Lankem

The next generation of green surfactants

Technical Guide

BioLoop Surfactants

Introducing a new range of bio-based surfactants containing components that are from renewable sources. Unlike many bio-based surfactants, these products offer excellent surfactant properties and can be used as green alternatives to conventional synthetic nonionics, such as alcohol ethoxylates. The BioLoop has two soybean hydrophobic sections that are linked by a hydrophilic loop of polyethylene glycol derived from molasses. Unlike palm-based surfactants, the BioLoops contain soybean oil which is considered to be a great sustainable source.

PG (Pure Grade) v Normal Grade

The normal grade of BioLoop surfactants are aimed at standard industrial-based processes in which clarity in an aqueous medium isn't a necessity. The PG versions which denotes our purified grades are for industries in which clarity in aqueous mediums is essential.

Typical Applications

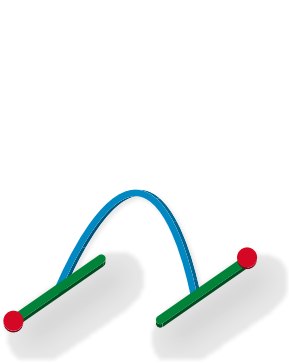
Normal Grades
Oils and Lubricants
Emulsion Polymers
Agrochemical Additives
Textiles Auxiliaries
Hand and Floor Wipes

PG Versions
Personal Care
Cosmetics
Household Products

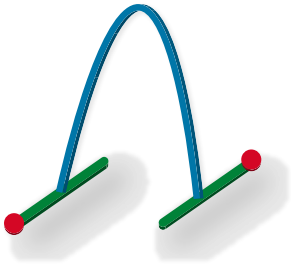
Key Features

- Based on BioLoop technology
- Bio-based
- Ultra-Mild
- No skin or eye irritancy
- Low ecotoxicity
- Biodegradable
- Good detergency
- A green alternative to alcohol ethoxylates

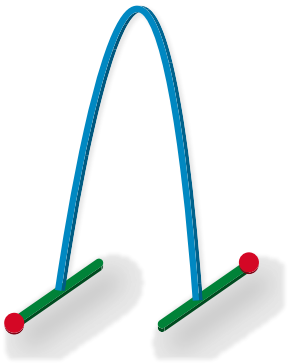
Product Range



BioLoop 56L
BioLoop 56L-PG



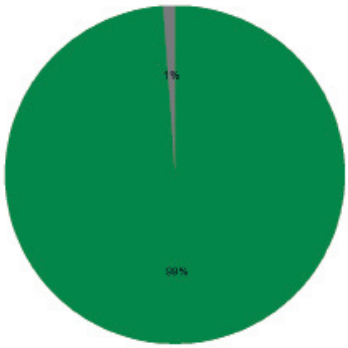
BioLoop 68L
BioLoop 68L-PG



BioLoop 84L
BioLoop 84L-PG

Radiocarbon (C14) dating

Result: 99.36% Bio-based carbon



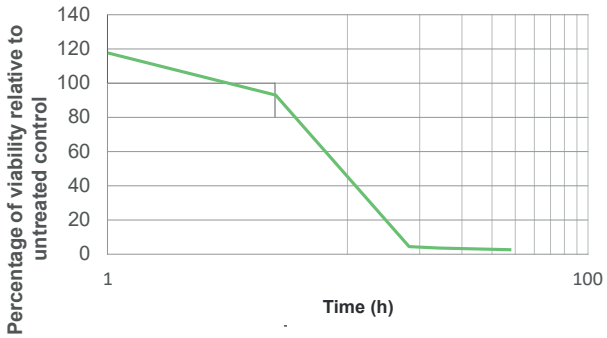
Mildness Studies

The ET 50 test method

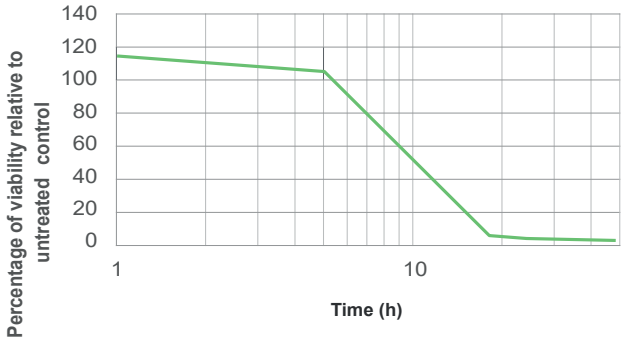
The in vitro test was successfully adapted from the widely used ET50 method using human reconstructed skin models. Formulations are applied to the skin model surface for defined time points, followed by determination of any damage to the skin cells, using an indicator of intracellular metabolism. Test results are expressed as the ET50 value - the time taken for viability to drop to 50% of the untreated control.

The results indicate that the BioLoops, in this instance BioLoop 84L, gave a result to show extreme mildness.

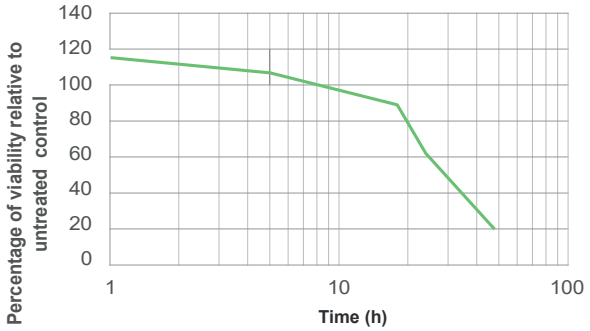
ET_{50} determination of 0.3% SLS Result 9.37 (h)



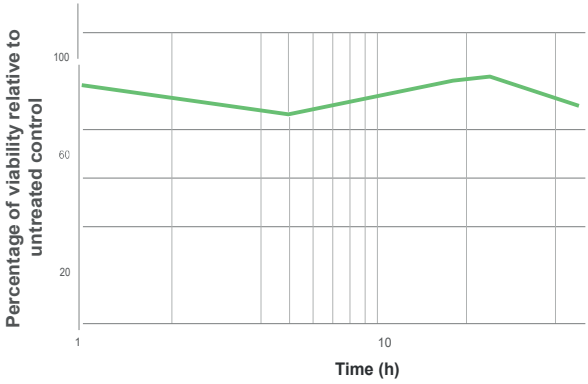
ET_{50} determination of 0.3% SLES Result 10.25 (h)



ET_{50} determination of 0.3% CAPB Result 29.4 (h)



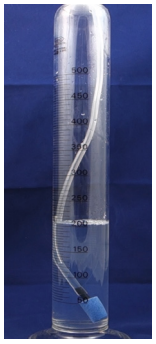
ET_{50} determination of 0.3% BioLoop 84L Result > 48 (h)



Foaming Profile

Test method

A 0.1% solution is prepared and aerated for 30 seconds and then stopped. The degree of foaming is assessed after 60 seconds: A foaming classification was then defined using comparative foaming date generated across the whole of our product range.

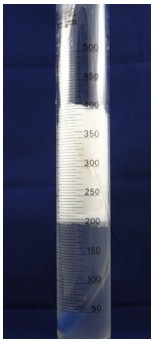


BioLoop 56L type:

Classed as extreme low foam

BioLoop 68L type:

Classed as medium foam



BioLoop 84L type:

Classed as medium foam