## Boron - Why do we care?

Lab prepares samples for atom counting, one by one.

Boron gets in the way.



The lab is used for ultrasensitive analyses:

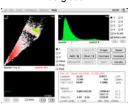
ppq = one human hair out of all the hair on all the heads of all the people in the world

ppt = one square foot of floor tile on a kitchen floor the size of Indiana

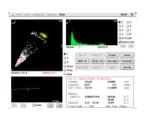
## **Boron- Causing Trouble**

#### **Boron-Contaminated**

post fire from sheetrock and fiberglass?



## Normal Sample from uncontaminated lab



## Boron - What is it?

- · A light element
- · Commonly used for
  - Fireproofing
  - Glass making
  - insecticide
- · Non toxic
- Natural sources



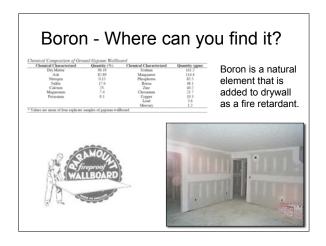
### Boron - Where does it come from?

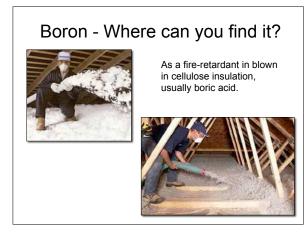
US and Turkey are the world's largest producers of boron.

Boron is a natural element that occurs in rock formations.

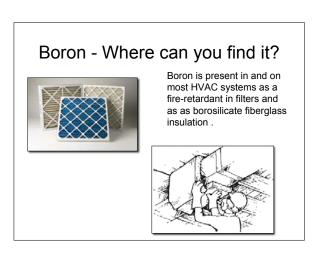


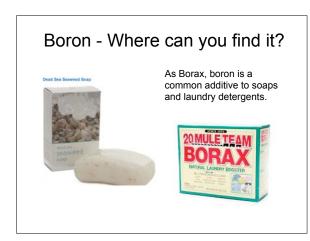


















# Boron- What to do about it?

- 1. Keep fiberglass out of the lab and air system.
- Keep insecticides and fire retardants away.
- 3. Do not use soaps and detergents in the lab.
- 4. Keep sheetrock out of the lab.
- Don't wear sheetrock/fiberglass- contaminated clothing and boots in the lab.
- Don't bring tools grossly contaminated with sheetrock dust or fiberglass into the lab.
- 7. Be wary of substitutions.
- 8. Check labels.
- 9. Get cleaner as completion approaches.
- 10. Ask if you have questions.