Please report all accidents and near misses. Things happen and it is important to learn from others. Environmental Health and Safety (EHS) and your colleagues appreciate hearing about incidents, reviewing their causes, and learning from them.

STOLEN SAMPLES-A WAKE-UP CALL FOR BIOSECURITY

Imagine losing priceless research samples without any sign of forced entry. This happened when a lab discovered valuable biological materials missing from long-term cold storage. This incident exposed critical gaps in inventory control, physical security, and insider threat awareness, which highlights the urgent need to follow institutional biosecurity protocols.

Disclaimer: *The following incident is for educational and internal awareness purposes only. All identifying details have been removed to protect confidentiality. This report highlights crucial lessons in biosecurity and sample stewardship from a real event.*

What Happened?

An investigator found that monoclonal antibodies developed in their research were missing. Though non-hazardous, these samples are irreplaceable and worth significant time, effort, and money. They could be valued at hundreds of thousands to millions of dollars. The loss not only sets back critical research but could also impact future grant funding and institutional reputation. The samples were stored in an unlocked liquid nitrogen dewar. Weeks to months passed before the loss was noticed after a lab member had left. No signs of tampering were visible, and no formal access monitoring system existed.

Incident Details

- **When was material last accounted for?** Only the investigator knows. There was no formal record.
- **Who reported it?** The investigator reported the incident.
- **Signs of unauthorized access?** No obvious signs of unauthorized access. The dewar was unlocked but appeared undisturbed.
- **Access logs?** The lab had a log sheet to document sample access, but its use was not enforced or regularly reviewed.
- **Location?** This lab shared space with several other labs, making it difficult to determine who may have accessed the samples.

What Went Right?

- The investigator eventually reported the loss to the appropriate authorities, including EHS and university police.
- The incident prompted a review and highlighted gaps in security and inventory procedures.

What Went Wrong?

- **Delayed Reporting:** Weeks or months passed before alerting authorities, which reduced response effectiveness.
- **No Formal Protocols:** There were no chain-of-custody or inventory systems for these valuable but non-hazardous materials.
- **Poor Physical Security:** The unlocked dewar was easily accessible in a shared lab space without adequate monitoring.
- **Lack of Routine Audits:** Inventory checks were informal and infrequent.

Financial and Funding Implications

Losing such valuable biological materials can have far-reaching consequences beyond the immediate research setback. This kind of loss can:

- jeopardize current and future grant funding by undermining confidence in research management.
- increase project costs because of the need to reproduce or replace materials.
- damage the institution's reputation which can affect collaborations and funding opportunities.

Protecting valuable samples protects not just the research but the financial health and credibility of your lab and institution.

What Corrective Actions Have Been Taken?

- Communication with authorities occurred, although details of subsequent security or policy changes are unknown.
- The investigator was advised to implement stronger security measures, such as locking storage units to limit access and maintaining detailed inventories.
- EHS policies for hazardous biological agents exist, but did not apply directly since these materials were non-hazardous.
- Awareness was raised about the need for individual researchers to take responsibility for securing their valuable materials.

How Can Incidents Like This Be Prevented?

- **Lock it down:** Enforce the use of locking units and tamper evident seals if samples are not frequently accessed.
- **Track it closely:** Maintain up-to-date, detailed inventories with regular audits.
- **Know your materials:** Register valuable items through institutional programs such as Material Transfer Agreements.
- **Report immediately:** If anything seems off, contact university security and EHS without delay.

Recommendations for Researchers with Sensitive Materials

- Security is everyone's job. Take it seriously.
- Regularly review your inventories and access controls.
- Work closely with EHS to develop best practices tailored to your lab.
- Don't hesitate to report missing materials or suspicious activity. Early action saves research.
- Change combination locks and collect any issued keys when personnel leave the lab or university.
- Conduct an exit interview with exiting personnel to ensure accurate inventory and to keep accessible controls up to date.

More Information

- Yale Community Safety tips are available at https://your.yale.edu/campus-essentials/community-safety. Download the LiveSafe App (https://your.yale.edu/campus-essentials/community-safety/livesafe-app), or call 203-785-5555
- Yale EHS: Find Your Safety Advisor at ehs.yale.edu/safety-advisor
- Contact Yale EHS at ehs@yale.edu or 203-785-3550 for any questions or concerns.