

Title: Healthier Living Through Identifying the Levels of Current Volatile Organic Compounds (VOCs) During Indoor Daily Activities

Goals of the Project:

Most people spend more than 2/3 of their daily lives inside, and many activities contribute to indoor air pollution. Smoking, furniture, paint, personal hygiene products, cleaning chemicals, and use of electronics all contribute to the overall levels of volatile organic compounds (VOCs) exposure to this population (Salonen, et al, 2010). For this project, I would like to identify current levels of these chemicals and their relationship with daily activities to understand the exposure levels of indoor air pollution. By understanding the common activities that may increase the level of exposure, this information would allow us to take steps to educate people regarding risky activities as well as behaviors that will decrease this pollution to promote healthier living. One occupied and one vacant residence hall room will be randomly selected for this study. These spaces are needed in order to obtain chemical readings and daily activities. This project is expected to increase awareness regarding indoor activities that may increase exposure to indoor air pollution, in order to promote healthier living. I am requesting \$275 for monitors, loggers and printing of educational materials. Lab costs (approximately \$100) will be covered by the UAH College of Science.

Step-by-Step Plan:

1. Approval of proposal (before 8/19/15)
2. Purchase material necessary for measuring daily activities (8/19 – 21)
3. Installation of monitors in selected rooms for chemical measurements (8/24)
4. Charting daily activities and lifestyle of student residents (8/24 – 11/2)
5. Obtain results of chemical measurements (11/2 – 6)
6. Data analysis (11/9 – 20)
7. Prepare and distribute educational guidelines (11/23 – 12/4)

Sources

Salonen, H., Pasanen, A., Lappalainen, S., Riuttala, H., Tuomi, T., Pasanen, P., Bäck, B., & Reijula, K. (2009). Airborne concentrations of volatile organic compounds, formaldehyde and ammonia in Finnish office buildings with suspected indoor air problems. *Journal of Occupational & Environmental Hygiene*, 6(3), 200-209. doi:10.1080/15459620802707835

Budget (please note these amounts are fictional for purposes of the budget)

Items (in order of importance)	Cost/each	Quantity	Total
Formaldehyde Monitor	\$5	2	\$10
VOC Monitor/naphtalene	\$10	2	\$20
Ozone Monitor	\$35	1	\$35
CO data logger	\$50	2	\$100
Temperature and Humidity Data Loggers	\$30	2	\$60
Printing for Flyers	\$50	500 flyers	\$50
Total Cost			\$275