

Air Quality: The Big Sky Connection

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Introduction

- 35 sites x 3 samples= 105
- 105 samples x 2 samples (in/ out)= 210
- 210 samples x 2 tubes=420 Samples
- Fall (November- December)
- Winter (February-March)
- Spring (April- May)
- Approx. 12 Hours

Sampling Procedure Duties

- **Schedule- Set Up**
- **Set boxes up**
 - Charge batteries
 - Clean Tubes- \$50.00 a piece
 - Instructions to follow
 - Check Boxes out to students
- **Field Data**
 - Record data on Research Form
- **Compile Results**

The Question

- Are the levels of Tetrachloromethane, Benzene, and Toluene higher inside than outside?
- What is the reason for the difference?

- 7 sites had higher amounts of at least three VOCs outside
 - 2 Lolo sites
 - 2 Big Sky sites
 - 2 Big Flat/Mullan sites
 - 1 Grant Creek site
- 23 sites had higher amounts of at least three VOCs inside

VOC Averages in ng/m³ by Location

- Target Range Area:

	INSIDE	OUTSIDE
Tetrachloromethane	643.26	350.1
Benzene	1825.72	709.06
Toluene	20209.22	1369.86

- Big Sky High School Area:

	INSIDE	OUTSIDE
Tetrachloromethane	662.325	986.375
Benzene	1498.1	1211.25
Toluene	7011.4	1714.425

- Grant Creek Area:

	INSIDE	OUTSIDE
Tetrachloromethane	1087.34	788.78
Benzene	1074.36	320.92
Toluene	3820.18	709.4

- Lolo Area:

	INSIDE	OUTSIDE
Tetrachloromethane	818.971	637.386
Benzene	2132.2	1863.671
Toluene	9268.614	2152.6

- Mullan and Big Flat Area:

	INSIDE	OUTSIDE
Tetrachloromethane	868.675	681.425
Benzene	1100.35	743.05
Toluene	10269.375	1422.55

The Reason

- New homes are built as airtight structures.
- Buildings are being designed to create controlled environments where energy consumption can be kept to an absolute minimum.
- Bad ventilation.