

CRADA Final Report Form

Date: _____4/26/2020_____

PI: Ning Sun

CRADA AWD No.: AWD00001908

CRADA FP No.: FP00004773

LBNL Report Number: _____

OSTI Number: _____ (SPO to add)

1. Parties: Sylvatex, Inc. and Lawrence Berkeley National Laboratory
(Identify Parties to the CRADA)
2. Title of the Project: Developing renewable free fatty acid surfactants to form diesel blendstocks
3. Summary of the specific research and project accomplishments:
(Were key major goals of the CRADA achieved?)
Note: Final Reports and Forms containing Protected CRADA Information are to be emailed directly to the SPO close out requestor, along with a confirmation of the public release date. Do not submit via eSRA. Also, please do not include any Proprietary Information (defined below) in CRADA Final Reports and Forms.*

During this project, ABPDU team evaluated various hydrolysates and feedstocks for renewable surfactant production. Various properties such as FFA composition, glycerol content, and physical properties have been analyzed for over 50 samples provided by Sylvatex.

4. Deliverables:

Deliverables met	Party (LBNL, Participant, Both)	Delivered to Other Party?
Determine how the hydrolysate composition could affect fuel properties and behavior.	Both	N/A
Screening of additional feedstock candidates for blendstock preparation.	Both	N/A
Assess the stability of finished fuel under various conditions and its	Both	N/A

potential for failures such as phase separation, solid formation and oxidation.		
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5. Identify (list below) and attach all publications or presentations at conferences directly related to the CRADA: None

6. List of Subject Inventions and software developed under the CRADA: (Please provide identifying numbers or other information.) None

7. A final abstract suitable for public release:

(Very brief description of the project and accomplishments without inclusion of any proprietary information or protected CRADA information.)

Sylvatex technology blends renewable components into diesel to create a low-carbon, blended fuel with significantly cleaner emissions. Sylvatex MicroX blendstock uses low-cost inputs to produce both the fuel additive and alternative fuel products. LBNL worked with to evaluate various hydrolysates and explore different feedstocks that can be grown as commodities and used to produce the renewable surfactant.

8. Benefits to DOE, LBNL, Participant and/or the U.S. economy.

Successful completion of this project enabled the performance requirements for the surfactant to be determined, and for a variety of potential feedstocks to be screened for eligibility of Sylvatex's MicroX blendstock. The Sylvatex micro-blend platform enables refiners and distributors to reduce environmental impact, increase feedstock flexibility, and reduce costs with minimal capital investment.

9. Financial Contributions to the CRADA:

DOE Funding to LBNL	\$40,000
Participant Funding to LBNL	\$0
Participant In-Kind Contribution Value	\$5,000
Total of all Contributions	\$45,000

* "Proprietary Information" means information, including data, which is developed at private expense outside of this CRADA, is marked as Proprietary Information, and embodies (i) trade secrets or (ii) commercial or financial information which is privileged or confidential under the Freedom of Information Act (5 U.S.C. 552 (b)(4)).