# $SiO_2$ Column Chromatography for amino acids with hydrophobic protection groups

- Suspend $SiO_2$ in petrol ether (PE)
- Load it onto a gravity column
- Let the PE flow through the column and tap the column several times to ensure there is no air left in the column (warning: don't let the column get dry)
- Dry the reaction mixture under reduced pressure to complete dryness
- Dissolve the reaction mixture in a highly polar solvent. We used ethyl acetate (EtOAc)
- Add 5 - 8 g $SiO_2$ beads so that you have a slurry suspension
- Dry under reduced pressure
- Put the dried $SiO_2$ loaded with the reaction mixture onto the column
- Load approx. 10 g $NaSO_4$ or $MgSO_4$ onto the column
- Flush the column one time with 100 % petrol ether (PE)
- For the next steps collect the eluent fraction by fraction
- Start the separation with 2 flushes with 5 % of the highly polar solvent in PE
- Increase the polarity of the eluent by 5 % steps
- While separation adjudge the fractions by TLC

Note: The flow rate can be increased by using a hand pump. Don't put too much pressure onto the column to ensure a good separation. It is recommended to collect the flow through dropwise. Depending on the amount of reaction mixture, the size of the column can vary.