

GREEN POWER
Feeds Your Engine



2nd VegOil

Demonstration of 2nd Generation Vegetable Oil Fuels in Advanced Engines

**Workpackage 3
Fuel development**

**Deliverable N° 3.5:
Additive report**

Publishable

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1 Explanation for cancelling of Task 3.5 – Additive report

For developing 2nd generation vegetable oil quality, in this task analyses on improving oil quality with fuel additives were planned.

The 2nd generation vegetable oil quality is defined with an element content of less than 3.5 ppm of phosphorus (P), calcium (Ca) and magnesium (Mg), these elements are responsible among others for failure-free engine operation.

On developing work on task 3.4 – Development of production process for optimised vegetable oil without additives – this quality level of 2nd generation vegetable oil (< 3.5 ppm P/Ca/Mg) was already achieved. Based on this paramount development in task 3.4 it was possible to pass over to task 3.8 - Set-up of a reference press for testing oil cleaning procedures in Austria - to produce subsequently advanced oil qualities for the demonstration fleet in WP5 and the experiments with the hybrid engine in WP2.

Hence, of rapid development in prior tasks and because of the fact, that no state-of-the-art technology exists to reduce P/Ca/Mg by means of fuel additives, the task 3.5 could not be fulfilled. The main target to reach 2nd vegetable oil is unaffected, so the original planned effort for this task will be used for additional development of advanced vegetable oil.

Additional development is required to design an improved production process. This process shall deliver oil which not only contains reduced amounts of the elements P, Ca and Mg, but also of sodium (Na) and potassium (K). This new task “Development of production process for optimised vegetable oil owing to Na/Ka/Oxi-stability” will also include the compliance with the limits of oxidation stability (DIN V 51605).