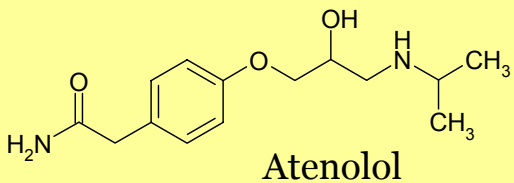
Antihypertensiv wirkende Stoffe

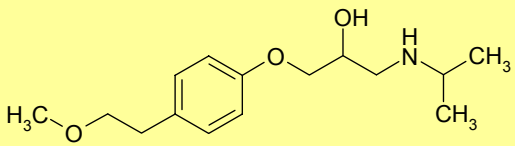
- Monotherapie
  - Beta-Blocker
  - Diuretikum
  - Calcium-Kanalblocker
  - ACE-Hemmer
  - Alpha1-Rezeptorenblocker
- Kombinationen

Antihypertensiv wirkende Stoffe

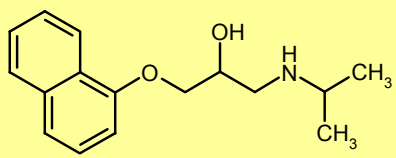
Beta-Blocker



Atenolol

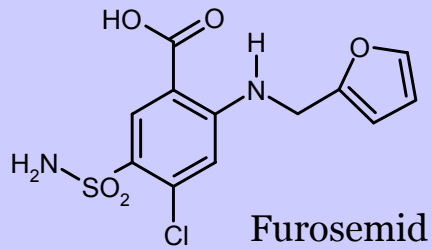


Metoprolol



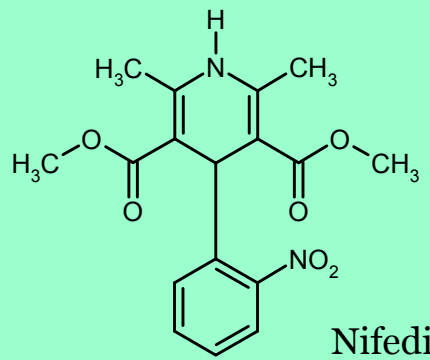
Propranolol

Diuretikum



Furosemid

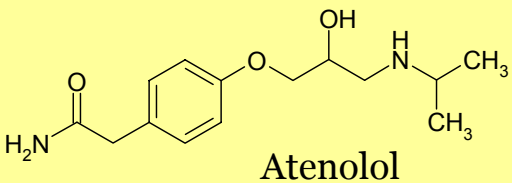
Calcium-Kanalblocker



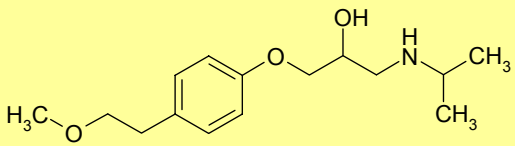
Nifedipin

Antihypertensiv wirkende Stoffe

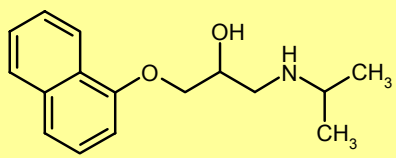
Beta-Blocker



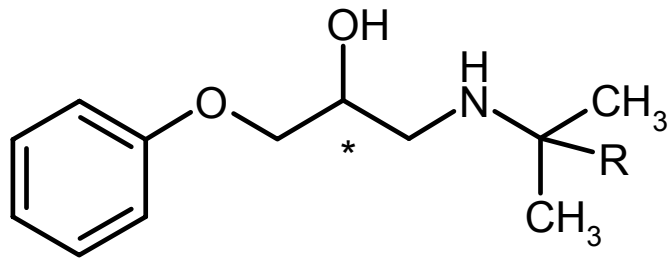
Atenolol



Metoprolol



Propranolol

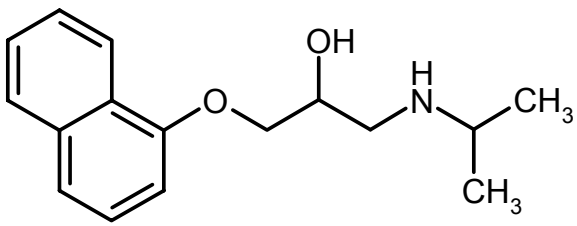


R = H oder CH_3

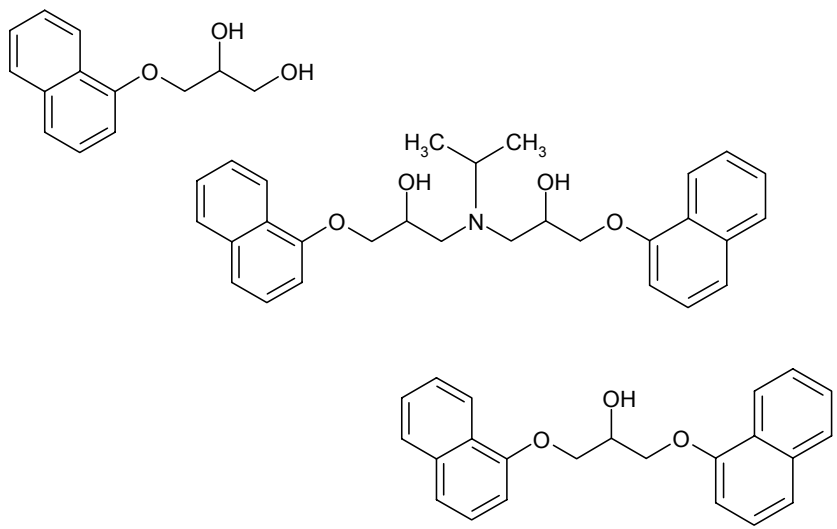
Essentielle Struktur

Antihypertensiv wirkende Stoffe

Propranolol *((R,S)-1-Isopropylamin-3-(1-naphthyloxy)-2-propanol)*

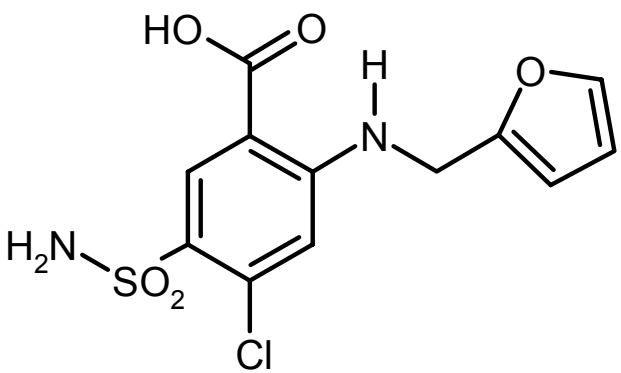


- Identifizierung
- Reinheitsprüfung (Synthesenebenprodukte)
- Gehaltsbestimmung (Verdrängungstitration)



Antihypertensiv wirkende Stoffe

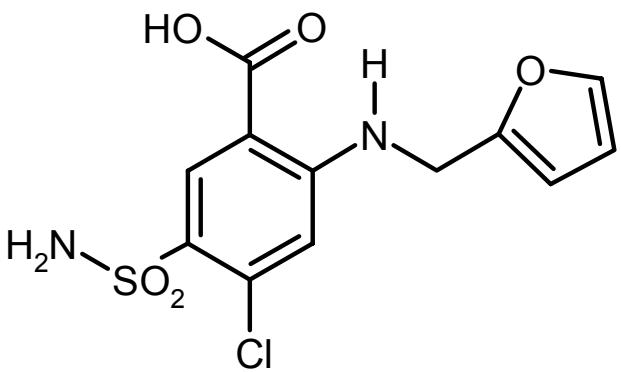
Furosemid *(4-Chlor-2-furfurylamino-5-sulfamoyl-benzoesäure)*



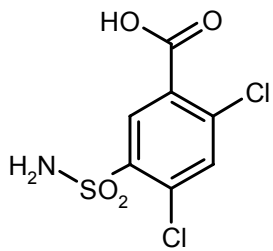
- photochemisch instabil
- Verunreinigungen aus der Synthese
- Identifizierung u.a. nach Hydrolyse und Diazotierung/Kupplung als Azofarbstoff
- Gehaltsbestimmung:
  - mit NaOH in DMF (Bromthymolblau)
  - wasserfreie Titration (NH-Proton)

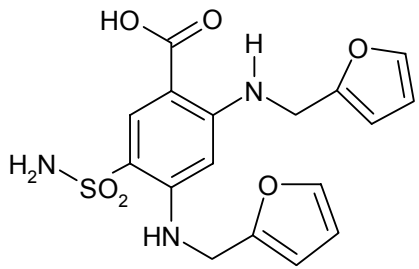
Antihypertensiv wirkende Stoffe

Furosemid (4-Chlor-2-furfurylamino-5-sulfamoyl-benzoesäure)



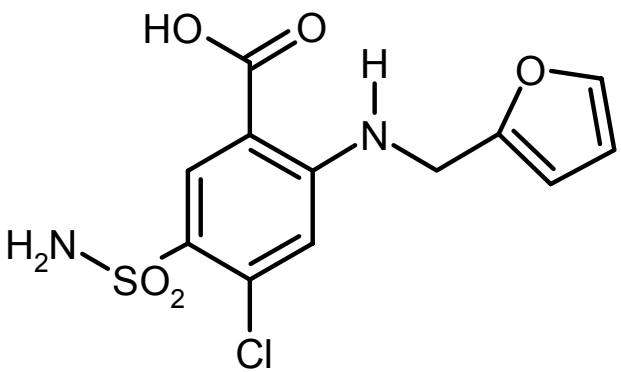
- Verunreinigungen aus der Synthese



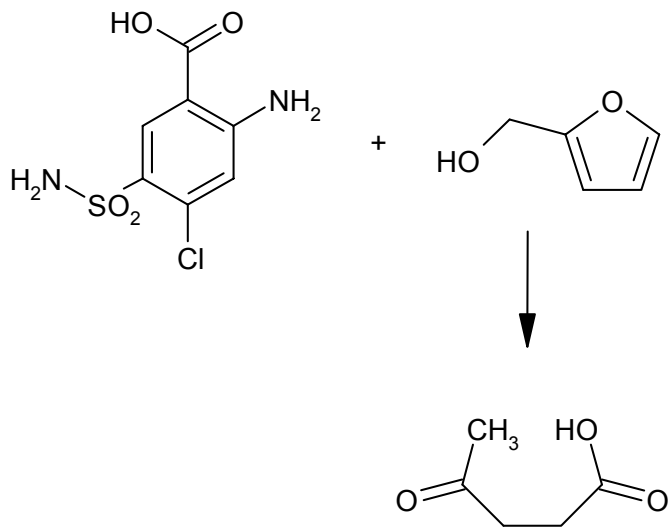


Antihypertensiv wirkende Stoffe

Furosemid *(4-Chlor-2-furfurylamino-5-sulfamoyl-benzoesäure)*

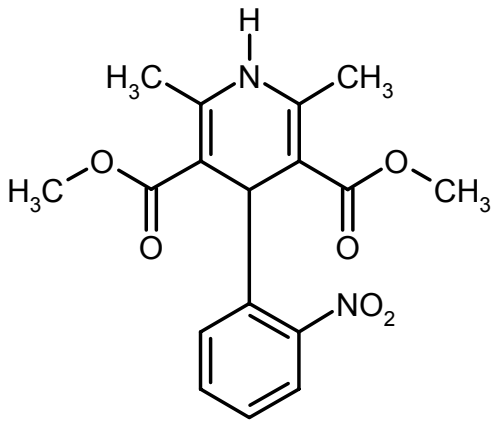


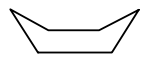
- photochemische Instabilität



Antihypertensiv wirkende Stoffe

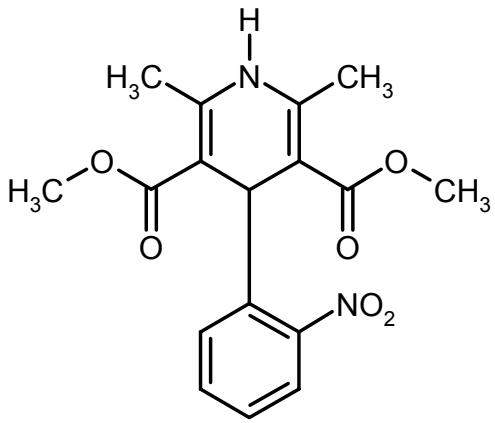
Nifedipin *(Dimethyl [1,4-dihydro-2,6-dimethyl-4-(2-nitrophenyl)-3,5-pyridindicarboxylat])*



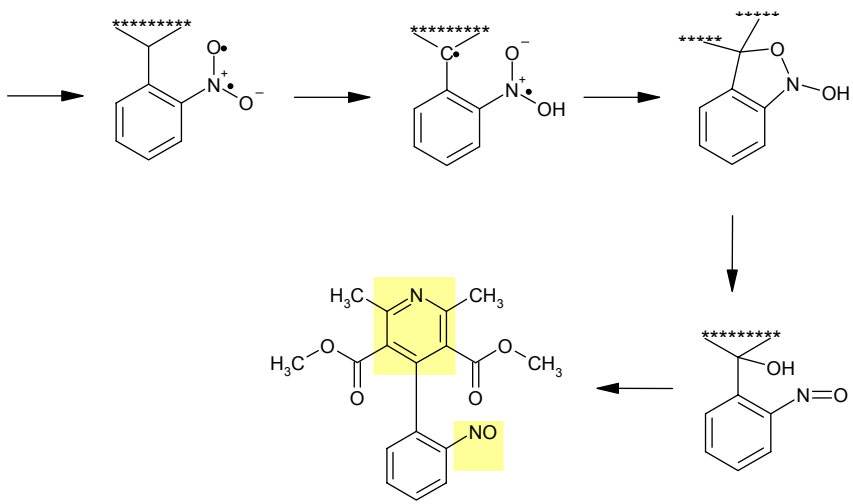
- flache Wannenform 
- Stabilität:
  - sehr lichtempfindlich
  - intramolekulare Redoxreaktion
- Identität (NW der Nitrogruppe)
- Reinheit
- Gehaltsbestimmung

Antihypertensiv wirkende Stoffe

Nifedipin *(Dimethyl [1,4-dihydro-2,6-dimethyl-4-(2-nitrophenyl)-3,5-pyridindicarboxylat])*

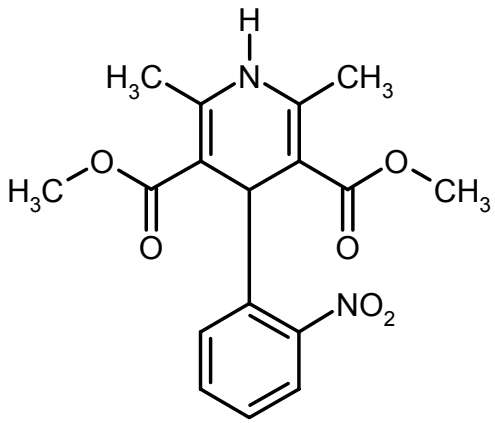


- Stabilität:
  - sehr lichtempfindlich
  - intramolekulare Redoxreaktion

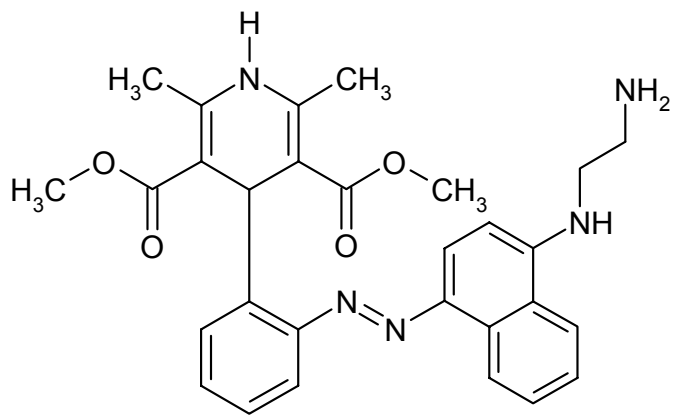


Antihypertensiv wirkende Stoffe

Nifedipin *(Dimethyl [1,4-dihydro-2,6-dimethyl-4-(2-nitrophenyl)-3,5-pyridindicarboxylat])*

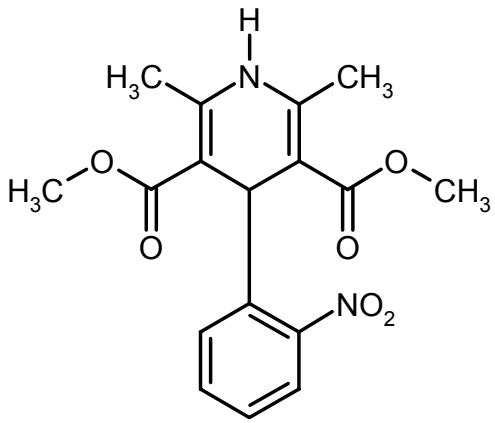


- Identität
  - DC (im Dunkeln, Gelblicht)
  - NW der Nitrogruppe:
    - Reduktion, Diazotierung und Umsetzung mit Bratton-Marshall-Reagenz (Azofarbstoff)

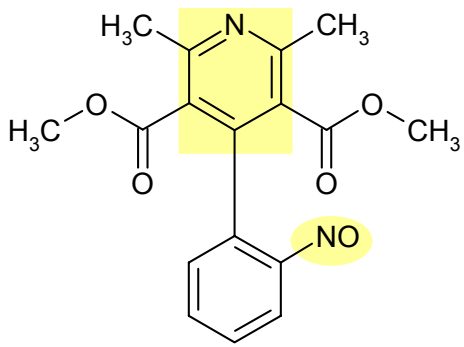


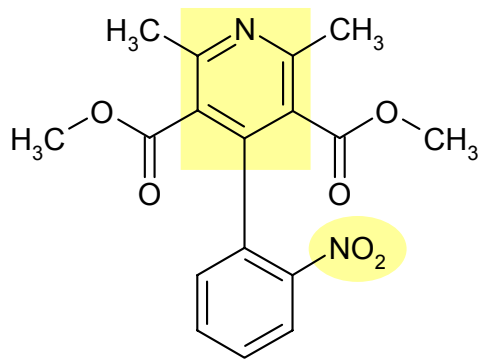
Antihypertensiv wirkende Stoffe

Nifedipin *(Dimethyl [1,4-dihydro-2,6-dimethyl-4-(2-nitrophenyl)-3,5-pyridindicarboxylat])*



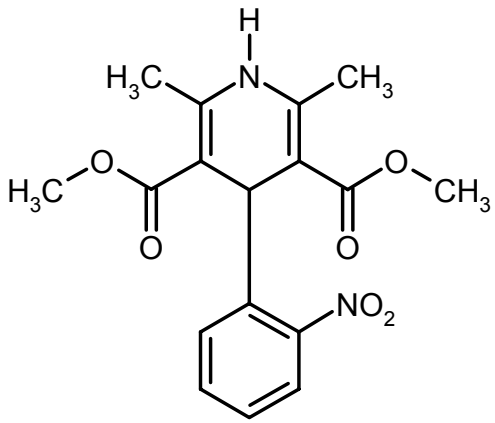
- Reinheit
  - Photoinstabilität
  - Syntheseverunreinigungen



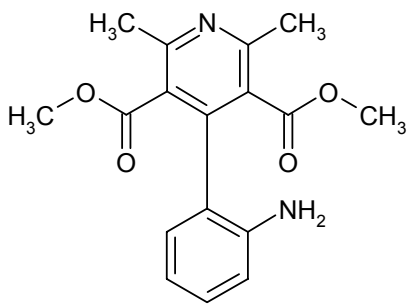


Antihypertensiv wirkende Stoffe

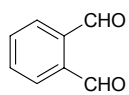
Nifedipin *(Dimethyl [1,4-dihydro-2,6-dimethyl-4-(2-nitrophenyl)-3,5-pyridindicarboxylat])*

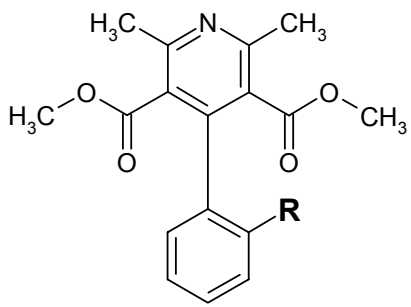


- Gehaltsbestimmung
  - Cerimetrie
  - fluorimetrische Bestimmung



Phthalaldehyd





R =