

# Purity First!

## Electrophysiology

... some things to think about .... if you are getting strange substates etc.

- All reagents and buffer components should be as pure as possible. Don't spare a few dollars to ruin months worth of experiments.

Think! .... for example: what does 5 ppm Fe or 5 ppm Pb mean?

Say you are using 1 M KCl. That is 75 g/L. So 5 ppm is 375  $\mu\text{g/L}$ , which is 6.7  $\mu\text{M}$  for Fe and 1.8  $\mu\text{M}$  for Pb.

- Your apparatus must be spotlessly clean: no grease, detergent, electrode contamination etc.
- Your electrodes must be freshly prepared. [someone should make a hand-out on preparation and care of electrodes]
- Avoid all sources of contamination: dirty pH electrodes, balances, spatulas, glassware etc.

These are SINGLE MOLECULE experiments!