

SAMPLING WALL CAVITIES FOR HIDDEN MOLD

**JOE SPURGEON, PH.D., CIH
BAYSHORE ENVIRONMENTAL, INC.
PLACENTIA, CA**

**AIHCE; MAY, 2004
ATLANTA, GA**

**NEITHER MOLD SPORES
NOR HYPHAE ARE
NECESSARILY VISIBLE TO
THE UNAIDED EYE**

2 “Contaminated”, 3 “Clean”



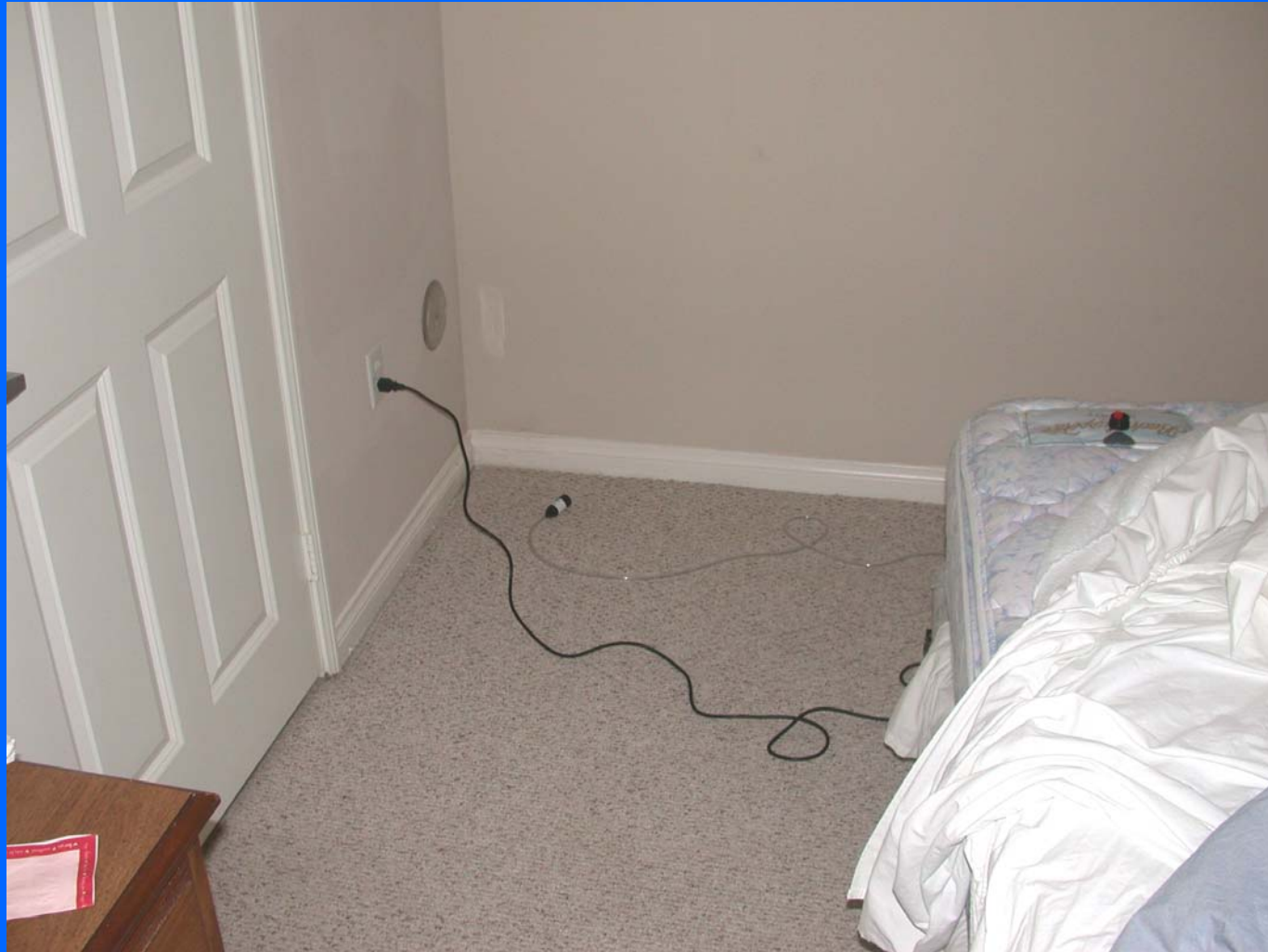
WALL CAVITY + SWAB



- 3.5 M A.VER
- 370 K A. VER., PEN
- 13 K NONSPOR
- < LOD
- < LOD

**THE MAJORITY OF
“PROBLEM” HOMES I
INVESTIGATE DON’T HAVE
ANY VISIBLE MOLD**

Bedroom Carpet: A. versicolor = 56,000



Airborne:

Clad = 42,000 Asp/Pen = 128,000

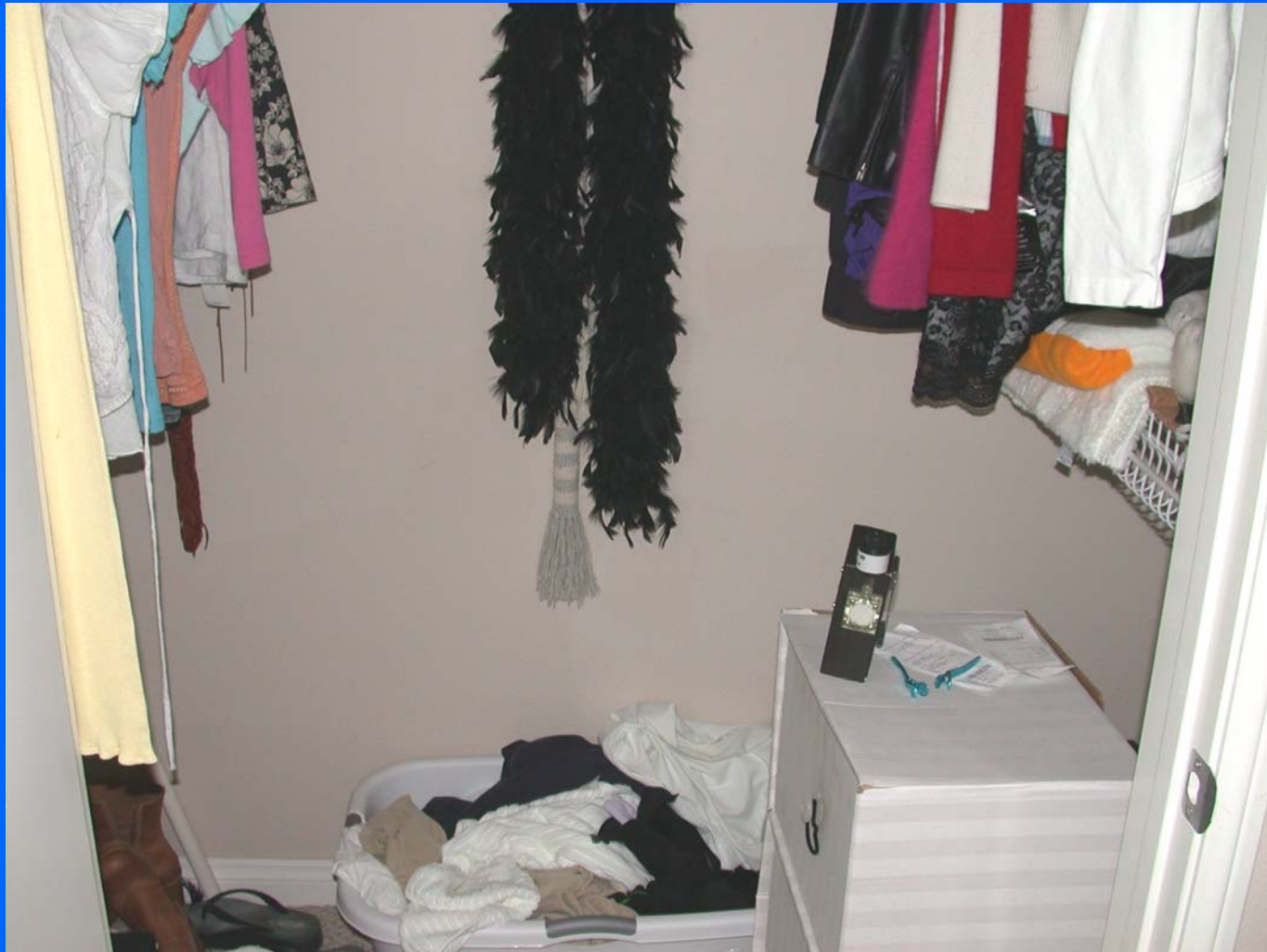


Comforter & Pillow:

$A. \text{ syd} + A. \text{ ver} = 110,000$



Air in Bedroom Closet: Clad=120,000 Asp/Pen=4 Mil



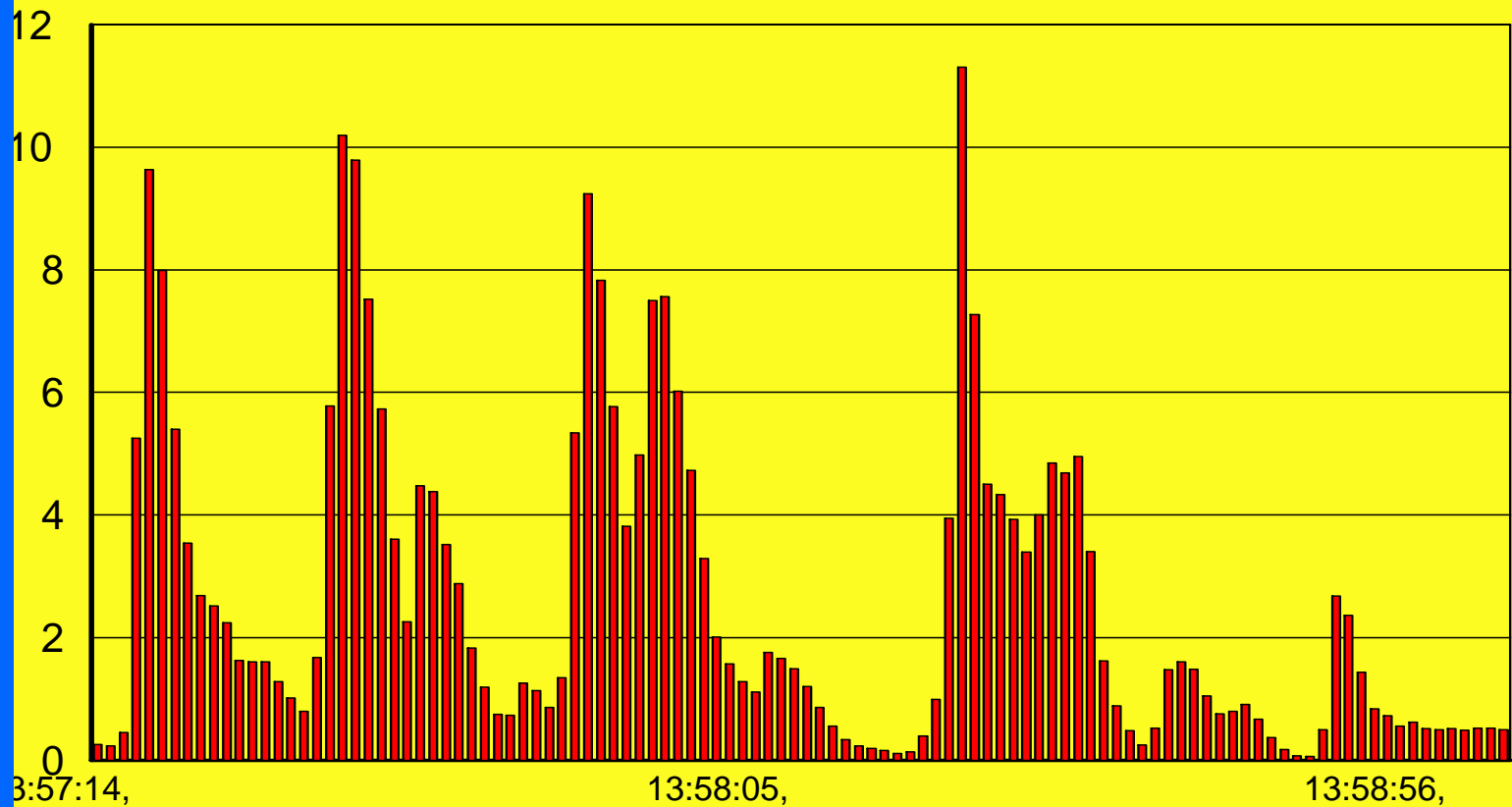
WHY SAMPLE WALL CAVITIES

- **Majority of problem homes do not have visible mold**
- **Mold can be a “tracer” for moisture when leaks have occurred in the past**
- **Define the scope of remediation**
- **Assess effectiveness of “restoration”**
- **Identify sites for destructive testing**

AIRBORNE DUST IN WALL CAVITIES

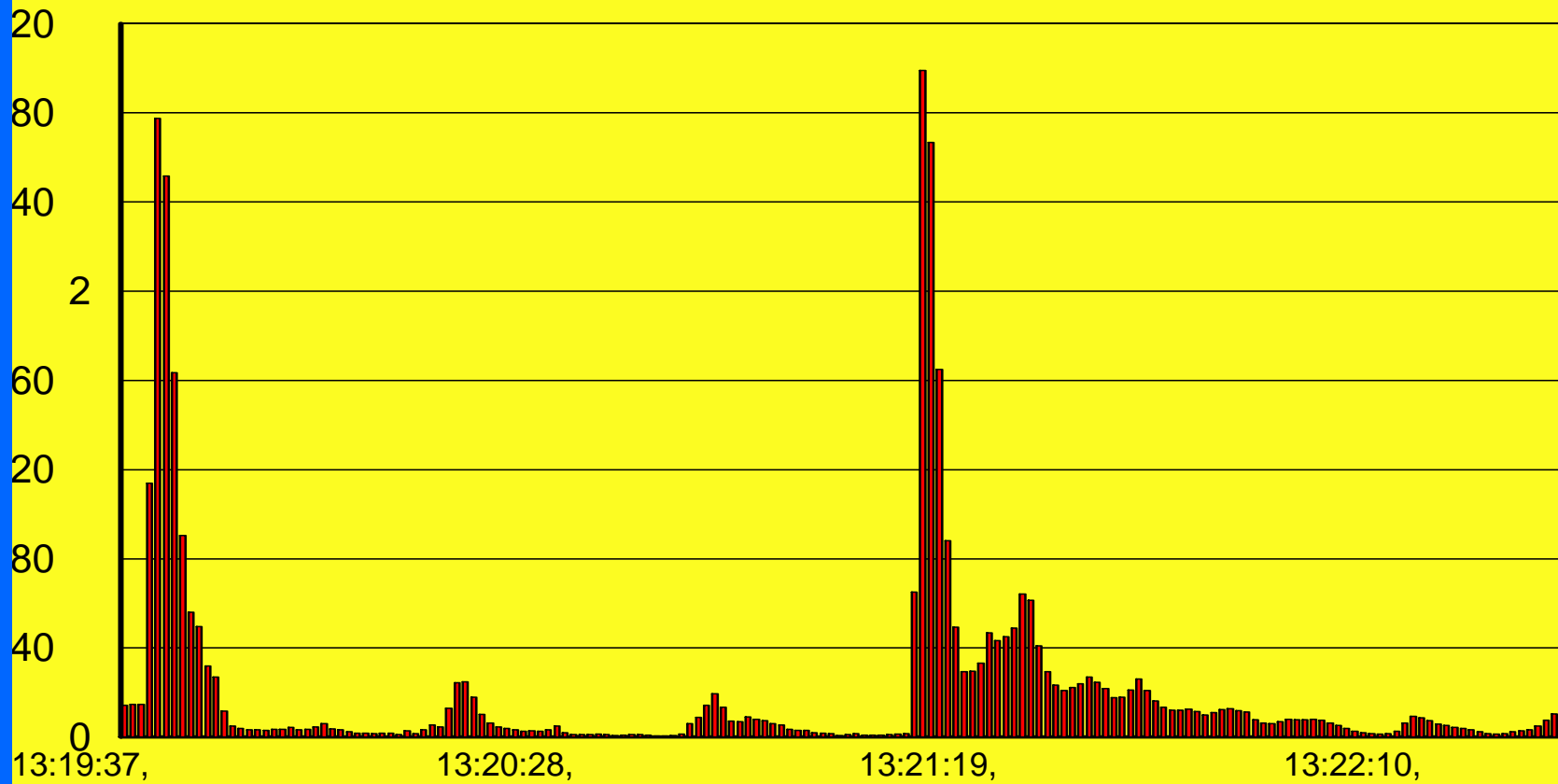
DUST IN WALL CAVITIES

MG / M3 v. TIME

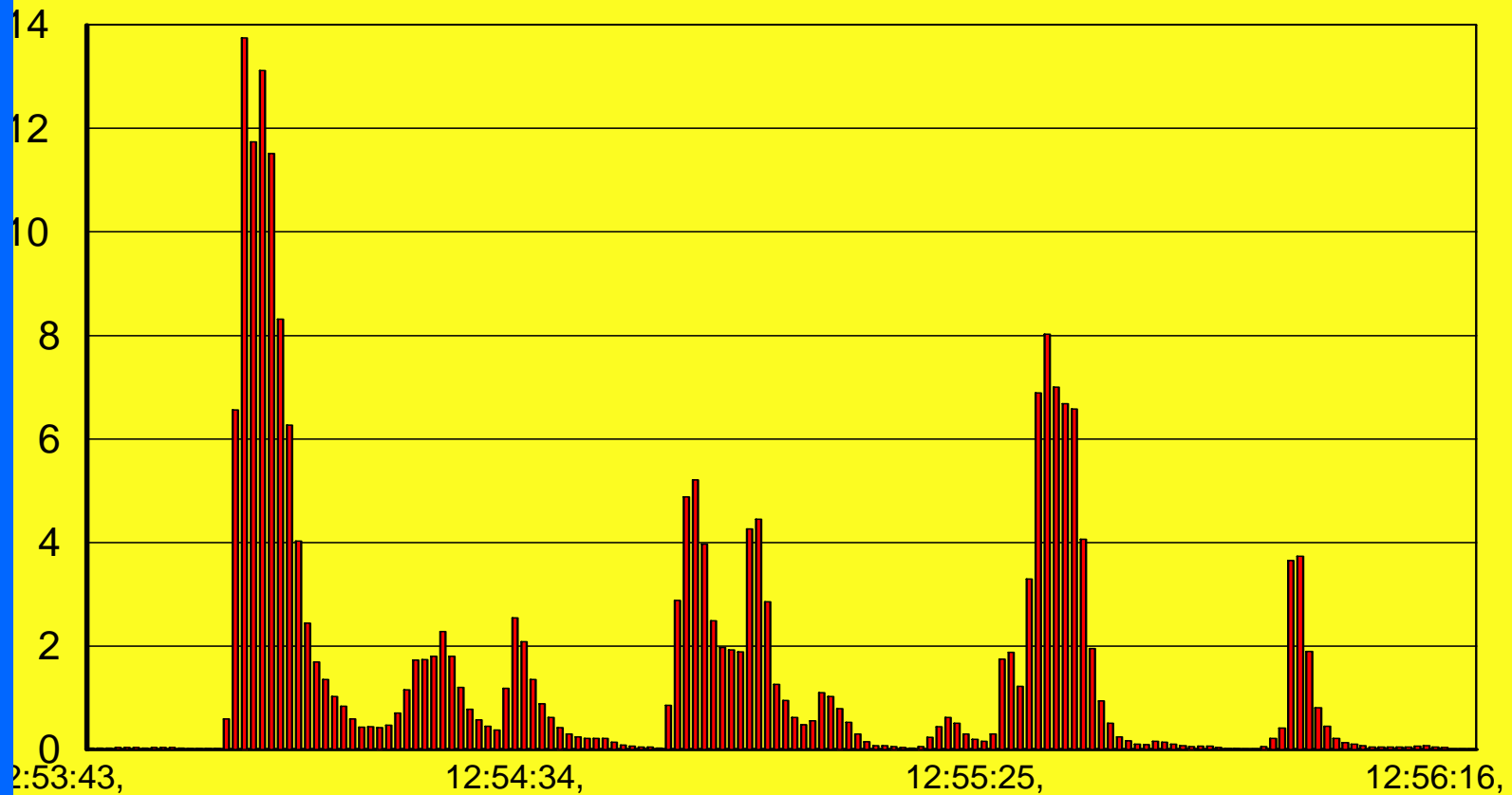


DUST IN WALL CAVITIES

MG / M3 v. TIME



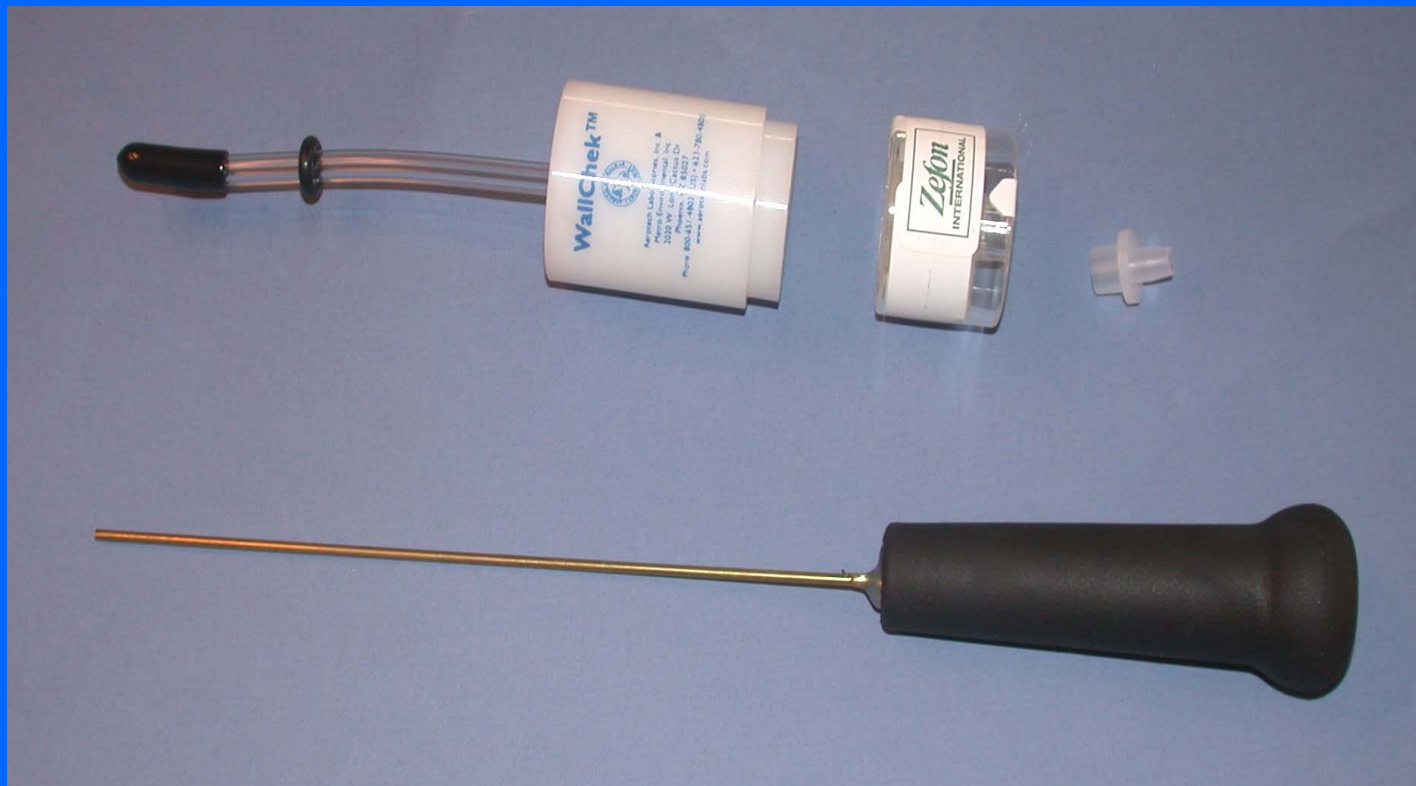
DUST IN WALL CAVITIES MG / M3 v. TIME



WALL CAVITY SAMPLING METHODS

- **AIR-O-CELL / WALL CHEK**
- **BI-AIR CASSETTE / WALL PROBE**

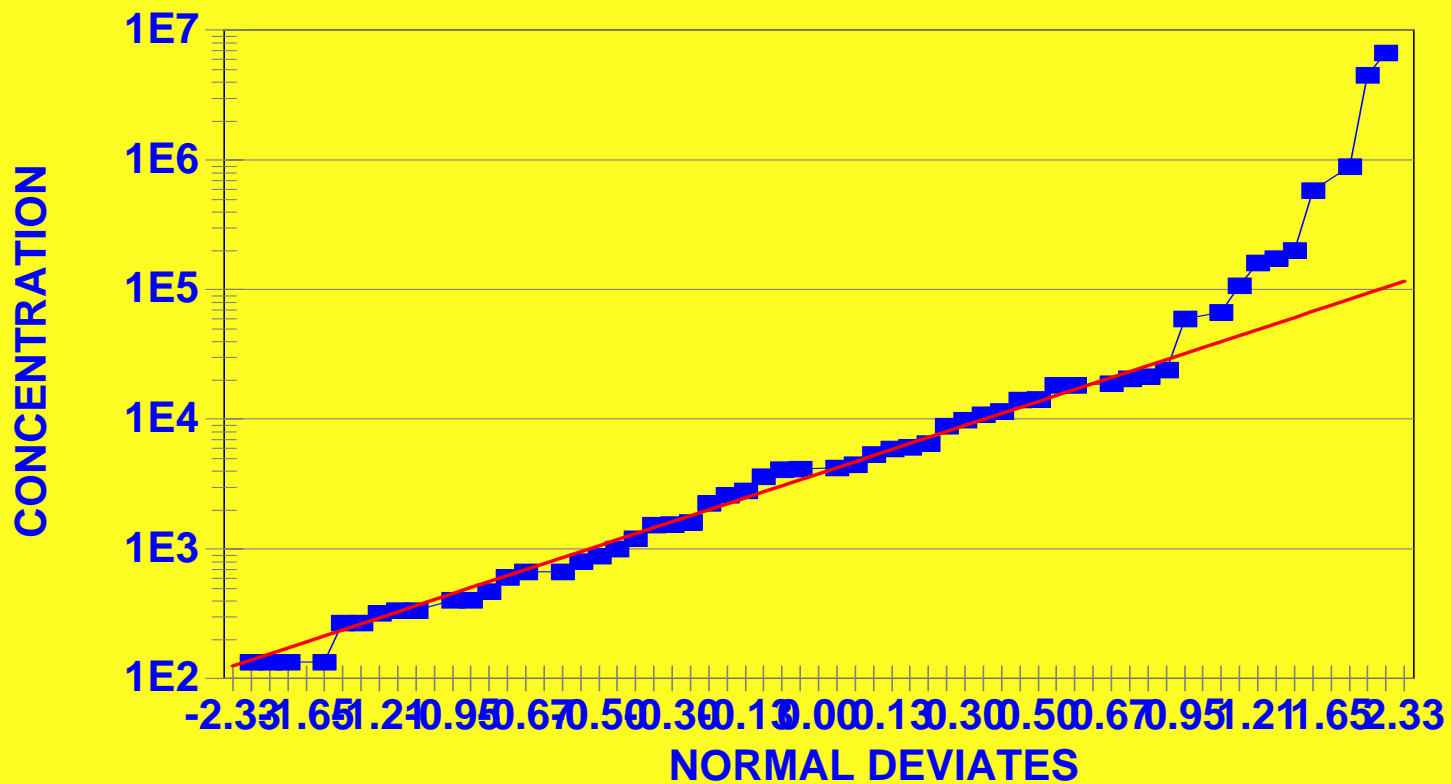
WallChek Sampler



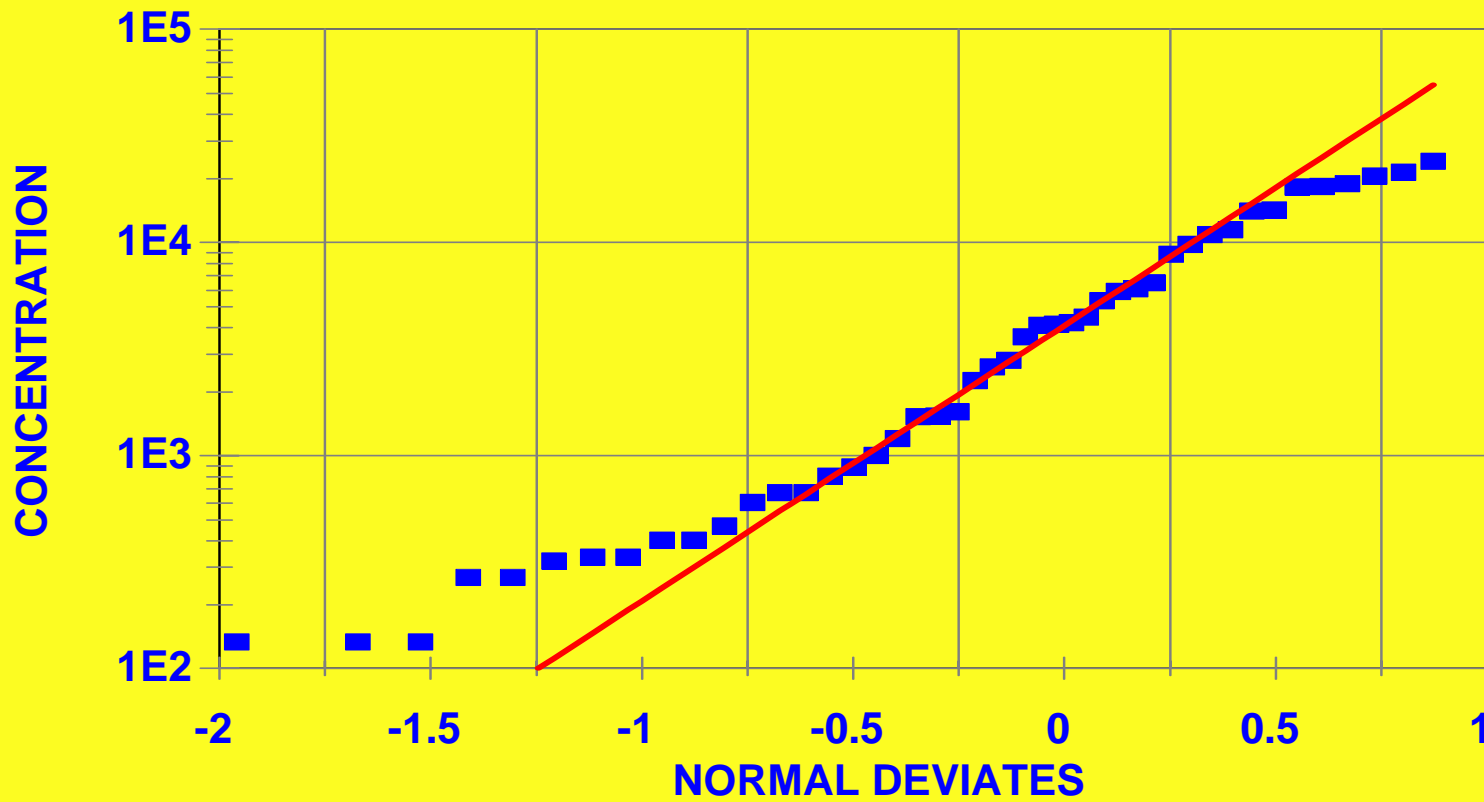
DATA ANALYSIS

WALL CHEK: SPORES

WALL CAVITY: WALL CHEK
ASP/PEN TYPE SPORES

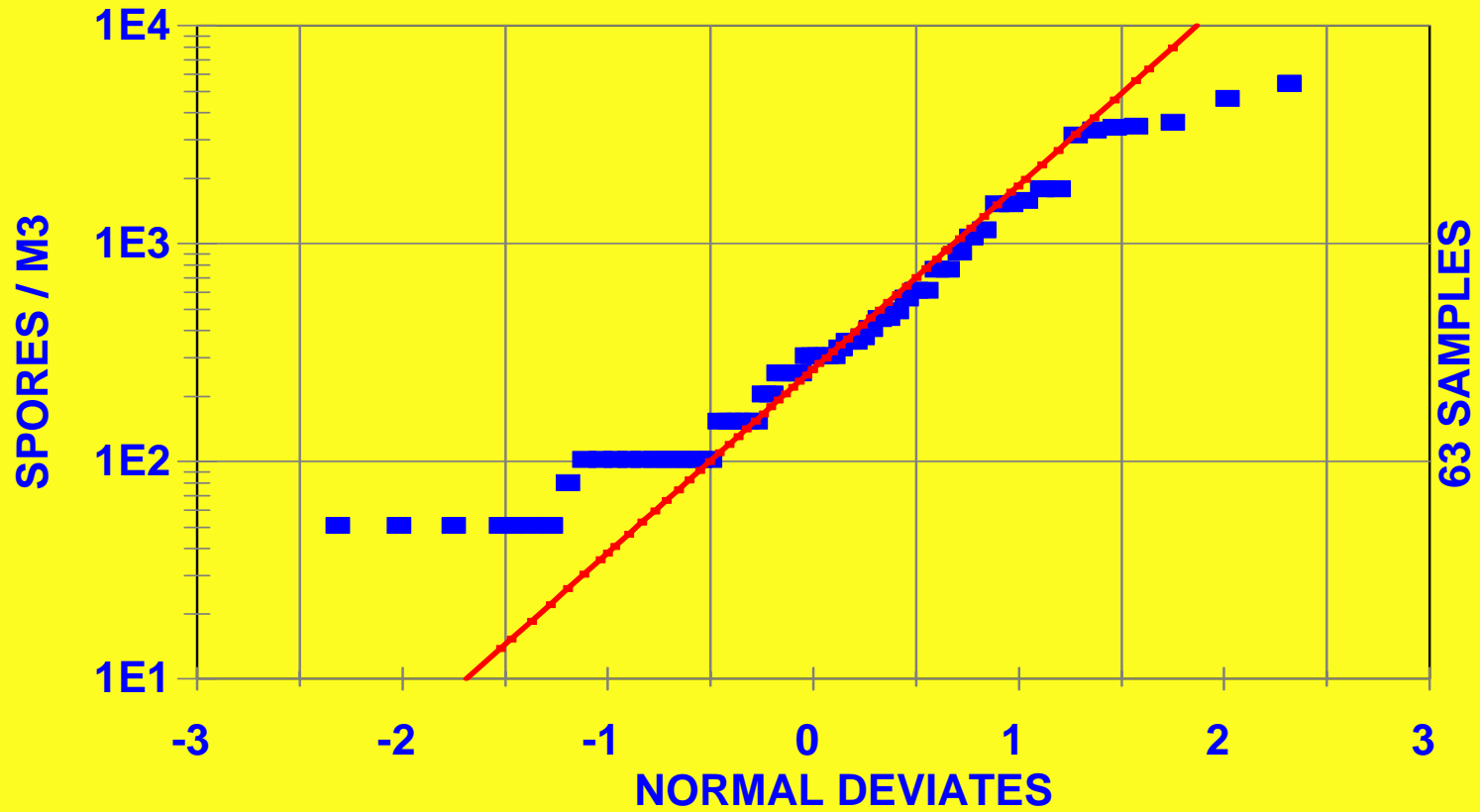


WALL CAVITY: WALL CHEK
ASP/PEN TYPE SPORES

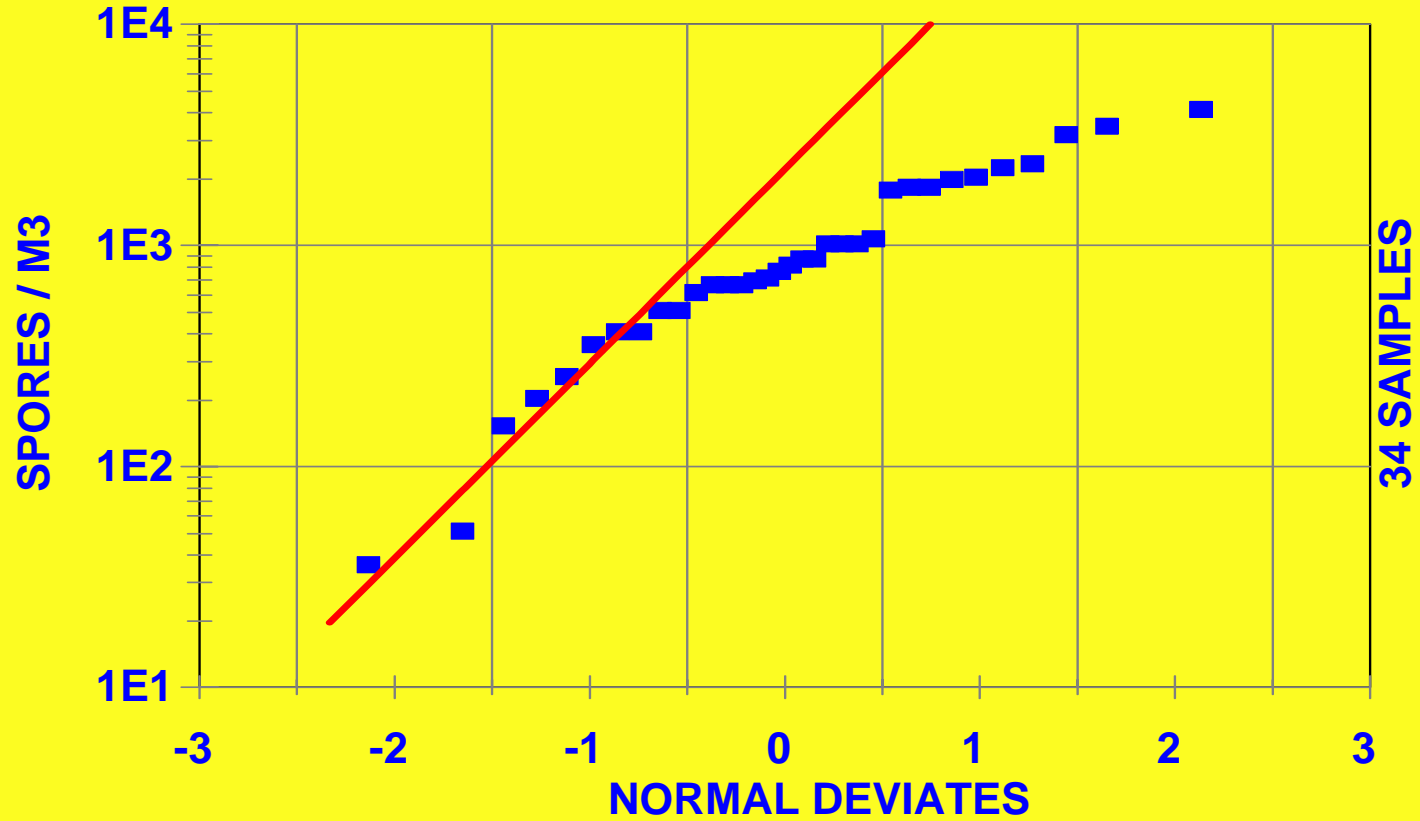


AIRBORNE SAMPLE DATA

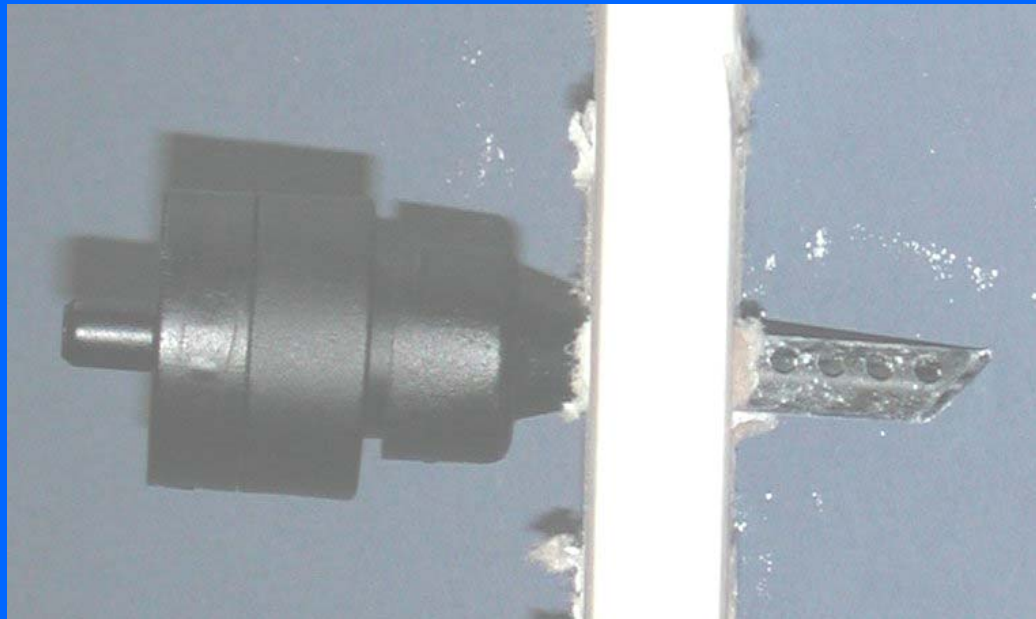
INDOOR AIRBORNE ASP/PEN SPORES AIR-O-CELL CASSETTE



OUTDOOR AIRBORNE CLADOSPORIUM AIR-O-CELL CASSETTE

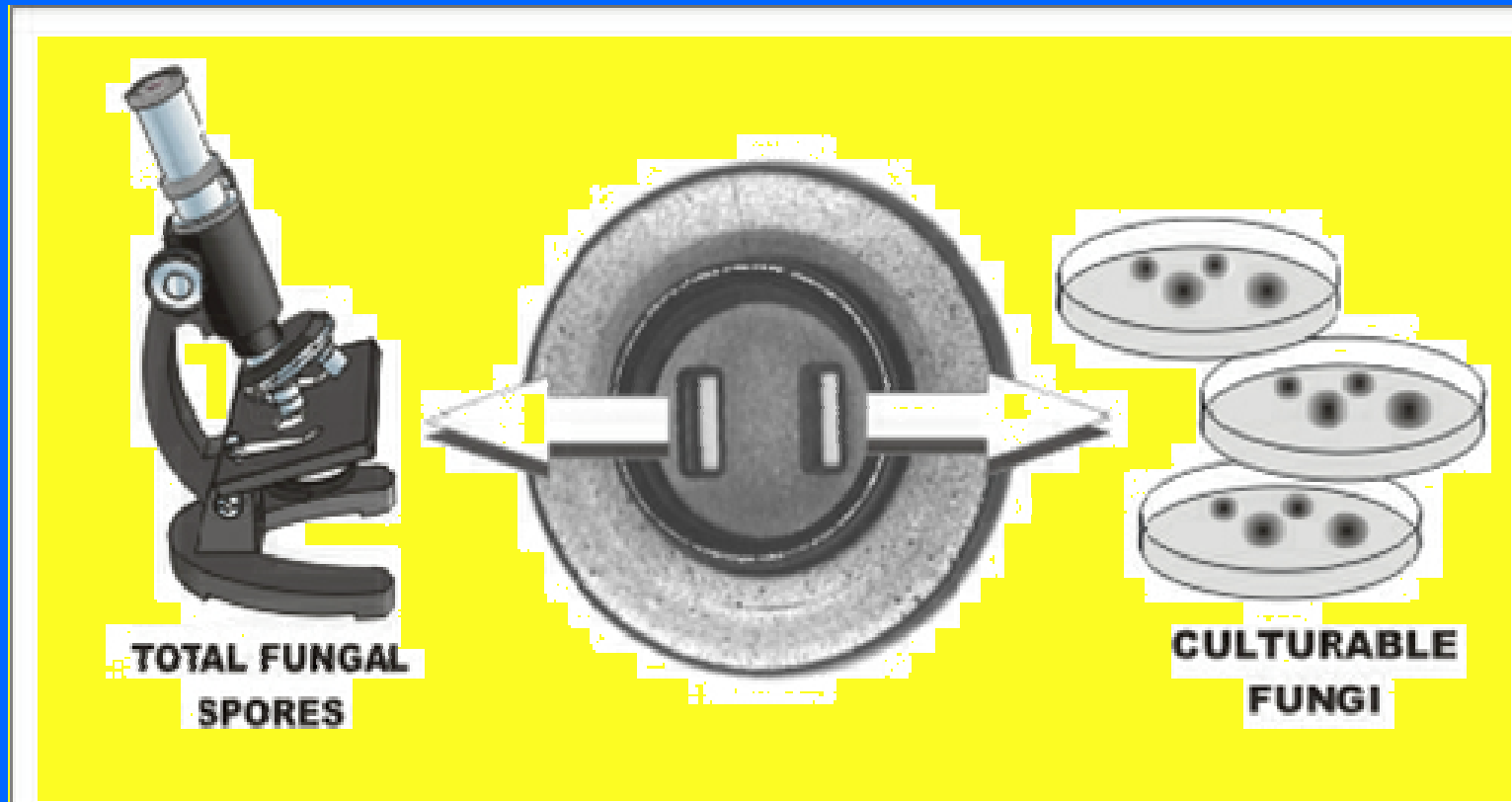


Bi-Air Cassette & Wall Probe



Clean probe used for each sample

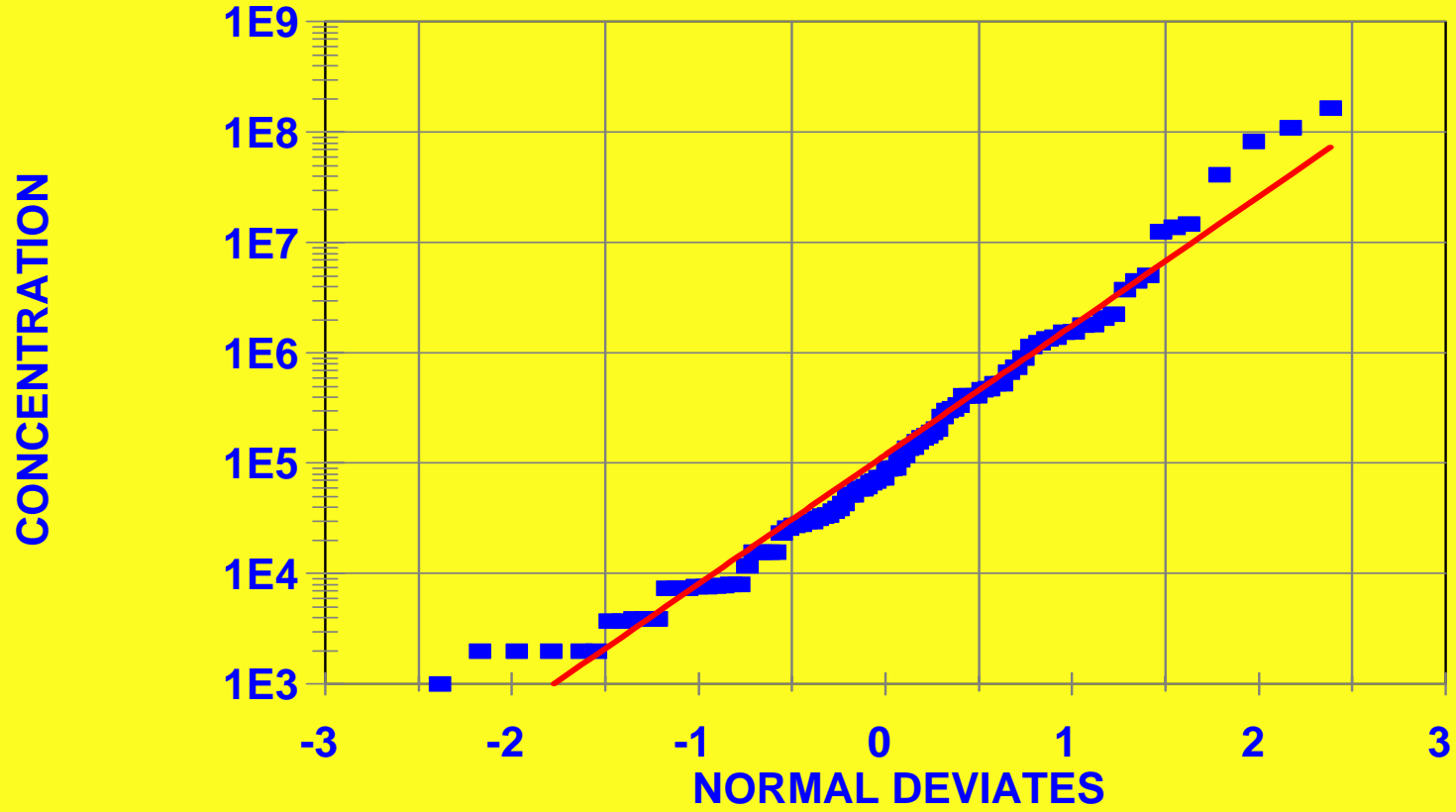
Fungal Spores and Culturable Fungi



DATA ANALYSIS

BI-AIR: SPORES

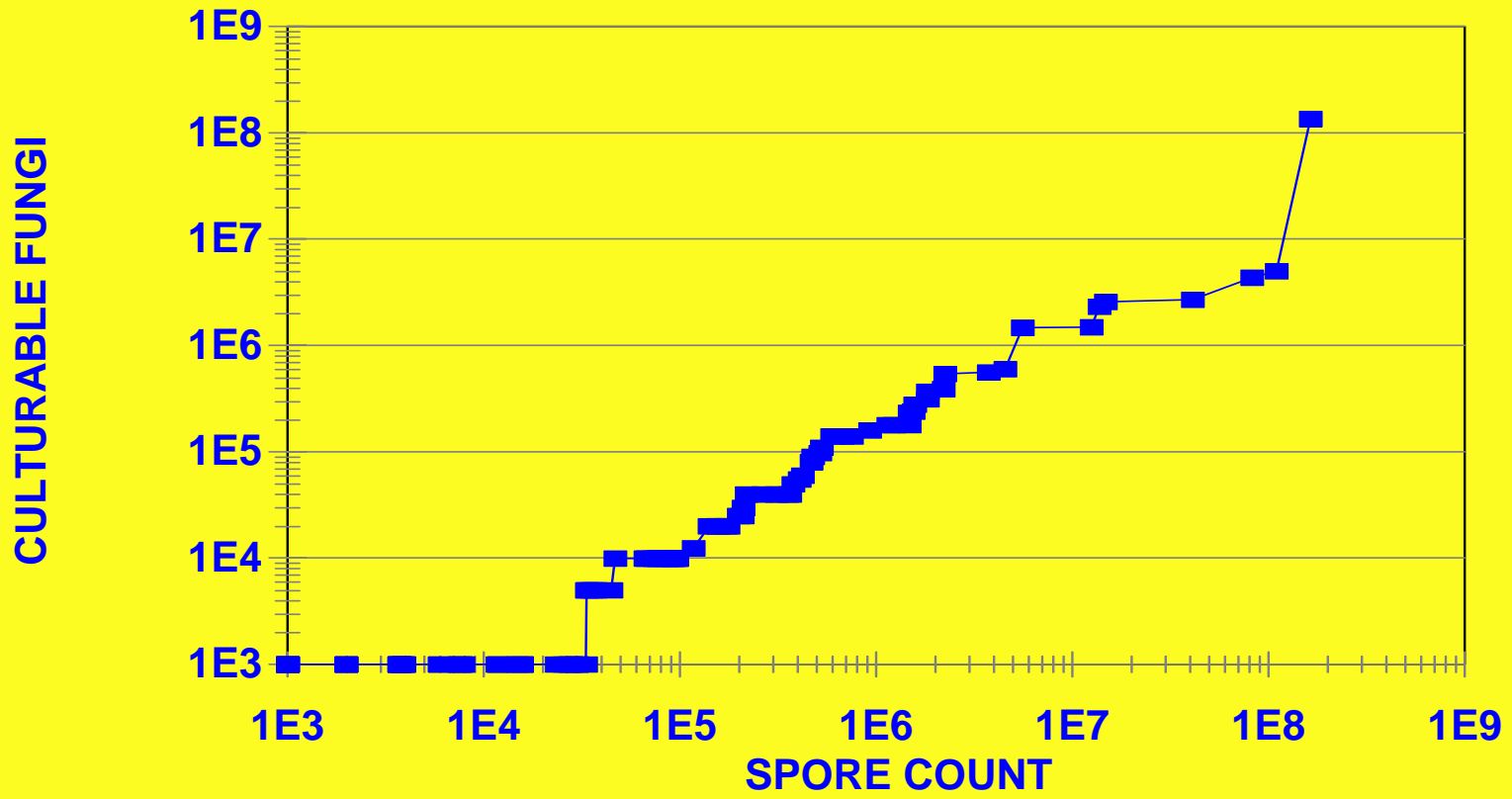
WALL CAVITY: BI-AIR
ASP/PEN TYPE SPORES



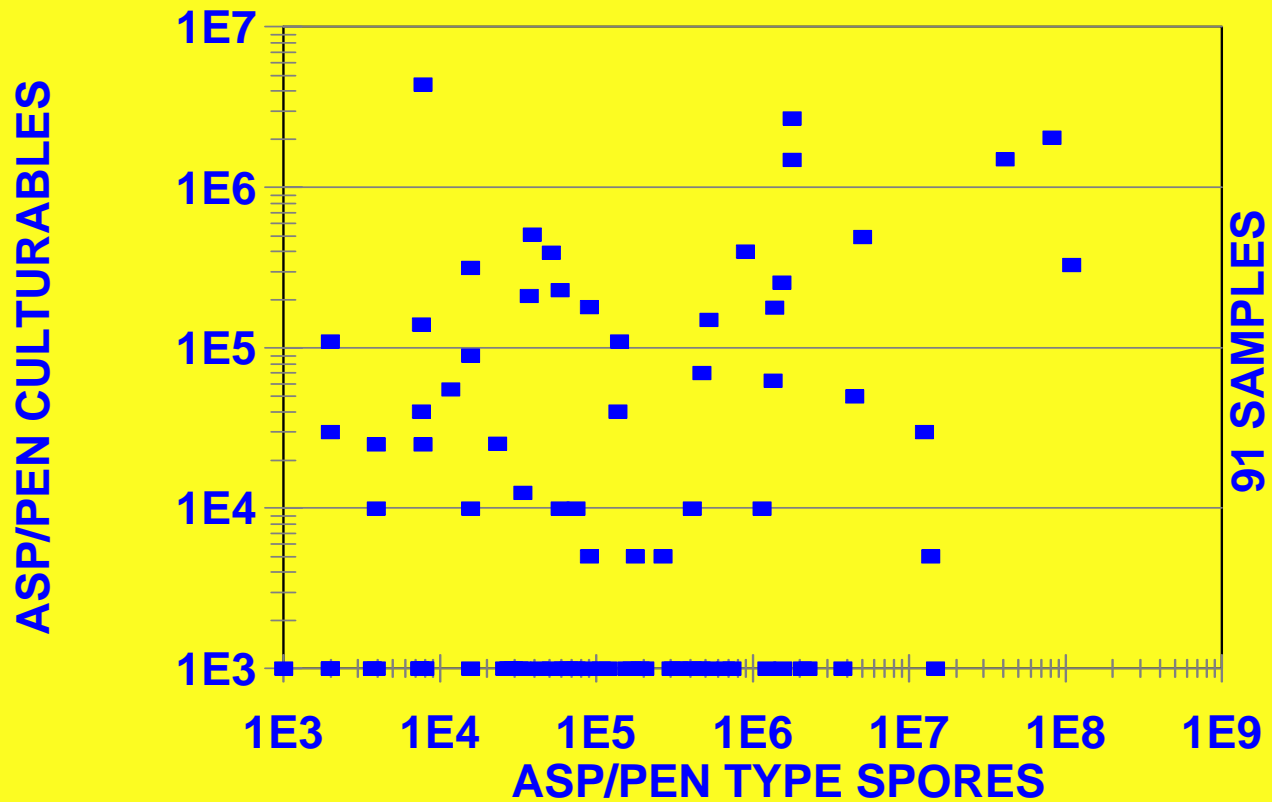
DATA ANALYSIS

BI-AIR: CULTURABLES

CULTURABLE FUNGI v. SPORE COUNTS WALL CAVITIES: BI-AIR



WALL CAVITIES: BI-AIR
ASP/PEN CULTURABLES v. SPORES



TWO GROUPS