



SLS/UoN Water Saving Story

The conservation of water in a laboratory is an integral part of any sustainability initiative. Labs can be very thirsty; a typical lab can be 5-10 times more carbon intensive than a commercial building space, they can also use up to 5 times more water.

For a long time, water aspirators have been a staple in many labs. They are designed to connect to a tap and allow water to flow through a tube inside the aspirator to create a vacuum. However, the environmental impact is really where water aspirators fall short and this is something worth understanding, especially if you are looking to make your lab more resource efficient.

A single water aspirator requires about 6-7 litres of water every minute to run, meaning they can use over 350 litres of water every hour with the tap open fully. To put this into perspective, with an average use of one hour a day, five days a week, using one aspirator can equate to the same amount of water usage as flushing the toilet an extra 300 times each week! Also, if the drain tube is not in the sink or if there is a blockage, this can also cause floods and further water wastage. The potential to contaminate experiments is also worthy of note, as there can be a loss of vacuum due to any water flow fluctuations.

As a solution to this problem which the University of Nottingham faced, Scientific Laboratory Supplies (SLS) supplied SLS Lab Basics vacuum pumps to replace their water aspirators. These pumps are dry-running devices, meaning they do not require water consumption and any subsequent issues are avoided. They also provide a much more reliable vacuum without the risk of contamination.

The result of replacing 100 water aspirators means the University of Nottingham have estimated savings upwards of 9 million litres of water each year (and a cost saving of approximately £20,000).

