

Improving Purified Water in a School Lab

Scientific | Case Study

The Client

City of London School is an independent day school for boys aged from 10 to 18 and is located in Queen Victoria Street in the heart of London. It is a City school in the truest sense, benefitting from the diversity and richness of the communities around it and from the wealth of opportunity brought to it by association with the City of London Corporation and the proximity of some of the world's most important cultural, financial and business operations. The school provides a wide breadth of education covering arts and sciences to classics and modern languages. Physics, chemistry and biology are taught by highly qualified teachers in well-equipped, modern science laboratories.



Key Figures

- Water consumption reduced by 300 litres/day
- Power consumption reduced by 10 kWh/day
- Reduced maintenance
- Cost savings estimated at £300 per year

The Client's Needs

The school's laboratories require purified water for making up reagents, buffers and general laboratory use. They had always used a laboratory still, which is a device that boils water, using an electric immersion heater, like an electric kettle, to produce steam and then condenses the steam to produce what is known as "distilled water". This was wasteful of mains water and consumed a good deal of electricity. In addition, the rate of producing distilled water was slow, taking most of the day to fill a container. When a glass washing machine was installed the need for purified water increased to about 20 litres approximately per day, and Chemistry Technician, Alan Jaques turned to Veolia Water Technologies for help.



The Solution

Veolia supplied a PURELAB Chorus 2. This uses a combination of reverse osmosis and ion exchange deionisation to deliver up to 20 l/h of Type 2 water, that is resistivity >10MΩ.cm, Total Organic Carbon <50µg/l and total viable bacteria count <10 cfu/ml. Type 2 water, an order of magnitude purer than distilled water, is delivered into an integral 30 litre storage tank which allows the glass washer to be filled very quickly with plenty of capacity remaining for general use. Valuable bench space was saved due to the stackable design of the PURELAB Chorus and storage tank.

The PURELAB Chorus 2 can be used for numerous applications in the school laboratory including replacing distilled water for glassware rinsing and making up standard solutions. It has low maintenance and operating costs, is simple to use and saves a good deal of Technician's time in configuring.

Veolia Water Technologies

Windsor Court, Kingsmead Business Park,
High Wycombe, HP11 1JU
Office. +44 (0)1628 897000
www.veoliawatertechnologies.co.uk