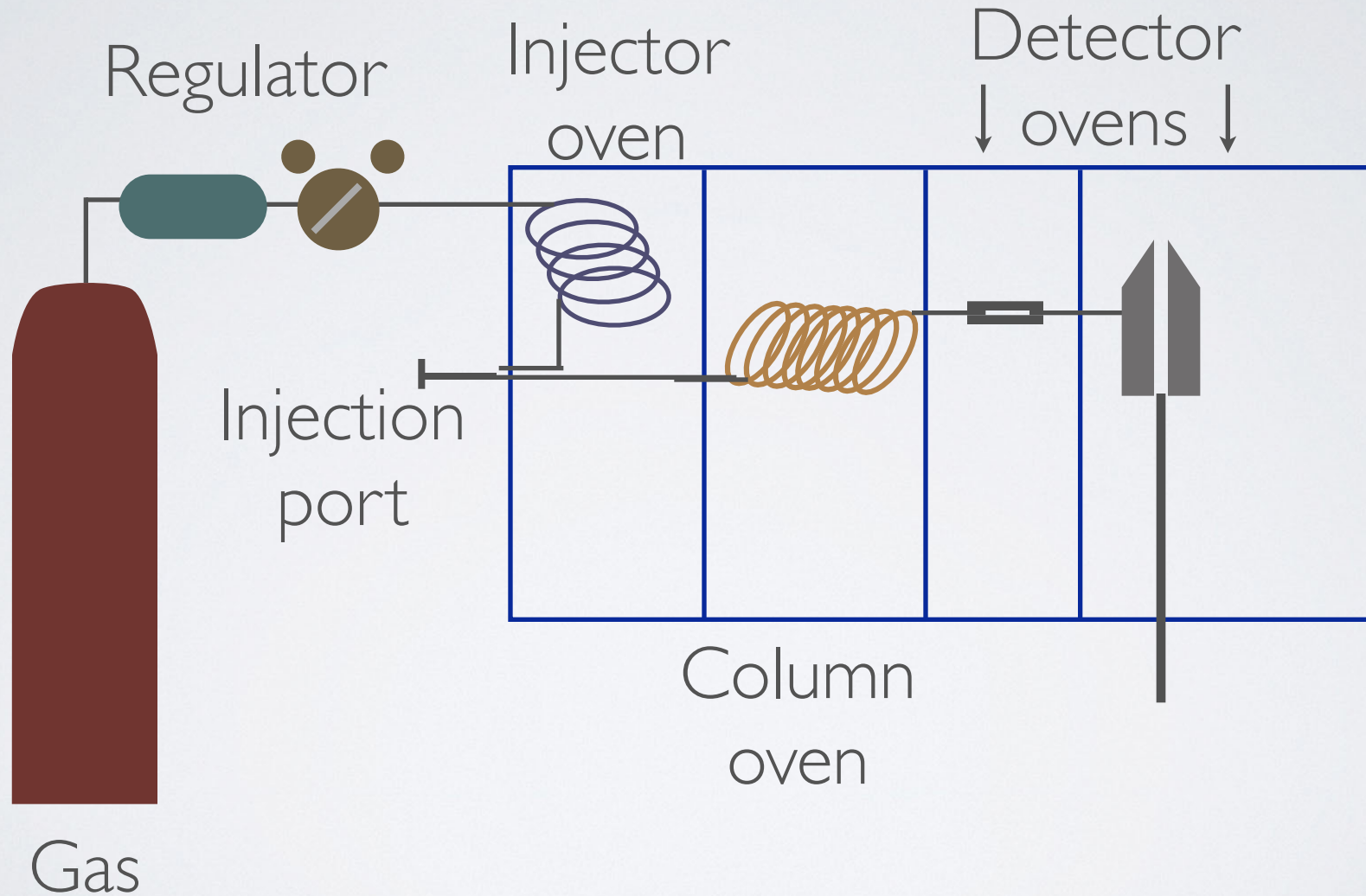


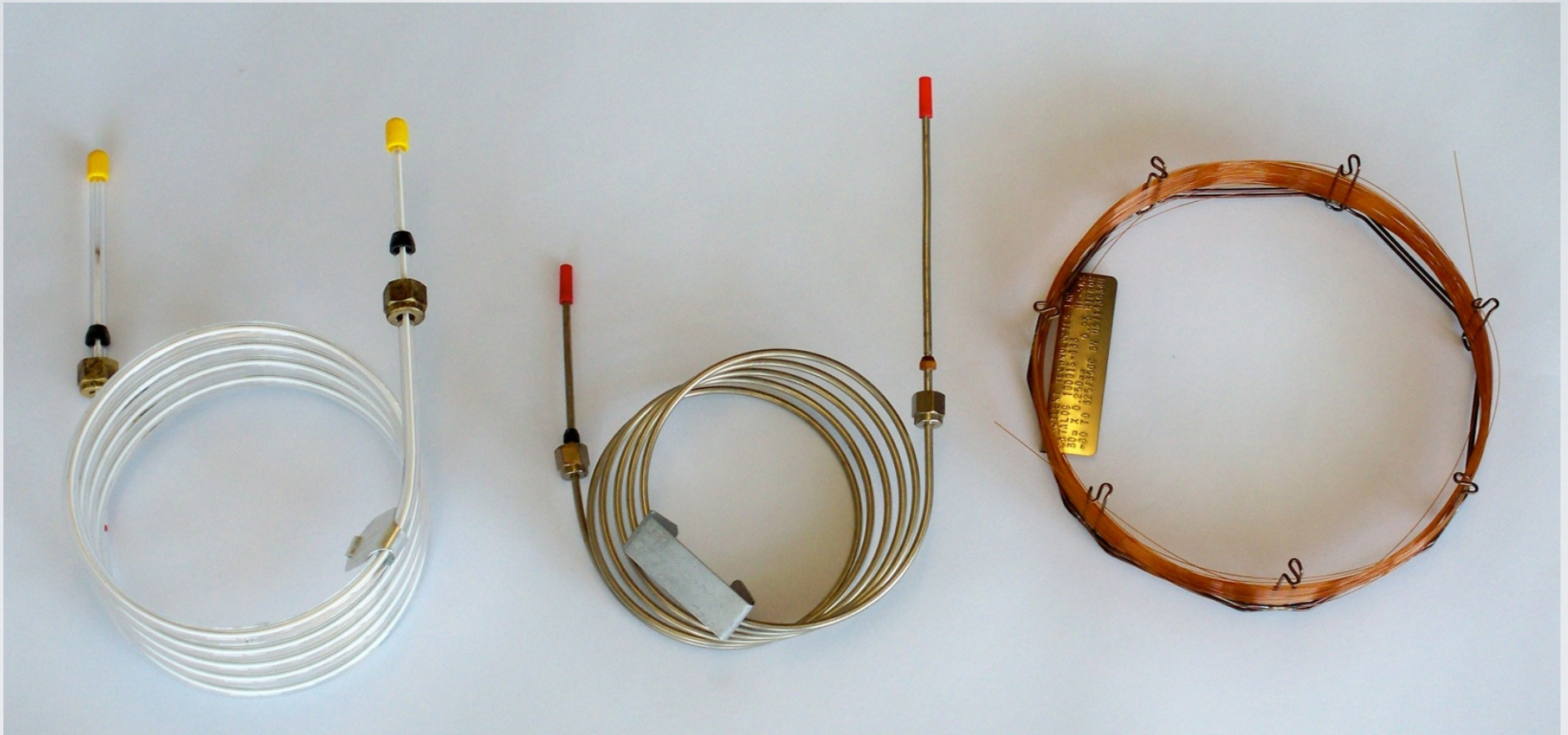
GAS CHROMATOGRAPHY

SDSU CHEM 251

GC COMPONENTS



COLUMN TYPES

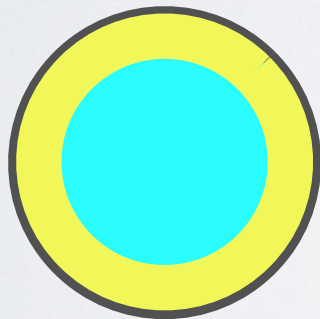


Packed columns

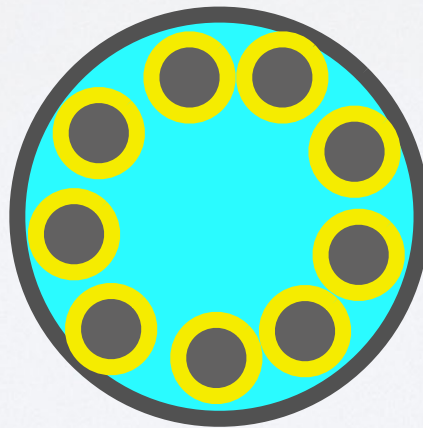
Capillary column

CAPILLARY COLUMNS

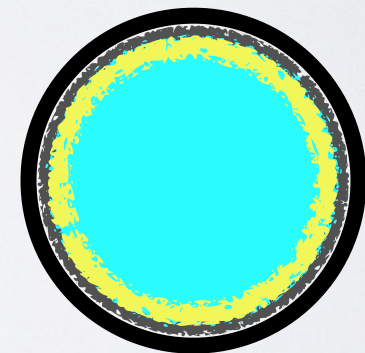
- Wall coated open tubular (WCOT)
- Support coated open tubular (SCOT)
- Porous layer open tubular (PLOT)



WCOT



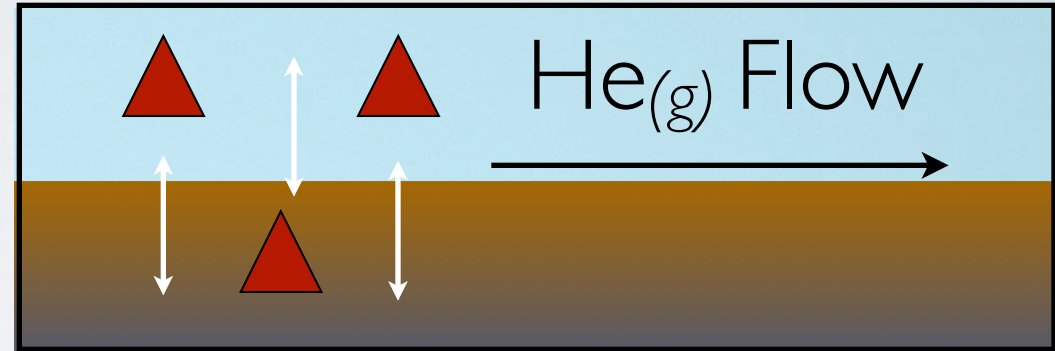
SCOT



PLOT

GC SEPARATIONS

- GC mobile phases are inert gasses (e.g. He, H₂, N₂).
- Stationary phases are waxes or high MW polymers.
- The gas pushes the gas phase analytes.
- The solubility of the analyte in the stationary phase dictates the retention time.



- High temperatures help move the analyte out of the stationary phase.
- Temperature programs can be used to optimize separations.