In situ transesterification of microalgae

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PIN Meeting

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FAME production using *in situ* transesterification

Conventional transesterification

**Biomass**

- Oil extraction
- Transesterification
- Purification

Biodiesel

In *situ* transesterification

**Biomass**

- Oil extraction and transesterification
- Purification

Biodiesel
Objectives

• Evaluate the relative moisture that can be used during in situ transesterification of *Nannochloropsis o.* and *Chlorella v.*

• Analyse the cell structure before and after transesterification

• Obtain the maximum FAME production from algae strains
Methods

- *In situ* transesterification methodology
Results: effect of moisture content

- Highest recoveries were obtained when using sulphuric acid as catalyst
- Recoveries were different for Nannochloropsis vs sulphuric acid
Results: change in microalgae diameter
Highest yield of FAME obtained

✓ FAME yield values obtained were 92±2% when using *Chlorella sp.* and 73±5% when using *Nannochloropsis oculata.*
Thank you!


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