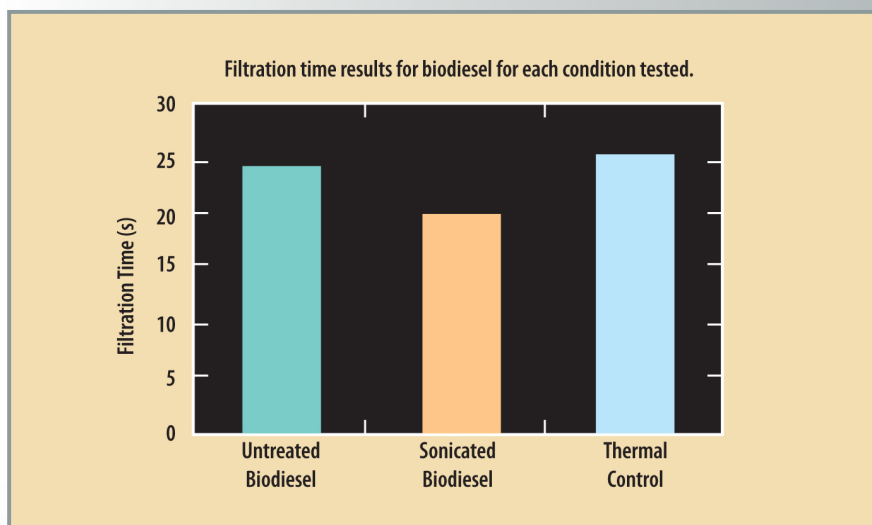


# Method for Removing Precipitates in Biofuel

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## Technology Summary

At ORNL the application of ultrasonic energy, or sonication, has been shown to successfully remove or prevent the formation of 50–90% of the precipitates in biofuels. Precipitates can plug filters as biodiesel is transported from one location to another, and often cannot be detected by visual inspection.

This simple method solves one of the most serious challenges in the biodiesel industry. Most biodiesel is still mixed with regular diesel; this results in higher levels of precipitates. When the temperature of biodiesel falls below 5°C (41°F), precipitates form that can foul a vehicle's fuel system. Simply heating the fuel above 5°C is not a solution because heat can degrade fuel.

## Advantages

- Prevents precipitates from plugging vehicle fuel systems
- Can be accomplished in storage tanks and in a vehicle's fuel line
- Has no negative effect on fuel
- Reduces vehicle maintenance costs

## Potential Applications

- All fuel derived from biomass
- Storage tanks and bulk transportation for biodiesel

## Patent

Raynella M. Connatser, Michael D. Kass, and Samuel Arthur Lewis, Sr., *Method for Removing Precipitates in a Biofuel*, U.S. Patent Application 12/820,177, filed June 22, 2010.

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