

Filtration of hazardous substances using syringe filters



Over-pressurising syringe filters causes filter and syringe to separate.

This leads to a rapid and significant release of the contents of the syringe.

If the contents are hazardous then such a release can result in harm to the worker or others in the vicinity.

Tips on reducing risk:

1. Reconsider whether filtration is really necessary
2. Consider using alternatives to syringe filters such as vacuum or centrifugal systems
3. If syringe filters must be used;
 - Use Luer lock fittings on both filter and syringe
 - Use the largest filter pore size possible
 - Dilute the sample so that the sample passes through the filter with the least resistance – but beware of large volumes
 - Use the least force necessary
 - Use a safety cabinet or fume cupboard. Ensure the syringe filter is held to the rear of the cabinet or cupboard
 - Wear eye protection
 - Establish emergency exposure procedures
 - Report all blow outs to your Safety Officer (and then to the Safety Department)
 - Report any blow outs of human toxins, infectious or potentially infectious material to Occupational Health