

Highlights

Aqualution produce an effective sanitiser without alcohol.

The production process is very efficient in both materials and energy, and requires no carbon based ingredients.

The product has a wide range of applications, with fewer side effects than alcohols.

A new production plant is being constructed with efficiency at its core, including solar panels and a wastewater treatment plant.

It is a growing business, with links to a number of community organisations in the Borders.



Aqualution

Aqualution are a company based in Duns in the Borders where it manufactures alcohol-free hand sanitiser using water, salt and electricity. The manufacturing process is very efficient and, unlike alcohol-based sanitisers, uses no plant or oil-based ingredients. There are also no carbon emissions associated with the manufacturing process, and therefore it can be described as a non-carbon economy product.

The product itself is very effective at killing bacteria and viruses, yet has no harmful effects on the environment, and it has a range of applications in addition to hand sanitising. It has been tested and proven in independent tests (BS EN 13727, 1500, 1650, 14476) to be as good as, or better than, alcohol, but without any of the associated carbon emissions or detrimental effects to human health that overuse of alcohol on the skin can cause; and has a shelf life of 12 months.

To manufacture the same amount of hand sanitiser using alcohol would require four times as much water and significantly more energy. The plant in Duns uses renewable sources of electricity in the production of the sanitiser.

Further improvements to the production process will be achieved when their new manufacturing plant opens later in 2022. This will have solar panels to generate electricity and will include its own wastewater treatment facility. Designed with the help of Zero Waste Scotland to make it as efficient as possible, it will require no waste removal and will be able to generate enough electricity to supply the excess to neighbouring businesses.

Aqualution provide employment in the Borders region, and also support a number of community activities in the local area.

Since the start of the COVID pandemic Aqualution have increased their staff by 285%, following equality and inclusion principles to ensure a diverse workforce.



During the pandemic they have made a number of product donations, including significant donations of sanitiser to the Border's hospital.

The production of the sanitiser involves the hydrolysis of water and salt, which has led to collaborative work with the University of Edinburgh, looking at low carbon green hydrogen production using similar techniques.

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