

Safety Alert

Explosion of Waste Containers

May 2018



Description

Over the past few weeks, two chemical waste containers have exploded in the fume cupboard of a chemical laboratory. In one case the bottle contained reducing waste and in the other case oxidising waste but in both cases shards of glass and the contents of the bottle were thrown across the fume cupboard and onto the floor posing a risk to anyone in the area. Fortunately both incidents occurred over the weekend meaning that no-one was injured. Other waste bottles in the fume cupboard were found to be tightly sealed and when opened were under pressure suggesting the possibility that further incidents could have occurred. While the warm weather may have been a factor it was also possible that the wrong substance was put in the bottles or contamination had occurred leading to increased production of gaseous breakdown products.

Actions Taken

- The remains of the waste container were carefully removed from the fume cupboard and all the fragments of glass carefully swept up and contained for disposal via the usual disposal route for broken glass.
- The remaining undamaged waste containers were examined and upon careful opening all of them were found to be tightly closed and under significant pressure, lids were replaced loosely on top of the containers.

Precautions for Safe Handling of Chemical Waste

- Incompatible waste should not be mixed, oxidisers, reducing agents and organic solvents must be separated
- Waste container lids **should not** be tightly closed as this can lead to a build-up of pressure, lids should be placed loosely on top of the bottles.
- Waste containers should not be filled completely to allow room for expansion (1/2 to 2/3 full at most)
- Chemical waste should be picked up regularly for disposal by the appropriate waste contractor.
- It is good practice to place waste containers in secondary containers such as trays to help contain spillages