

## PureSure System

### How it works

#### Introduction

The PURELAB Ultra features a unique double Labpure purification cartridge pack and monitoring system which provides key benefits to the user:

- Guaranteed product water quality
- No break-through of organics, silicon or boron
- Insusceptibility to monitoring errors
- Increased security
- Capacity gains

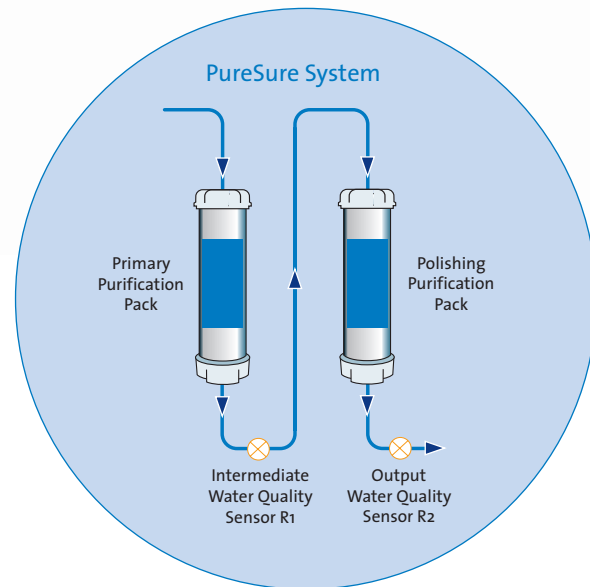
As shown in Figure 1, the PURELAB Ultra incorporates two Labpure purification cartridge packs, each containing deionisation resins and other media, and 2 water quality sensors, one to measure the quality as resistivity of the water after the first pack (R1) and the other at the end of the purification sequence (R2) just prior to the point of use.

#### Results

Typical resistivity values at these two points, as the unit is used, are shown in Figure 2. As the deionisation capacity of the first Labpure purification pack starts to exhaust, after approximately 930 litres of water have been used, the intermediate resistivity at R1 starts to fall from its initial value of 18.2 MΩ-cm. However, the resistivity of the product water at R2 is still maintained at 18.2 MΩ-cm by the Labpure purification cartridge pack in the polishing position.

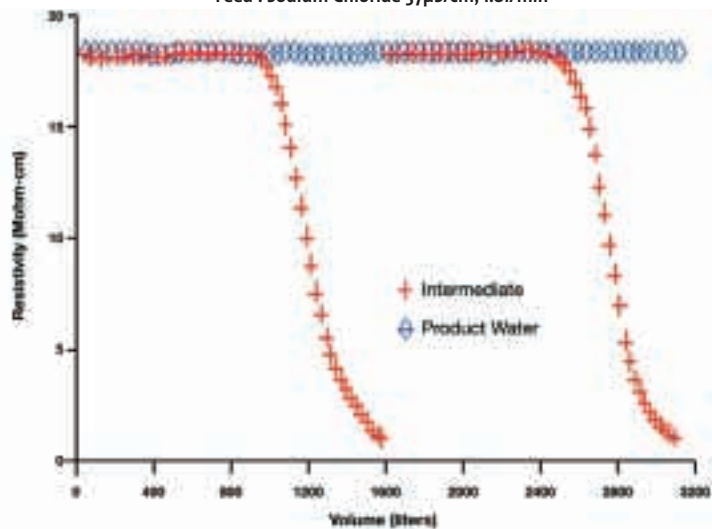
When the resistivity at R1 has fallen to 1 MΩ-cm, (after 1580 litres in this example) the primary Labpure purification cartridge is removed and discarded. It is replaced by the polishing cartridge and a new pack is fitted in the polishing position. This process can be repeated indefinitely.

In this way, a highly regenerated unused pack is always present in the polishing position.



**Figure 1 Twin Labpure Purification Cartridge Principle of Operation**

**PURELAB Ultra  
Intermediate and Product Water Resistivities**  
Feed : Sodium Chloride 37µS/cm, 1.8l/min



**Figure 2**

For more information and to order your copy of the Pure LabWater Guide go to [www.elgalabwater.com](http://www.elgalabwater.com)