

Precautions for Laboratories using Mercaptans

Mercaptans, also known as thiols, contain a functional group of sulfur and hydrogen (-SH). Low molecular weight mercaptans are of particular concern for public safety because many mercaptans can be mistaken as a natural gas leak. It is these low molecular weight mercaptans, because of their volatility, that are of greatest concern. Mercaptans have odor thresholds reported as low as 0.2 ppb. This means that even used in the hood, operations that volatilize small amounts can create odors across campus. Mercaptans are typically heavier than air and under certain weather conditions will not dissipate easily.

There are several prudent practices to follow to reduce complaints and unnecessary evacuations. They are:

- Open, dispense, purge and/or use only in a properly functioning chemical hood
- When storing, ensure container is clean and lid seal properly
- Only use amount that is absolutely necessary
- Use closed containers and septums whenever possible
- Never leave containers open and unattended even in the hood
- Report spills immediately*

***Reporting**

PPD should be notified prior to use of mercaptans if the operation is suspected to cause complaints or has caused campus reports of a natural gas leak. The physical plant's Delta room is staffed 24 hours a day and can be contacted at 257-2830

Spills inside the hood contact PPD Delta room 257-2830 immediately. Then contact Environmental Management for assistance in cleanup at 323-6280.

Conclusion

Please be aware that any reports of a suspected gas leak will be handled according to UK's Incident Action Plan. Fire, police, physical plant and safety representatives have an obligation to ensure public safety. This can mean evacuations and down time for many people. Please follow these guidelines and establish communication with PPD and Occupational Health and Safety (257-3827) prior to emergencies. This can prevent or shorten emergency responses.