



# REDIFUEL

**Deliverable report**

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Project management: Uniresearch (NL) (<http://www.uniresearch.com>)



## Executive Summary

REDIFUEL (RF) is a bio-mass derived renewable fuel which can be a potential diesel fuel replacement. It is a mixture of Alcohols and Paraffinic fuels in a specific proportion making the final product which has a close compliance to EN590 standards. It is also very important for any fuel to be drop-in capable so that the functionality of the current technology is not affected, and the fuel can be easily introduced into the market. In this regard, Tec4Fuels (T4F) conducts the material compatibility testing in a Hardware in the loop testbench which consists of all the fuel system components of an automotive fuel injection system. CoCoS (Complete Common Rail System) is a hardware in the loop testbench in which all the fuel systems components are connected in series and the fuel can be circulated for a specified amount of testing period without combustion. This helps in checking the compatibility of all the fuel components while stressing fuel leading to fuel degradation. This testing can be conducted at different conditions to obtain a detailed picture of the fuel interaction with the fuel components.

This report is a follow-up report for the Deliverable D3.4 submitted in Month 18 of the project. D3.4 has indicated the Selection of fuel blends and the experimental matrix and analytics that are considered by Tec4Fuels. Current deliverable (D3.12) will indicate the final results of the component interaction tests and a comprehensive analysis of the achieved results indicating the Drop-in compatibility of REDIFUEL. The fuel was tested as pure components and as blends. The RF has shown high compatibility with the components and the sealing materials. The observed blocking of the injectors, in the case of FAME blends can also be solved with the addition of Deposit control additive (DCA). In the regards, T4F considers Redifuel as a highly compatible and drop-in capable fuel



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**Project partners:**

- 1 - FEV – FEV EUROPE GMBH - DE
- 2 - MPI – MAX-PLANCK-GESELLSCHAFT ZUR FORDERUNG DER WISSENSCHAFTENEV - DE
- 3 - CSIC – AGENCIA ESTATAL CONSEJO SUPERIOR DE INVESTIGACIONES CIENTIFICAS - ES
- 4 - VTT – Teknologian tutkimuskeskus VTT Oy - FI
- 5 - RWTH – RHEINISCH-WESTFAELISCHE TECHNISCHE HOCHSCHULE AACHEN - DE
- 6 - OWI – OWI Science for Fuels gGmbH - DE
- 7 - VUB – VRIJE UNIVERSITEIT BRUSSEL- BE
- 8 - NESTE – NESTE OYJ – FI
- 9 - MOL – MOL HUNGARIAN OIL AND GAS PLC - HU
- 10 - INER – INERATEC GMBH - DE
- 11 - T4F – TEC4FUELS - DE
- 12 - UNR – UNIRESEARCH BV - NL

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