# DETERMINATION OF SILVER CATIONS WITH THE USE OF ISOTACHOFORESIS

## 1. Aim of the work

*The aim of the exercise is the determination of silver ions in wastewater by using electromigration techniques, in particular - isotachophoresis.*

**Preparing the apparatus for work:**

1. Turn on the apparatus.
2. Flush the system with deionized water and remove the water.
3. Fill the lead electrolyte tank CE2 and the analytical column.
4. Fill the CE1 reservoir, buffer block and pre-separation column with leading electrolyte.
5. Fill with electrolyte to terminate the TE tank.
6. Remove air bubbles from the system!
7. Start the computer program that controls the apparatus.

**Performing the analysis:**

1. Check the correct preparation of the device for work.
2. Place the sample (analyte) in the syringe (dosing valve in horizontal position - A).
3. Insert the sample into the dosing loop.
4. Turn the dispense valve to the vertical position - C (for approx. 1 s in position B).
5. **Close the transparent plastic cover (do not open the door until analysis is complete)**.
6. Run the analysis in the computer program.
7. After analysis, turn the dispense valve to the horizontal position - A.
8. Rinse and fill the columns with lead electrolyte (starting from the bottom analytical column).

**Data Analysis.**

After the exercise, a report should be made. Based on the standard curve available, indicate the concentration of ions in the analyzed sample.