

Top risks in SA laboratories

Improper storage and underestimating the risks posed by small quantities of hazardous chemicals are among the biggest fire and safety risks in South African laboratories, says Sascha Kunkel, vice president of global markets at Asecos.



Sascha Kunkel

South African regulations on storage, handling and materials safety are rather vague, and often the users are not properly trained.

“Flammable materials are a particular risk in the lab environment, yet we find that many labs in South Africa are not aligned with global best practices in terms of storage and handling of hazardous and flammable chemicals. Many accidents occur around these, yet many people don’t have a real sense of the risks,” he says.

“A key issue is underestimating the risks posed by small quantities of hazardous or flammable chemicals. They might store large quantities safely, but keep small quantities in the lab, in ordinary wooden or metal filing cabinets. This is extremely dangerous, as one small accident can quickly cause a chain reaction and within minutes, a blaze and possibly even an explosion.” Kunkel says

Proper storage

Another common safety mistake made in labs is to store chemicals alphabetically for easy location, he says. “It is important to group materials correctly by the characteristics of the materials, and not in alphabetical order, as materials grouped in this way could be incompatible.”, he notes.

Awareness of – and alignment with – the Globally Harmonised System (GHS) for classification and labelling of materials and studying the safety data sheets that come with hazardous materials are important measures to reduce risks in the lab

“Proper storage is crucial for lab safety. If a fire breaks out close to an ordinary metal cabinet, the cabinet will blow up within minutes. Flammable and hazardous materials must be contained in appropriate storage cabinets – they need to be corrosion resistant or fire-rated, depending on their use. In the case of flammable materials storage, it is recommended that the cabinet offer 90 minutes’ fire resistance, which allows ample time for evacuation of the site and for fire officials to attend to the blaze safely.”

However, there is no single protocol for optimal lab safety, he says. “There is no one size fits all approach – it depends on the application, lab type and chemicals in use. But it is important that people are made aware of the potential risks, take inventories, get rid of all hazardous materials that are no longer needed, group and store them correctly, and do robust risk assessments. These protocols should be repeated regularly – especially when processes change and new employees come aboard.”

Asecos will present workshops on laboratory safety at analytica Lab Africa at the Gallagher Convention Centre 9-11 July, giving in-depth insights into risks and live demonstrations of proper safety procedures in the lab.

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