

## BioDiesel Purification Efficiency Increases with Pall's PhaseSep® AS Liquid/Liquid Coalescer

### Application

Acidic water – BioDiesel wash water separation downstream of centrifuge

### The Challenge

Water soluble impurities, (glycerol, soap, salts and free water) remain in BioDiesel at unacceptable levels after acid water wash centrifuge separation step. The inability or variability of a centrifuge to further reduce these impurities negatively impacts product quality and increases processing costs and energy consumption.

### The Solution

Pall's PhaseSep® AS liquid/liquid coalescer reduces impurity levels helping achieve in specification product. Installation of a PhaseSep AS liquid/liquid coalescer after an acid wash centrifuge will benefit the process by further reducing free water and water soluble impurities before methanol recovery or downstream drying steps.



Fig 2: Emulsion on (left), BioDiesel exiting coalescer (middle), acid water phase collected from coalescer (right)

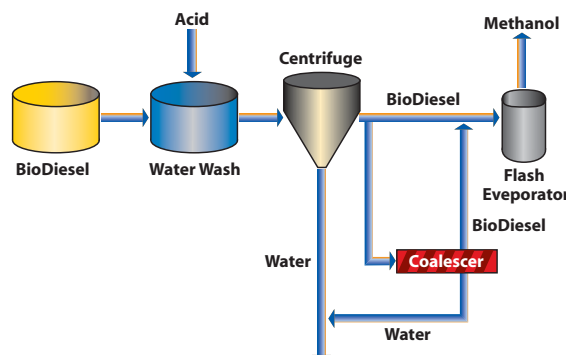


Fig 1: BioDiesel acid water wash schematic

### The Results

Pall's PhaseSep AS liquid/liquid coalescer removed an additional 1200ppm of water in one case and 1700ppm in another. *(Actual results will vary based on process and feedstock. Testing to determine results at process conditions is recommended.)*

Benefits from reduced water soluble constituents:

- Glycerol value down to close to GC detection limit
- Complete removal of soap under specific process conditions
- Significant reduction in total contamination associated with water-soluble impurities
- Strong improvement in final product filterability tests
- Reduced energy consumed in drying



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