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

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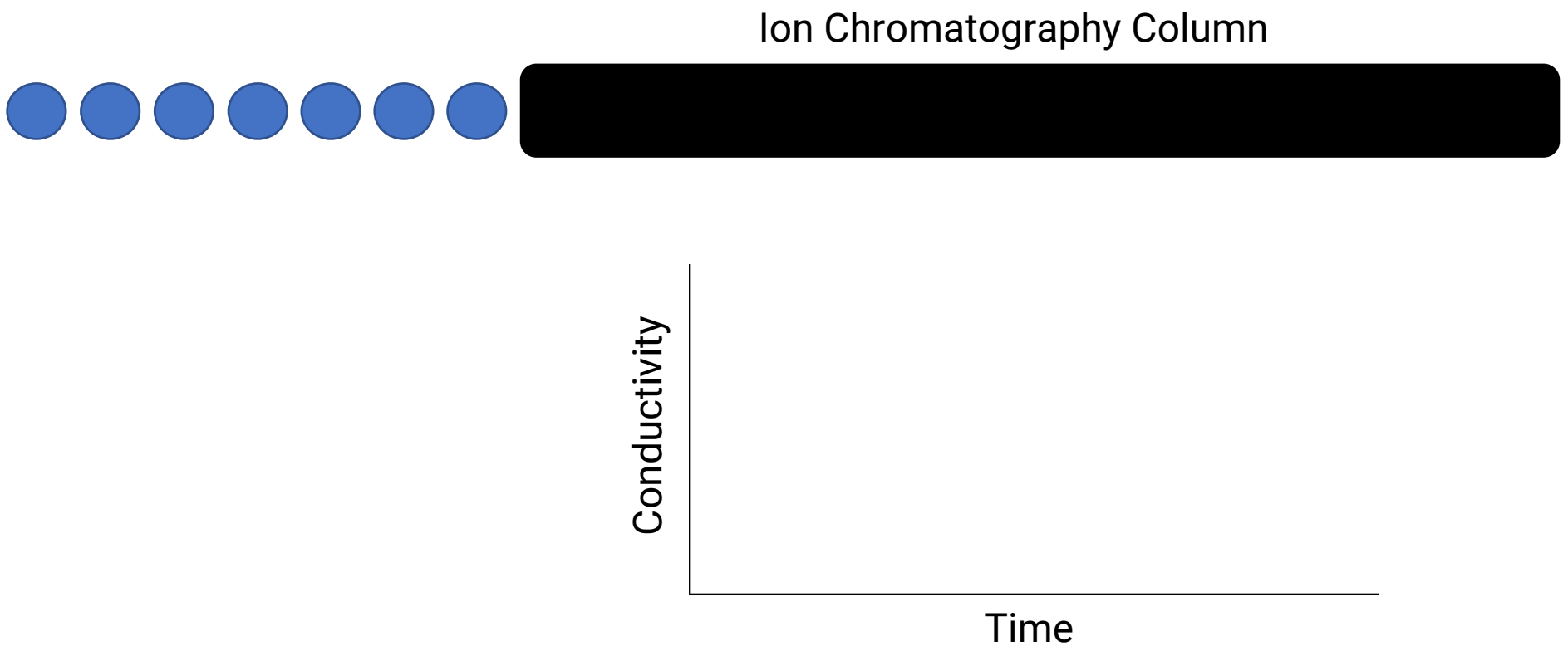
What does the eluent affect?

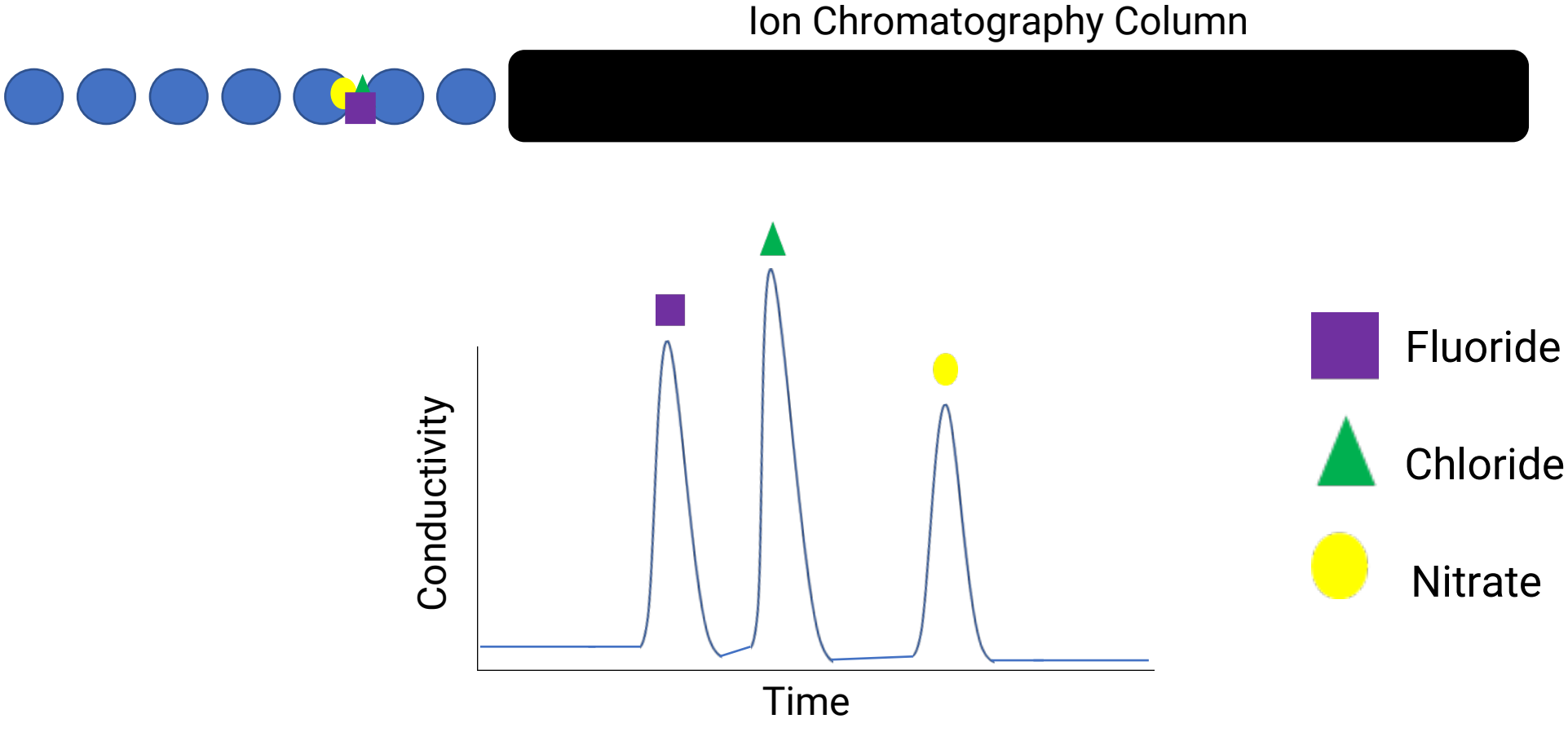
1. Analyte Retention Times
   a) Consistency of eluent preparation is key for methods that are “set”.
   b) Locked-in methods will reduce time spent running single element standards during trouble shooting periods.

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

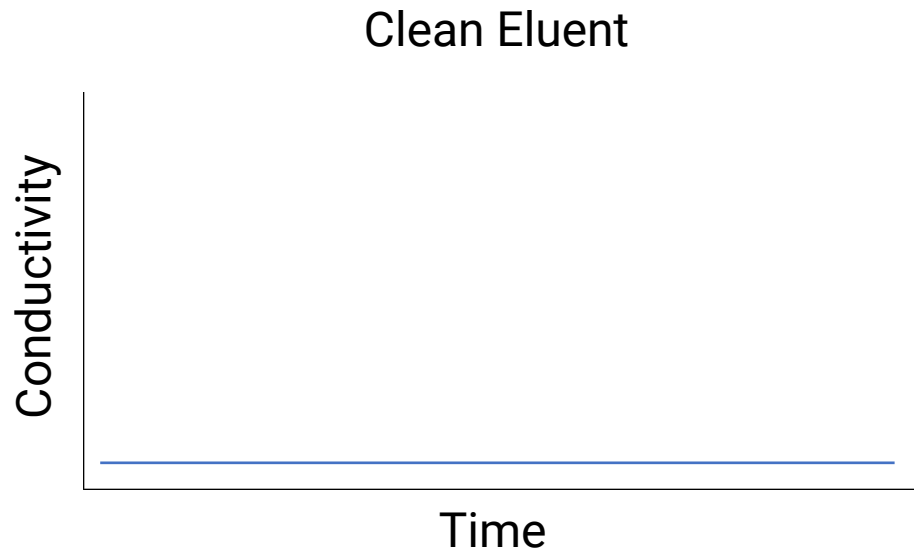
Example 1 – Clean Eluent

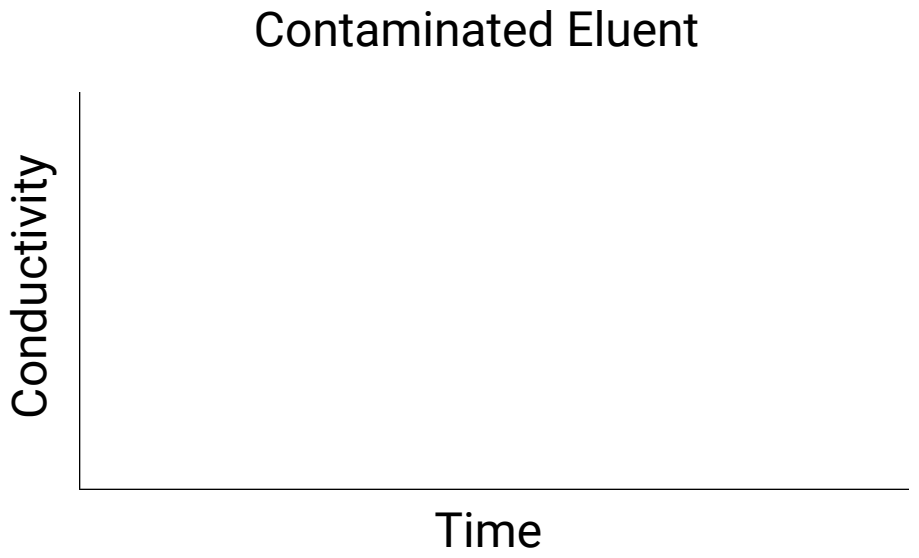


Example 2 – Clean Eluent with Sample

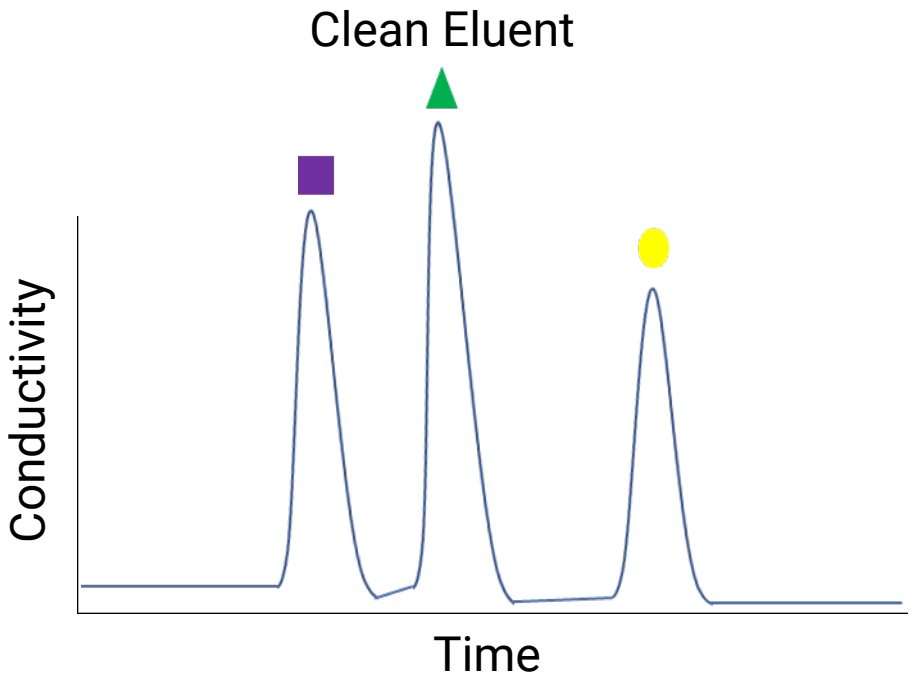


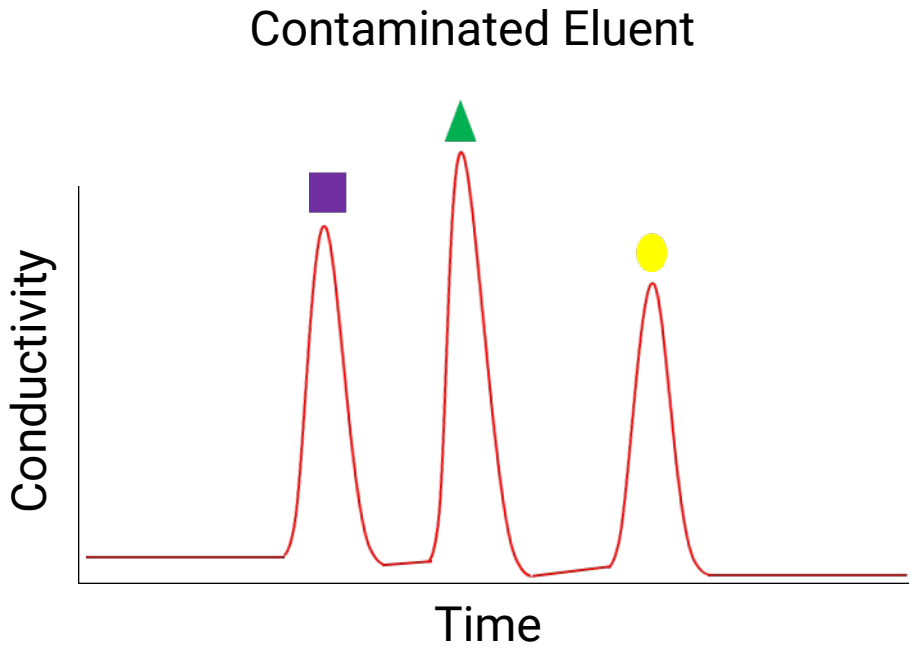
Example 3 – Contaminated Eluent

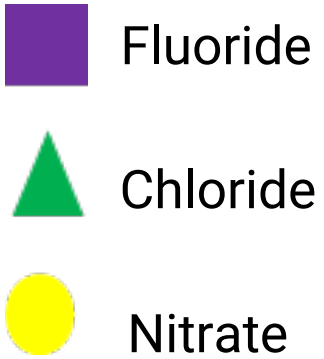




Example 4 – Contaminated Eluent with Sample







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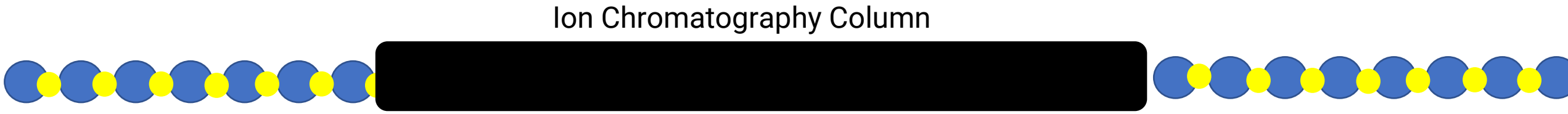
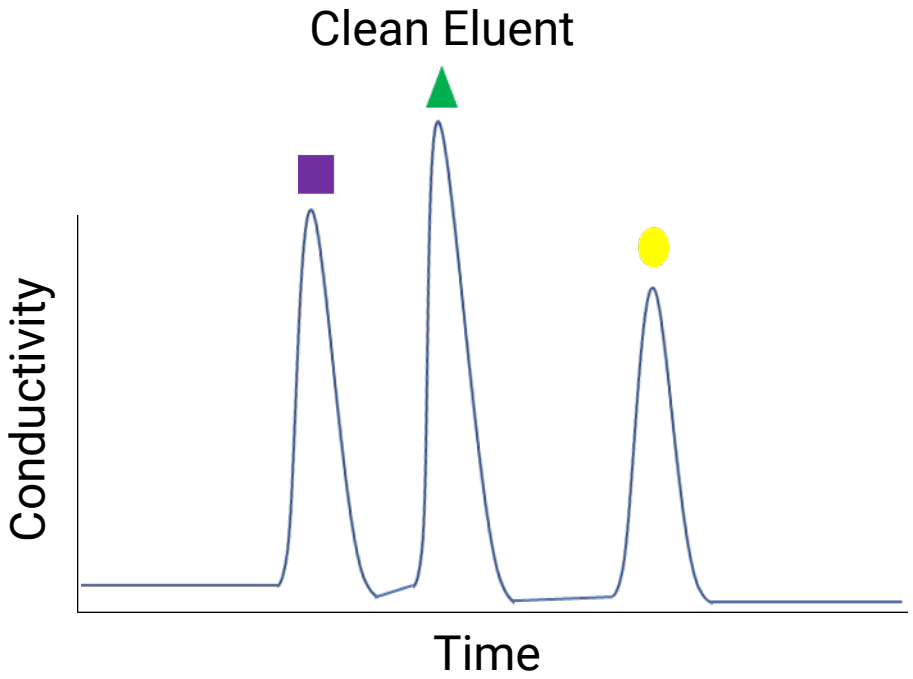
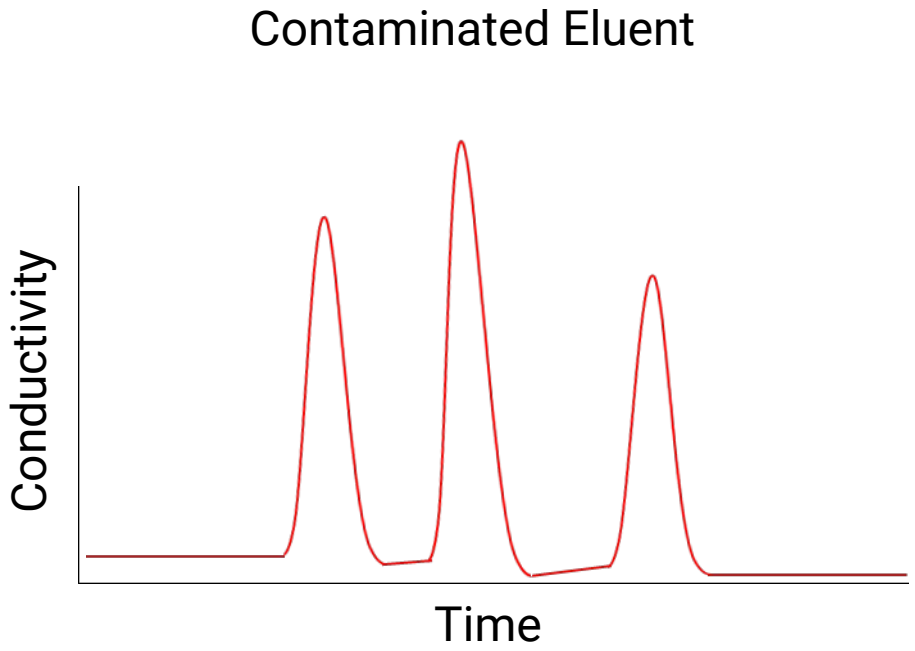
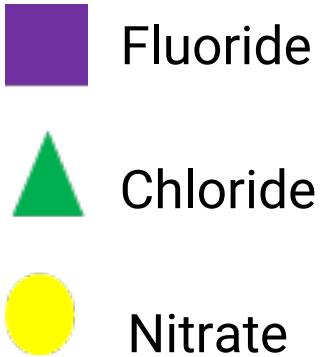






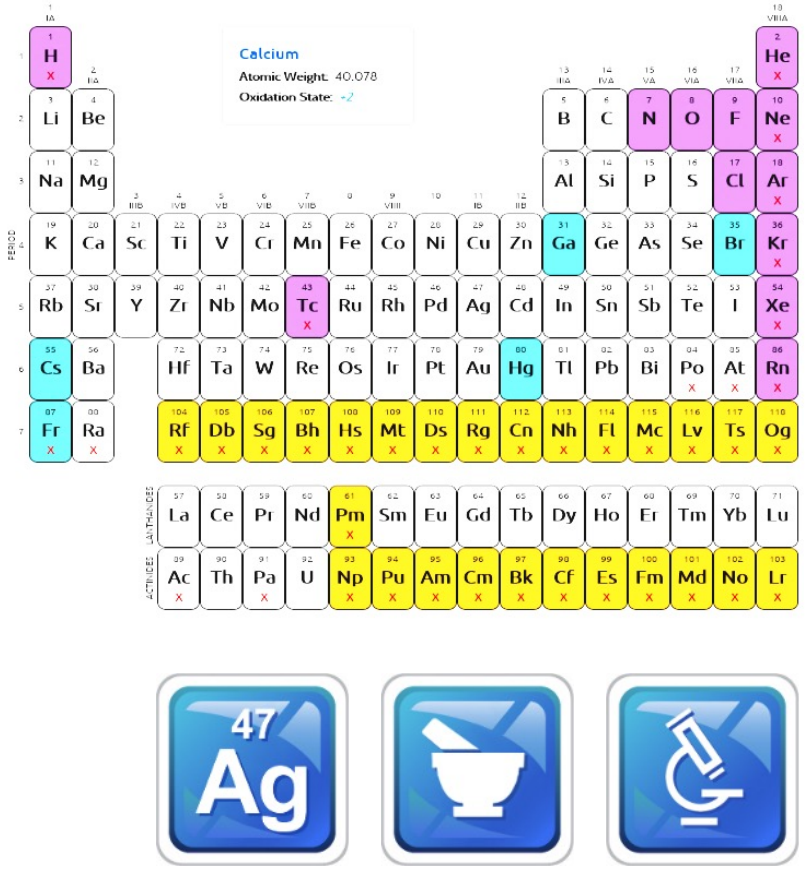


How to make clean eluents

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

Technical Support – Available to Everyone

Online Resources at inorganicventures.com



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- Sample Preparation Guide
- Trace Analysis Guide
- ICP Operations Guide
- Expert Advice
- And much, much more.