

## Bio-Surfactant: a novel biobased surfactant

A surfactant produced from biobased chemicals that can replace petroleum-derived detergents, exhibiting higher performances in cleaning and resistance to hard water.

### Proposed use

The biosurfactant has an applicability in the surfactant market, specifically in personal care and household detergency. The need for cheaper, more environmentally friendly surfactant is addressed through our technology.

### Problem addressed

The vast majority of the current detergents on the market exhibit several drawbacks such as low resistance to hard water and low solubility. They also tend to have a high Kraft point and a CMC, which results in the need to add additives. This consequently results in higher costs and environmental impact.

### Technology overview

The novel biobased surfactant is based on natural raw materials, is relatively cheaper to produce and has low-toxicity and is biodegradable. Our novel surfactant has been developed to have a lower CMC, higher solubility in water, low Kraft-temperature and environmentally friendly; overcoming all the shortcomings in traditional surfactants. It can be scaled up and does not need any harmful additives.

### Intellectual property information

An initial patent application has been submitted on the 31<sup>st</sup> of July 2020.

### Inventor information

Prof. Jason Hallet – Professor of Sustainable Chemical Technology at Imperial College London

Dr Amir Al Ghatta – Research Fellow at Imperial College London

Raul Aravena – Research Postgraduate at Imperial College London

### Benefits

- Low cost biobased surfactant
- Low CMC
- High solubility
- Low kraft- temperature
- Non-toxic
- Biodegradable

**Michelle Cortis**

Executive

Industry Partnerships and  
Commercialisation – Faculty of  
Engineering

**e:** m.cortis@imperial.ac.uk

**t:** +44 (0) 7517551971

Technology reference: **10576**