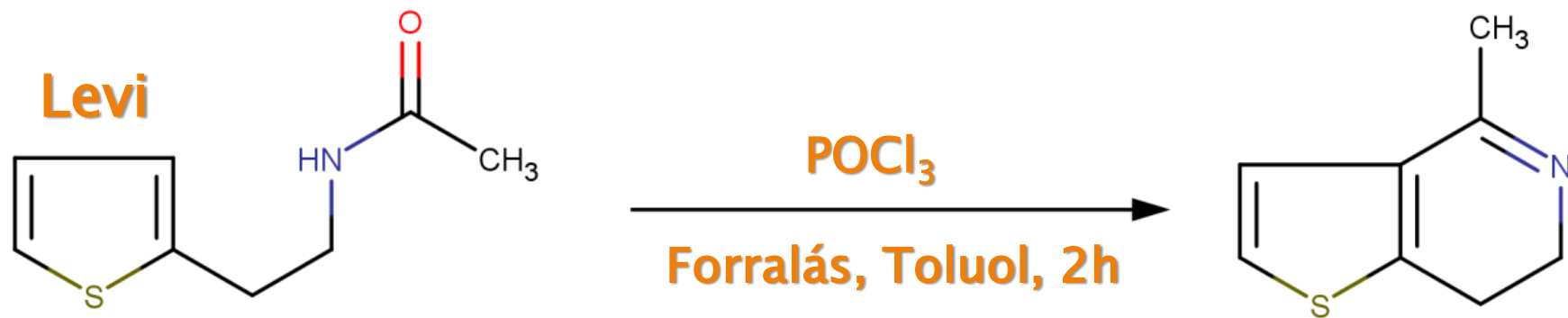


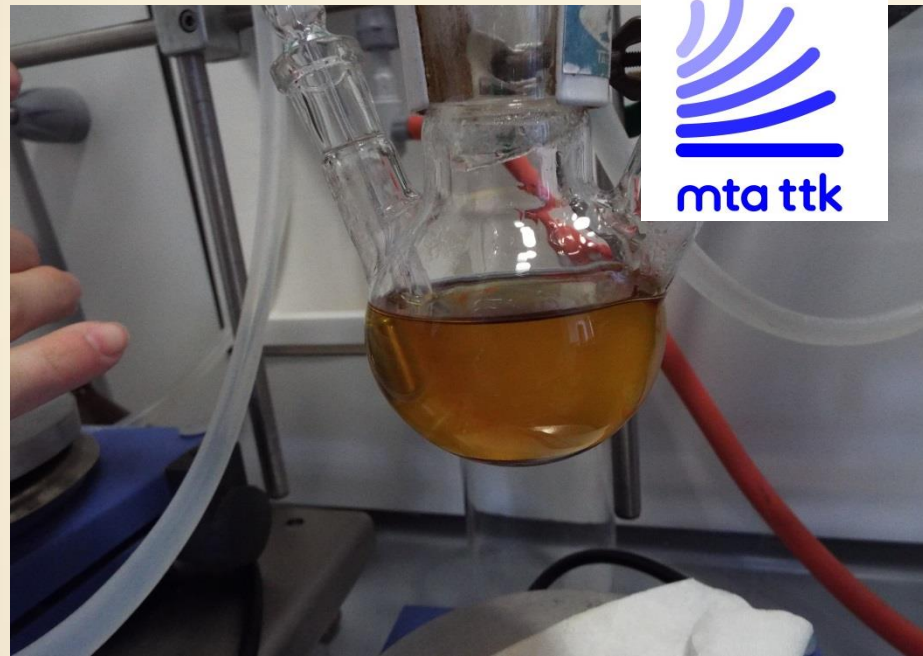
2. reakció

Tomi



Levi

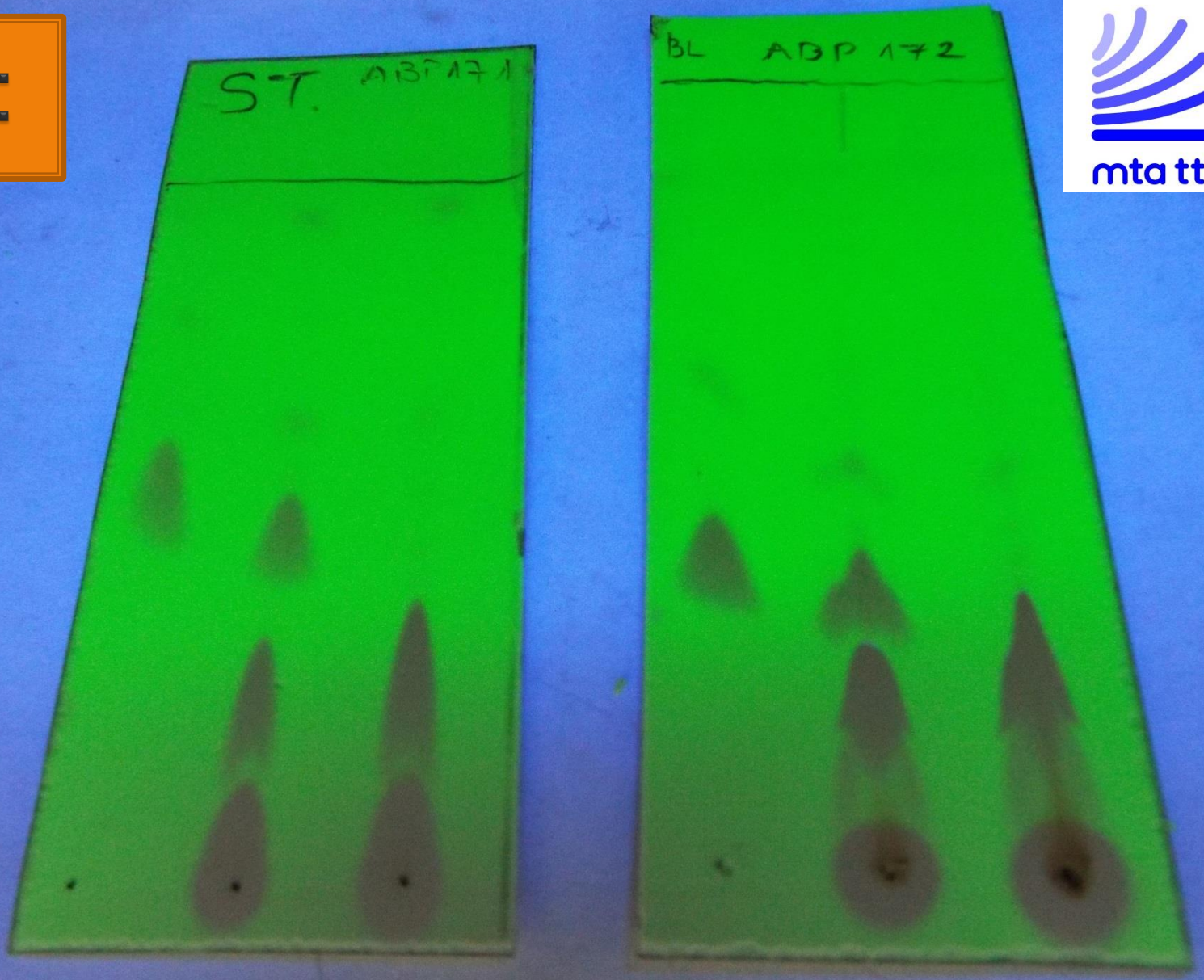




- ▶ 50 ml toluolban feloldjuk
- ▶ POCl_3 csepegtetés 30min
- ➡ 1,5h forralás



VRK:



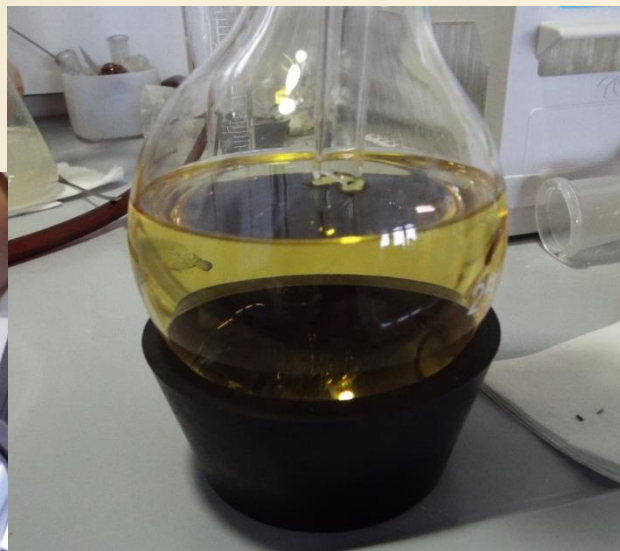
Feldolgozás:

- ▶ Extrakció
- ▶ Lepárlás





Szárítás:

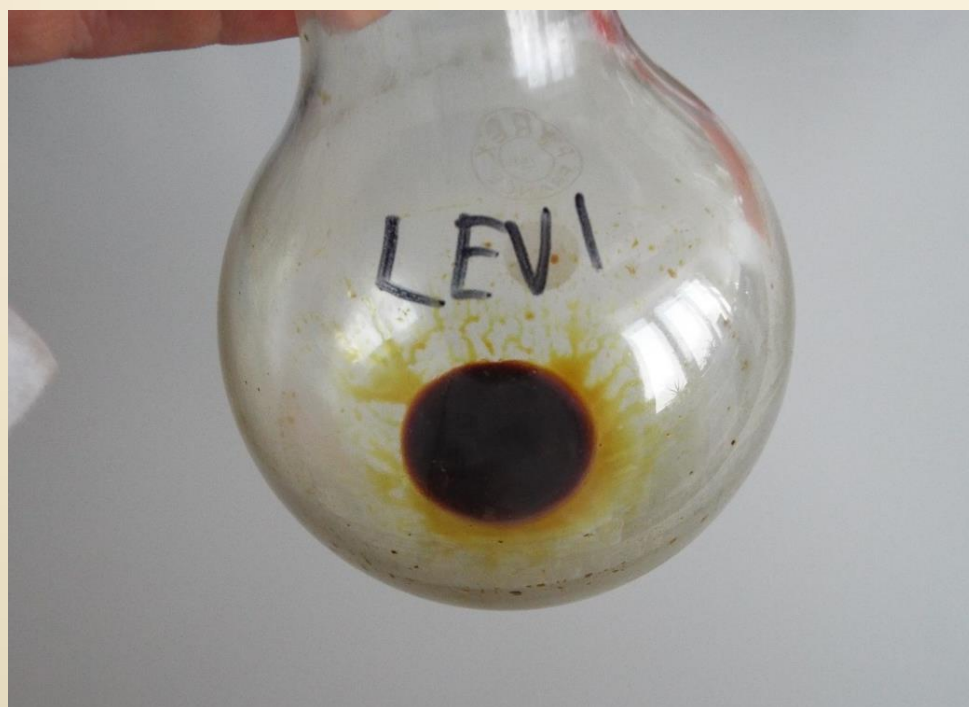
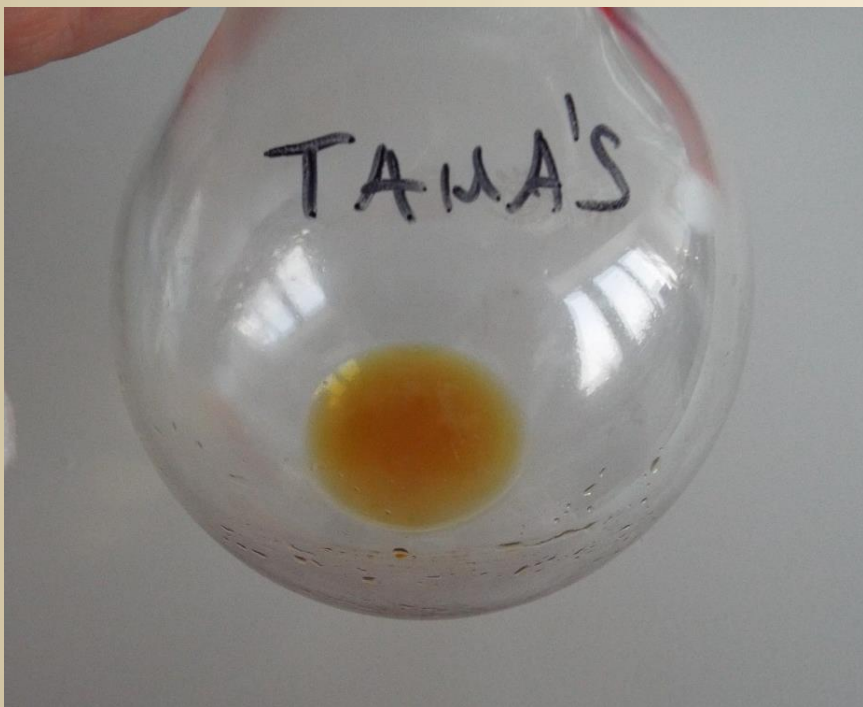


MgSO_4

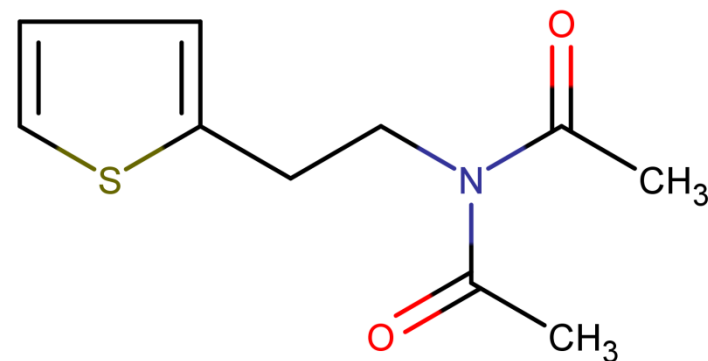
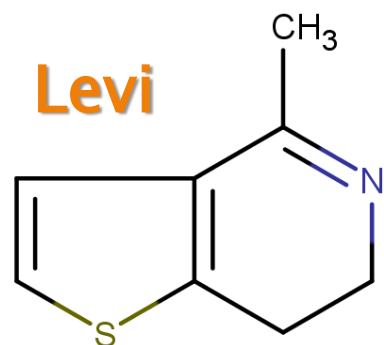
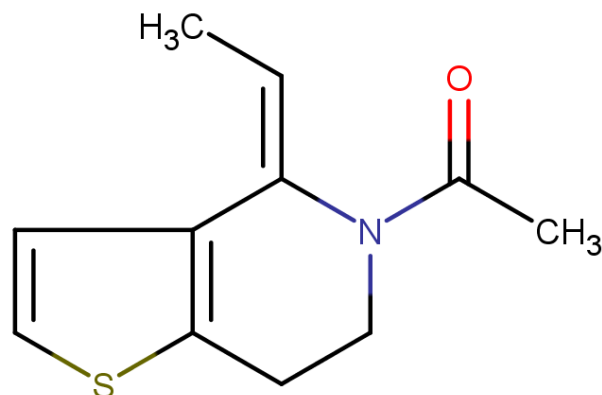
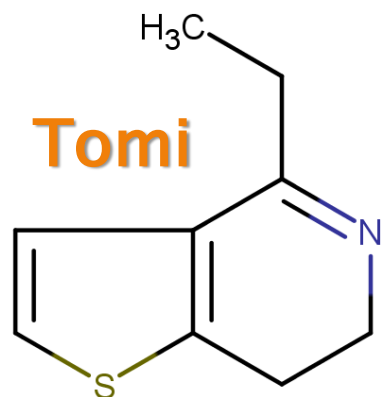
Bepárlás:



Másnapra:

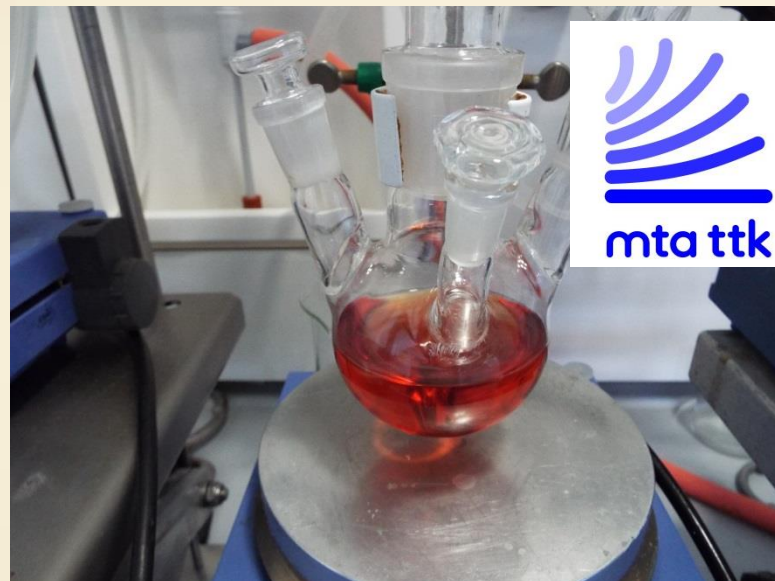


3. reakció



Eljárás:

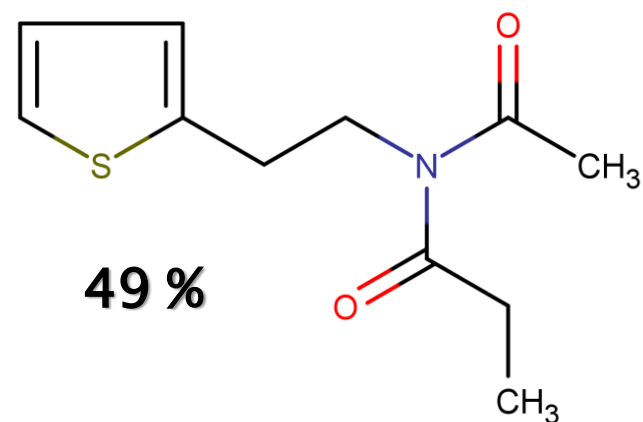
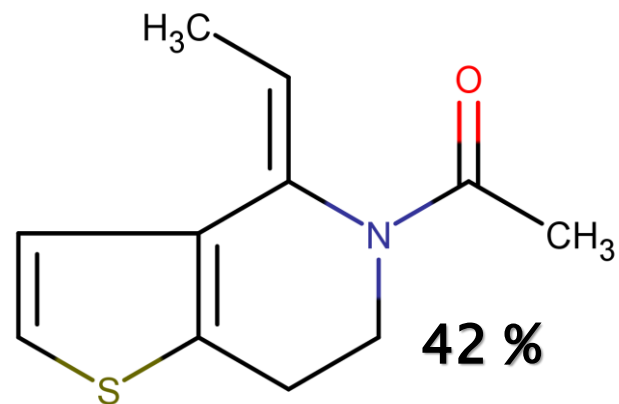
- ▶ 50 ml DKM-ben + TEA
- ▶ AcCl/DKM csepegtetés
- ▶ Tomi: VRK fél óránként



Feldolgozás:



LC-MS:

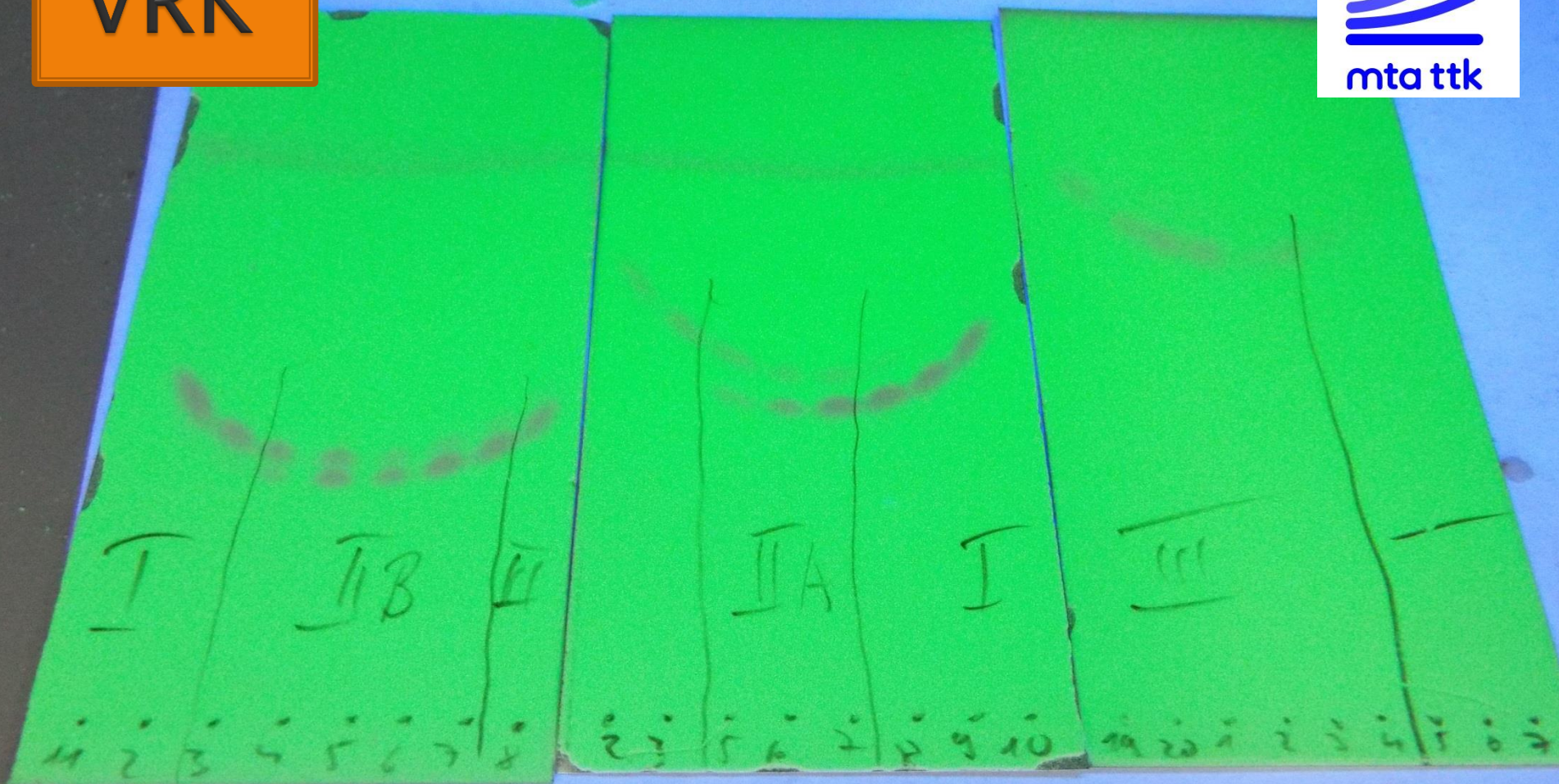


Kromatográfia:

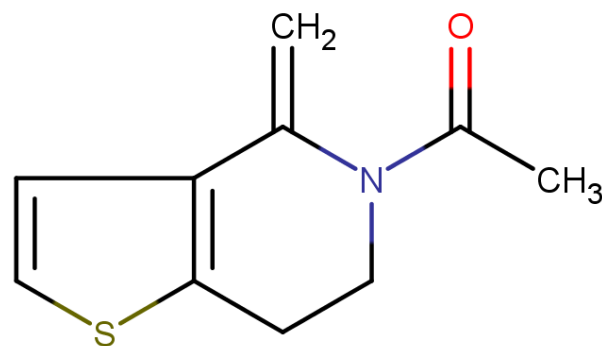
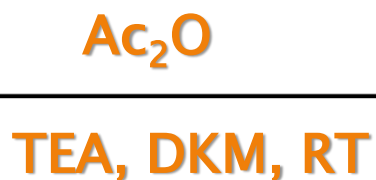
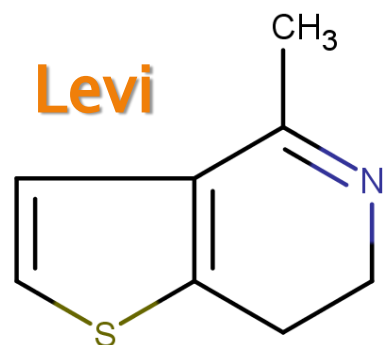
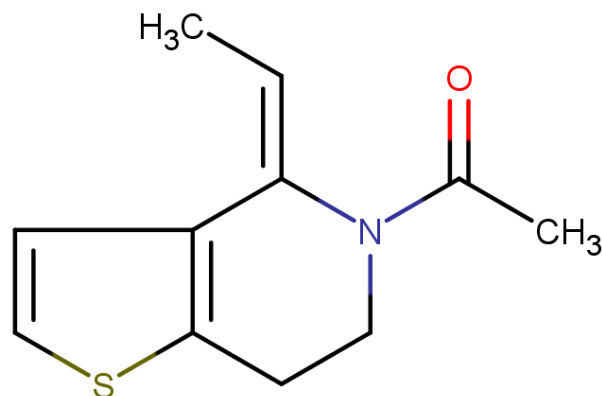
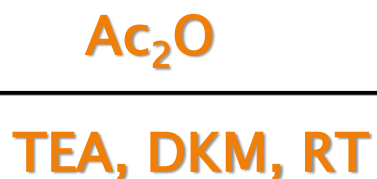
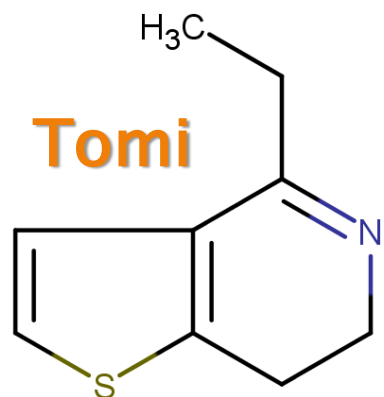
A termékek
elválasztása



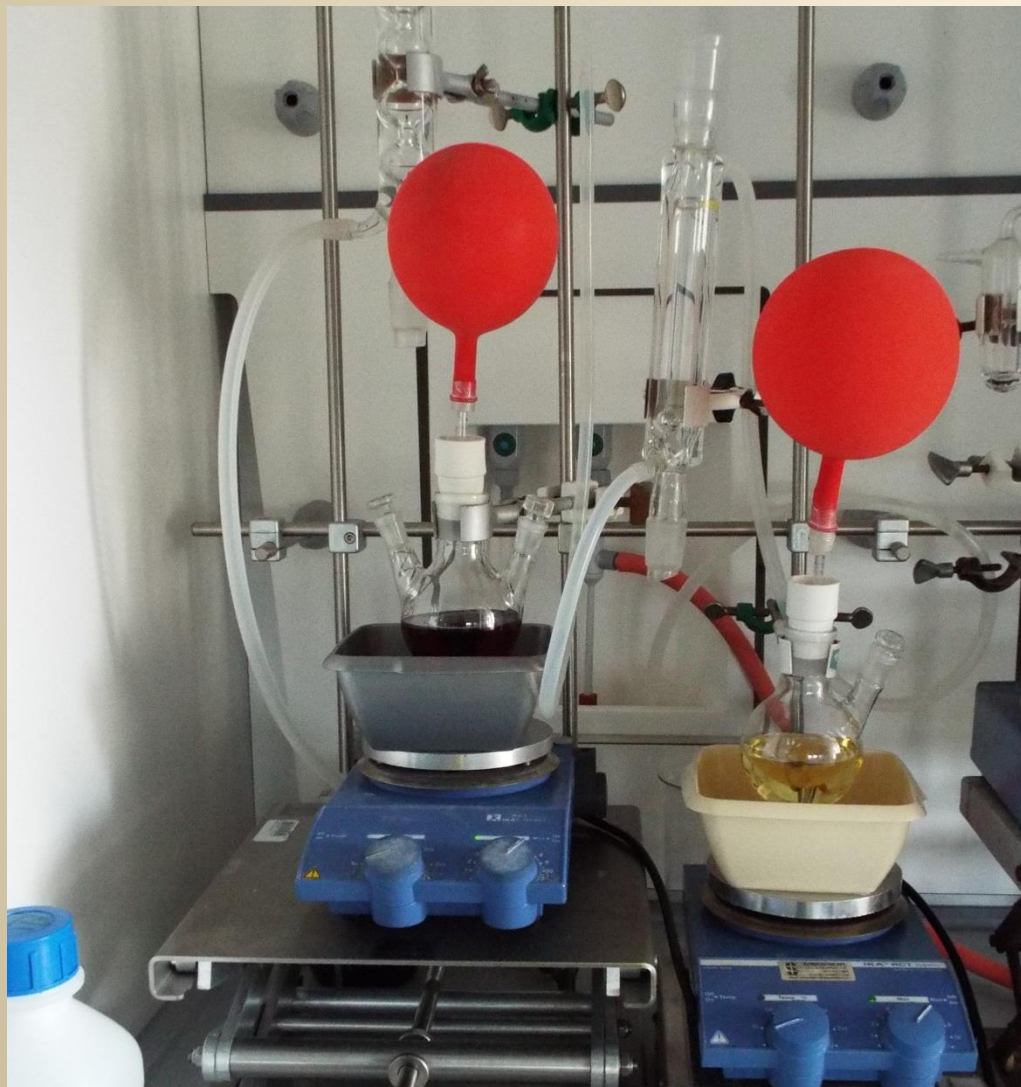
VRK



4. reakció:



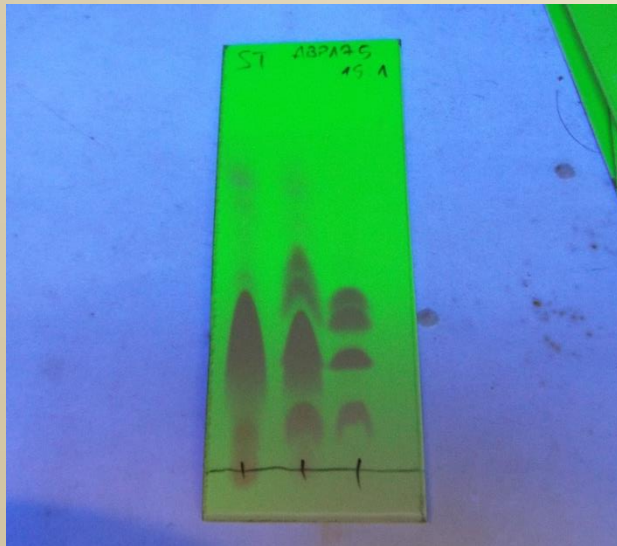
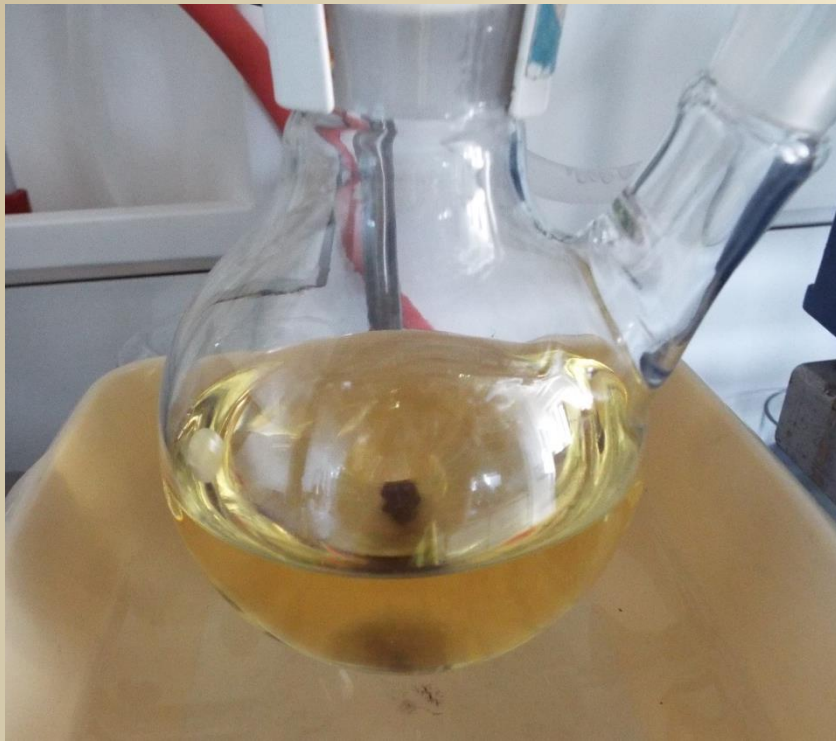
Eljárás:



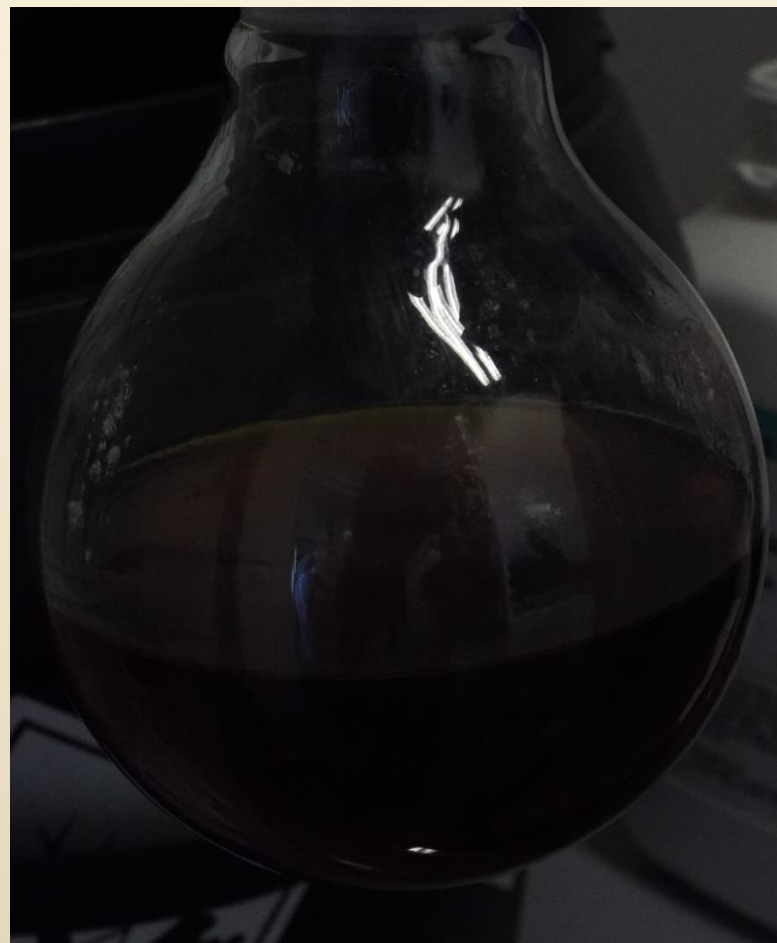
Ar atmoszféra

Vízmentesen

100 ml DCM
 Ac_2O / 20ml DCM



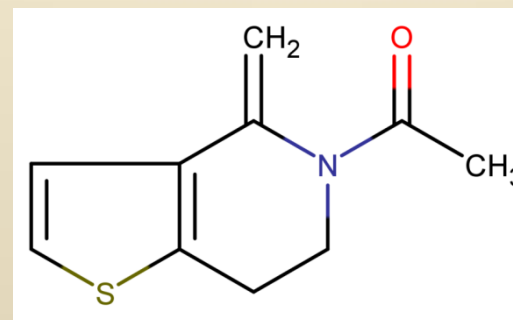
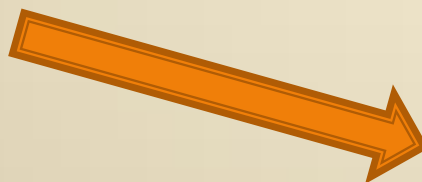
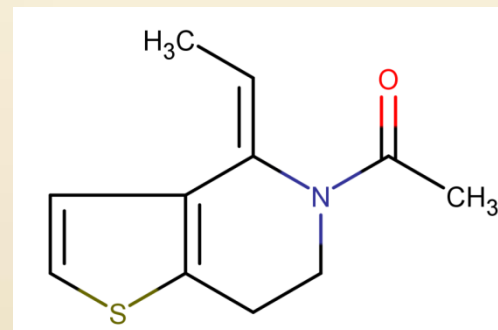
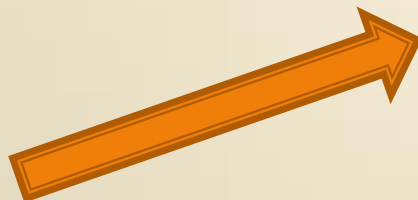
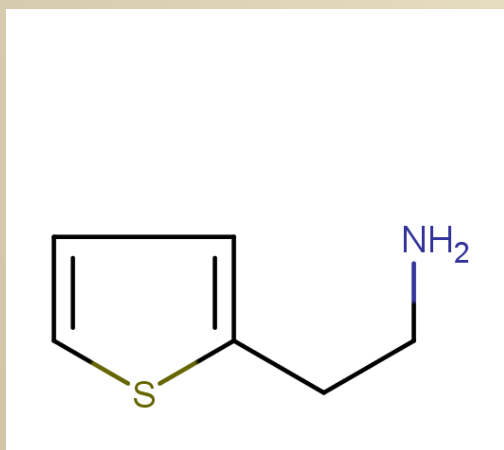
Kromatográfia:





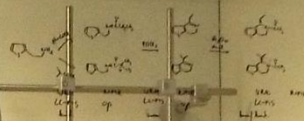
Konklúzió:

„Lehetséges”





Clopidogrel



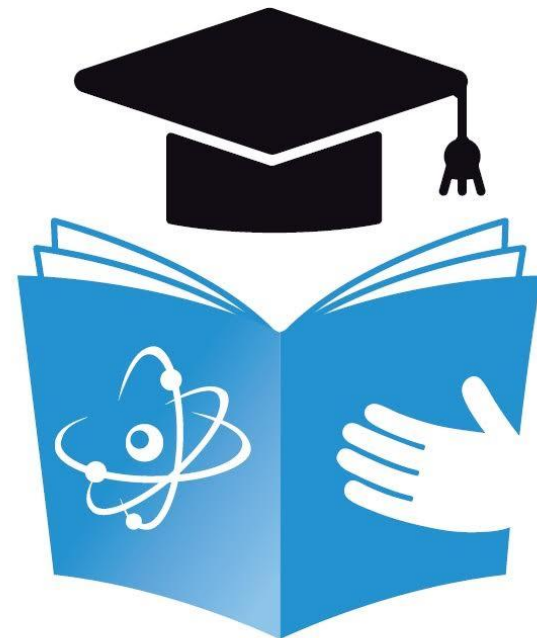
SZÉCHENYI 2020



MAGYARORSZÁG
KORMÁNYA

NEMZETI KUTATÁSI,
FEJLESZTÉSI ÉS
INNOVÁCIÓS ALAP

BEFEKTETÉS A JÖVŐBE



MSMS TUDÁSPONT