



# The Importance of Clean Eluents for Ion Chromatography (IC) Analysis

# What does the eluent affect?

## 1. Analyte Retention Times

- a) Consistency of eluent preparation is key for methods that are “set”.
- b) Locked-in methods will reduce time spent running single element standards during trouble shooting periods.

## 2. Background Conductivity

- a) A higher background conductivity will result in a loss of sensitivity and higher detection limits.

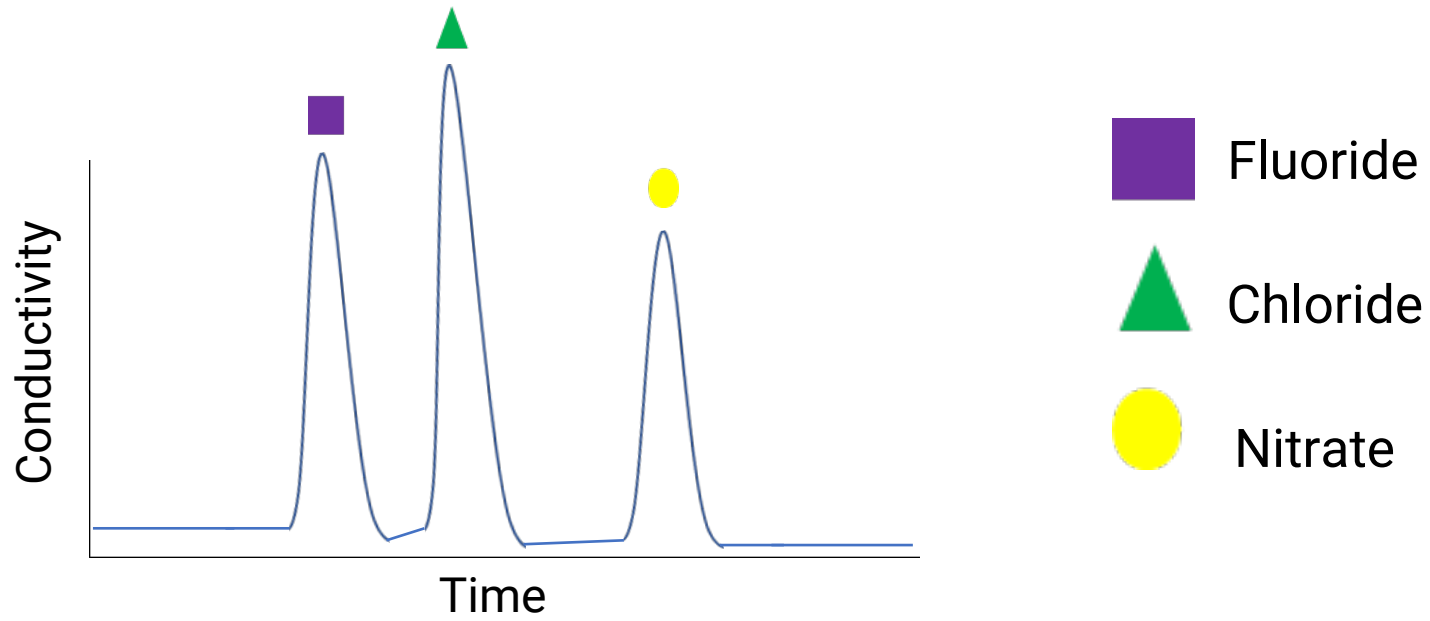
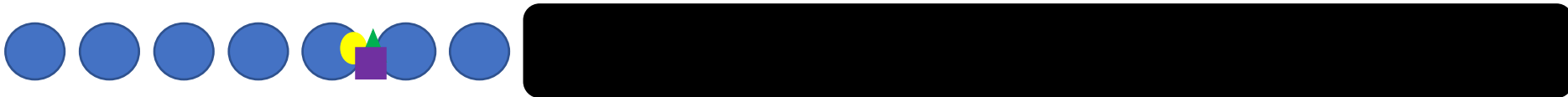
# Example 1 – Clean Eluent

Ion Chromatography Column



# Example 2 – Clean Eluent with Sample

Ion Chromatography Column

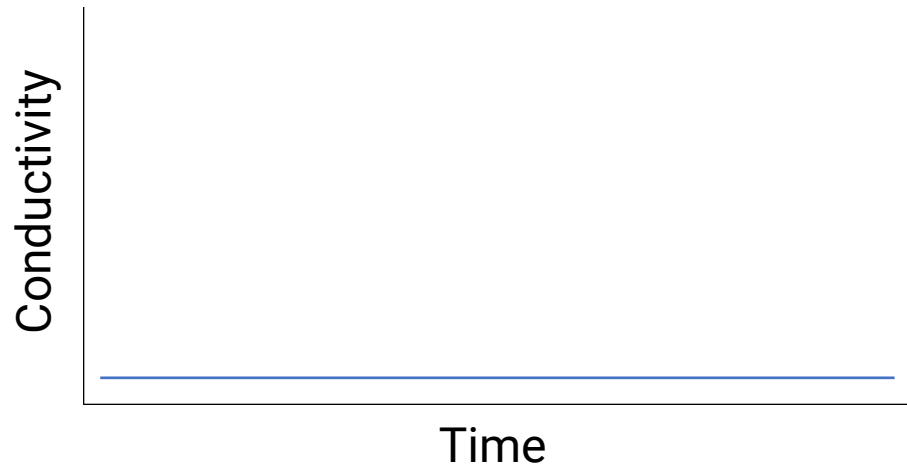


# Example 3 – Contaminated Eluent

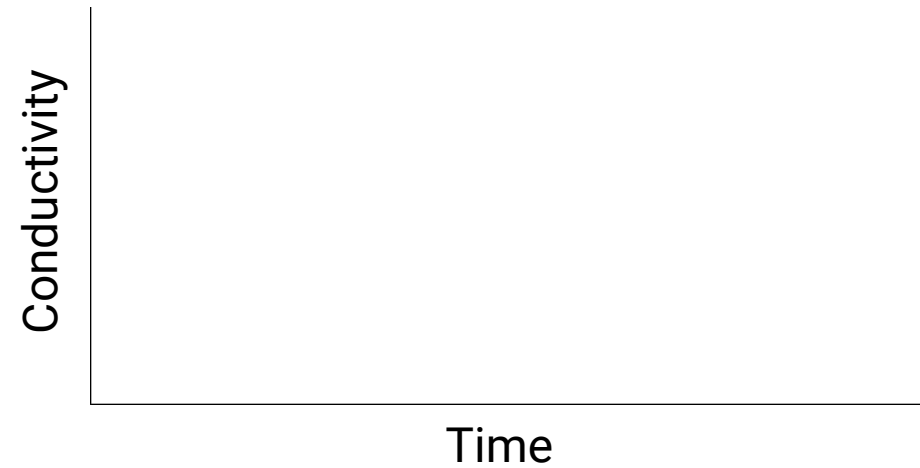
Ion Chromatography Column



Clean Eluent

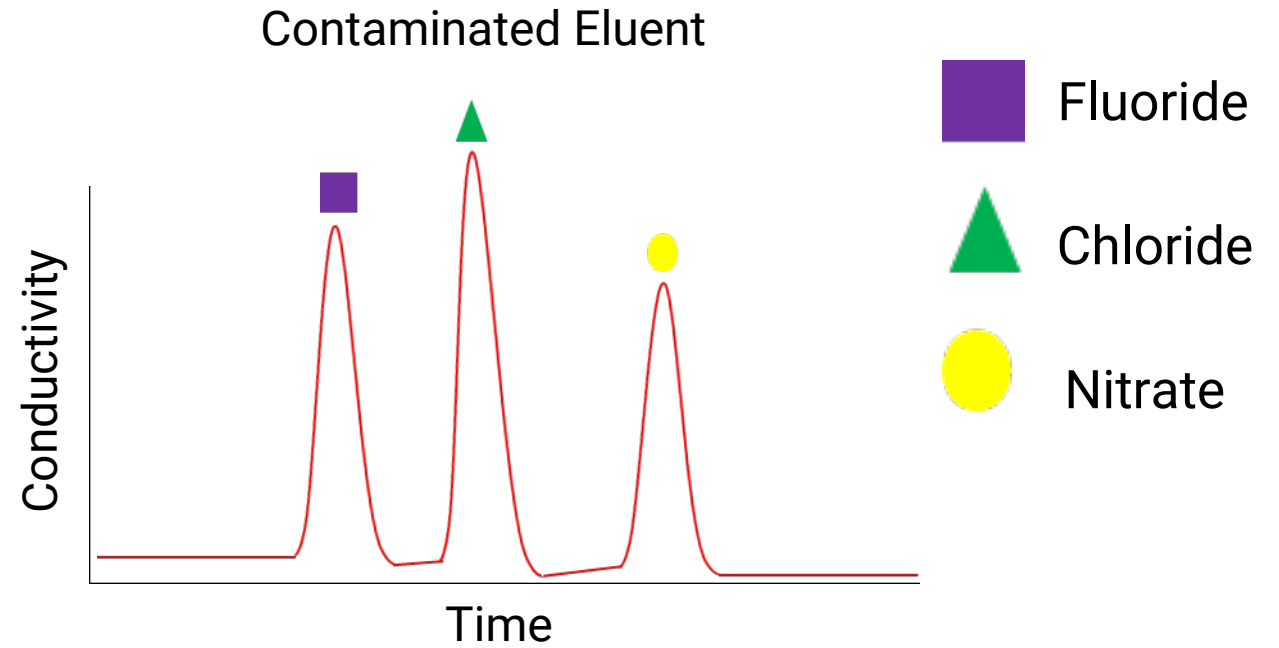
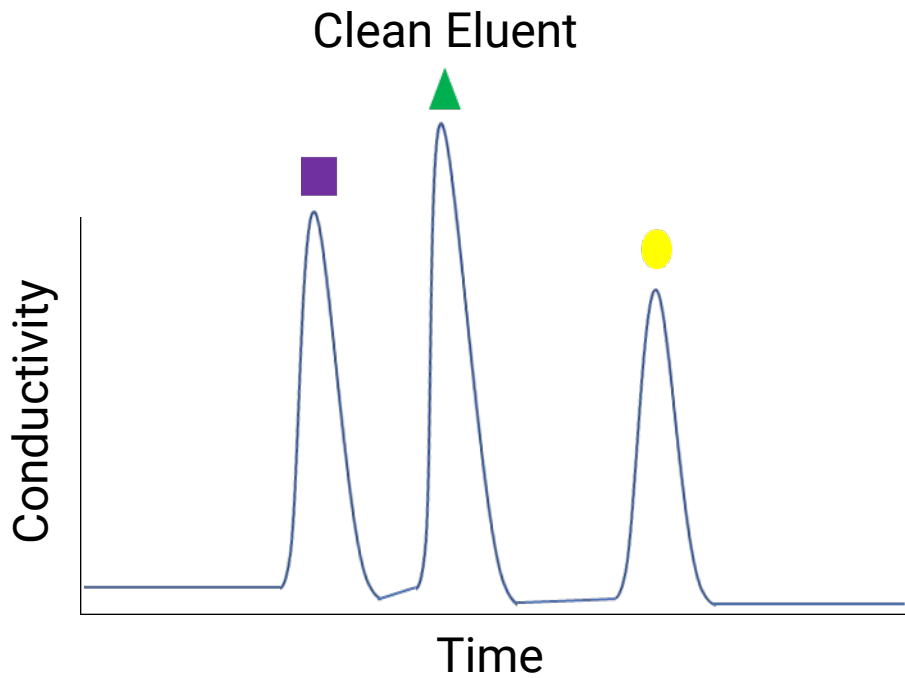


Contaminated Eluent



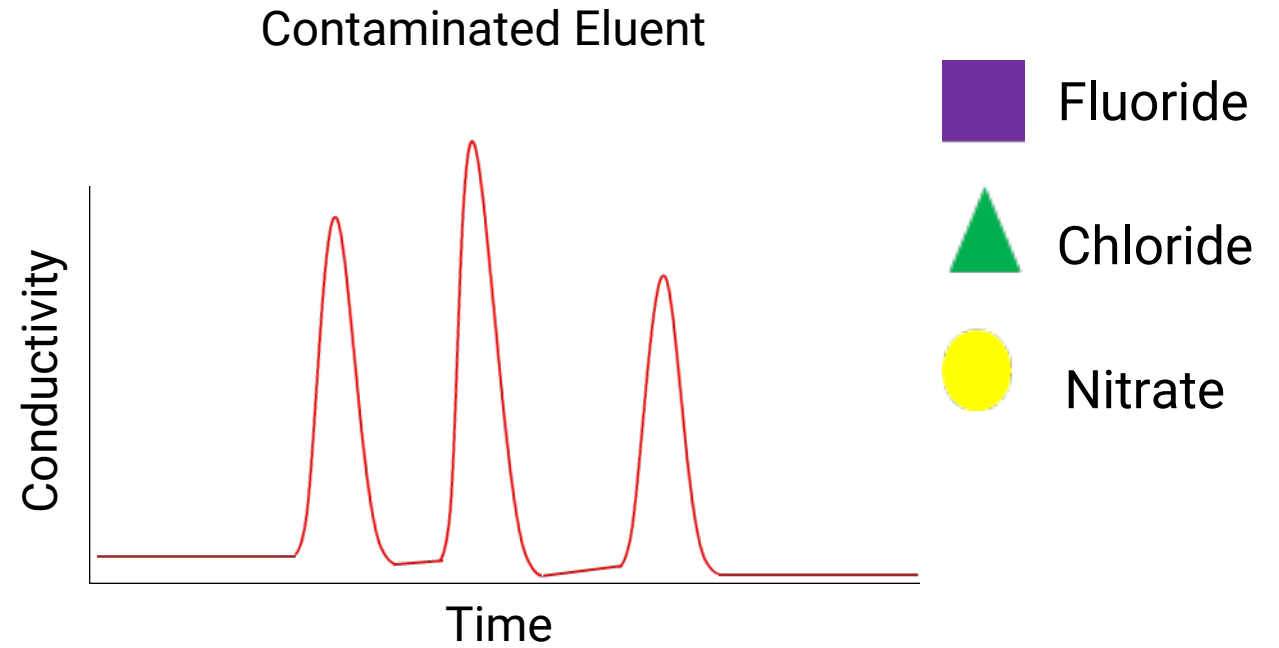
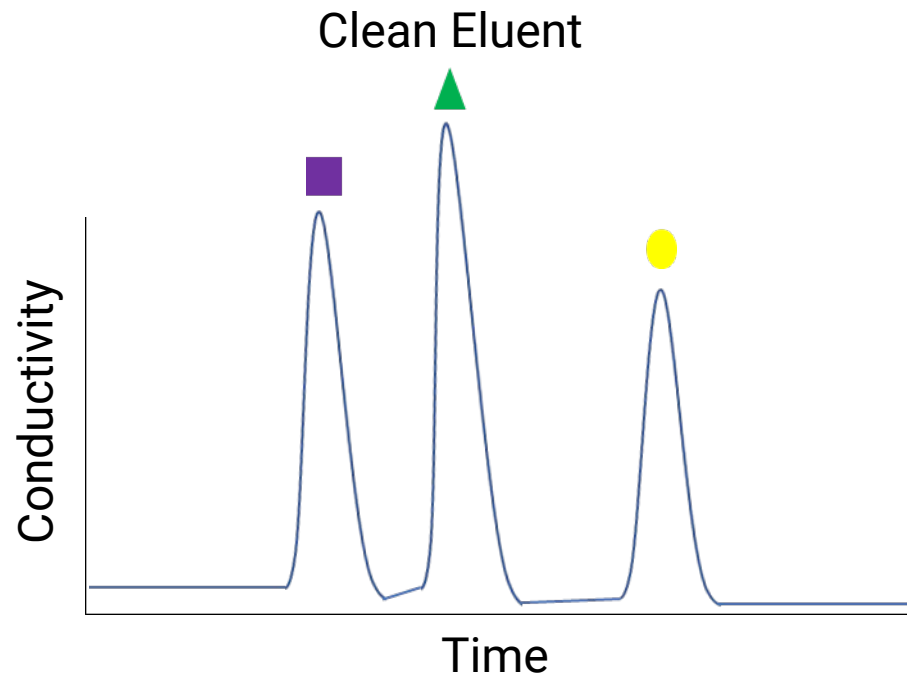
# Example 4 – Contaminated Eluent with Sample

Ion Chromatography Column



# Example 4 – Contaminated Eluent with Sample

Ion Chromatography Column



# How to make clean eluents

1. Start with clean eluent concentrates and very clean water.
2. Separate lab equipment and designate them for use only when making eluents.
  - a) Keep designated graduated cylinders and pipettes for measuring eluent concentrates
  - b) Consider having a separate water source for making eluent and IC preps
3. Keep a detailed maintenance log.
  - a) Track background conductivity daily
  - b) Note when new preparations of eluent were made