Current Experiment

Problem, Relevance, Solution
Problem: DF values unknown
Relevance: Interdicted Material Origins
Solution: Determine DF values, and link to D-values

I Problems with Previous Experiment

1. Concentrations too low in Mass-Spec and Gamma
    - Some previous data just didn't make sense
2. Barium contamination
3. Experiment contamination (vials too tall)
4. Activity Balance
5. Lack of full molecular separation of phases before partition.

II How current experiment attempted to address problems

1. Factor of four concentration increase
    - Factor of 2 from initial solution
    - Factor of 2 from less initial volume (also lets us switch to smaller vials for first cycle)
2. Leech vials before use
3. Switch to vials with smaller height/diameter (also have nice push caps) for first cycle
4. Maintain constant geometry for gamma counts
5. Centrifuge samples after agitation on vortex mixer

III Status of experiment

Problem with first extraction. Exploding top after vortex mix, Sputtering pipette, contamination, 2-3 drops lost. Chemistry for cycle one is complete. Counted 4 different vials, still need to count 2 more. No alpha samples as of yet.

IV Prelinary Results

Reduction of Cs by...

V Next Week

Full analysis of cycle one gamma and alpha. Cycle 2 complete, at a similar stage as this week.