**The specification of machines for experimental parts of publications and final theses.**

**Chiral HPLC**

The analysis was performed with a Shimadzu liquid chromatograph with a spectrophotometric detector (SPD-M20A). Chiral columns Daicel Chiralpak IA, IB, IC, AD, ODH were used for chiral separation of enantiomers.

**Specific optical rotation**

Specific optical rotations were measured with AUTOMATIC polarimetry, Autopol III (Rudolph research, Flandres, New Jersey) and as solvent was used CHCl3. Specific optical rotations are given in concentrations *c* [g/100 mL].

**Infrared spectroscopy**

Infrared spectroscopy spectra were measured with a Nicolet Avatar 370 FTIR. The method used for measuring was a diffuse reflectance (DRIFT) in KBr or Attenuated Total Reflectance (ATR) with Ge crystal. IR absorptions are given in wavenumbers as cm-1.

**UV-Vis spectroscopy**

UV-Vis spectroscopy spectra were measured with Thermo Scientific Helios γ with wolfram and deuterium lamp. Wavelength range is 190-800 nm.

**Mass spectrometry**

Low resolution mass spectra were measured with a Shimadzu LCMS-2020. Samples were ionized by electrospray technique (ESI) and detected by quadrupole or TOF. Drying and nebulizer gas was nitrogen.

High resolution mass spectra were measured with a Agilent Technologies 6530 Accurate-Mass Q-TOF LC/MS Samples were ionized by electrospray technique (ESI) and detected by quadrupole or TOF. Drying and nebulizer gas was nitrogen.

**GC chromatography**

The analysis was performed with a Shimadzu gas chromatograph GC-2010 plus with a flame ionization detector (FID). The silica capillary column SLBTM-5ms was used and carrier gas was hydrogen.