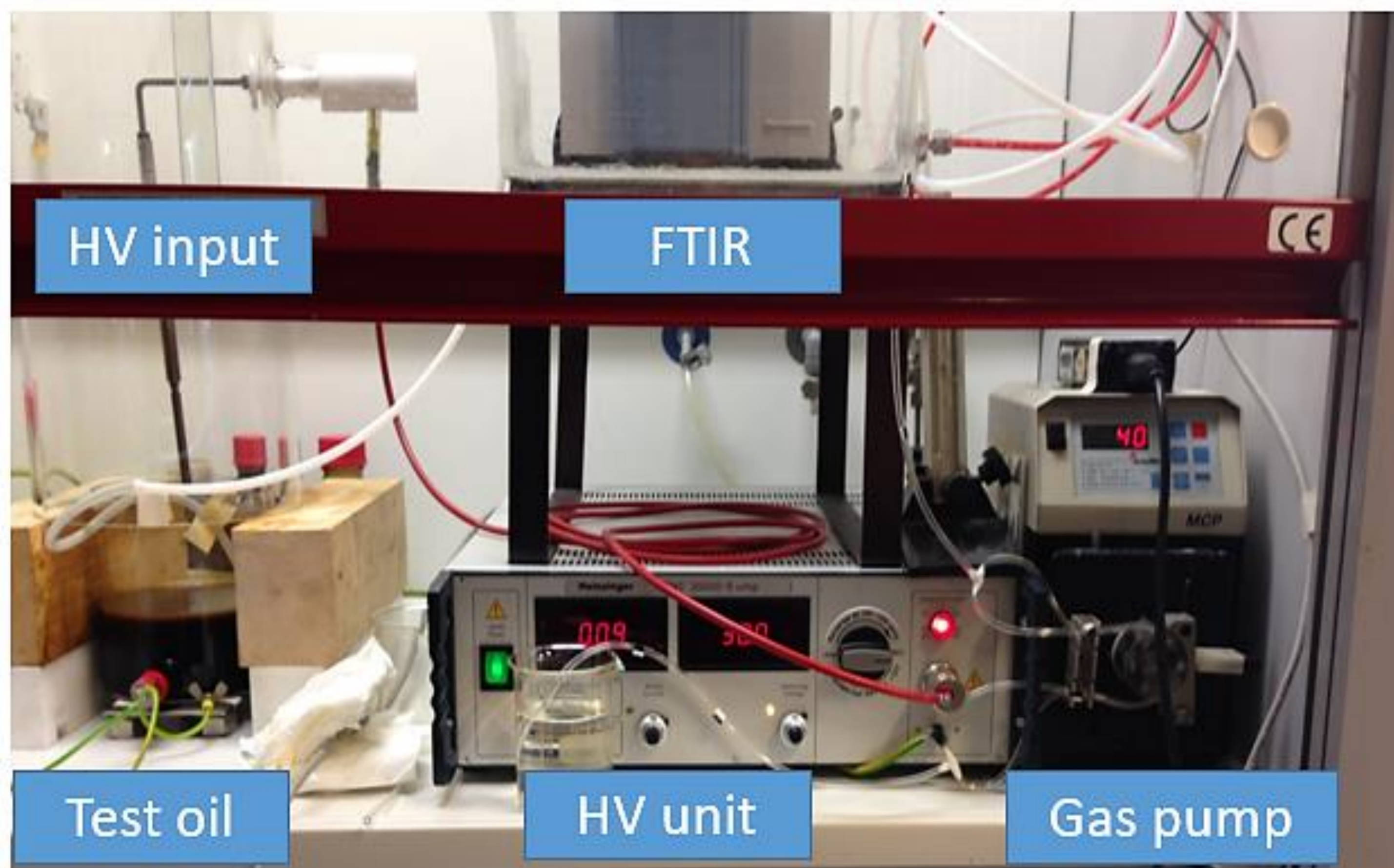


Treatment of pyrolysis oil in a DC corona discharge

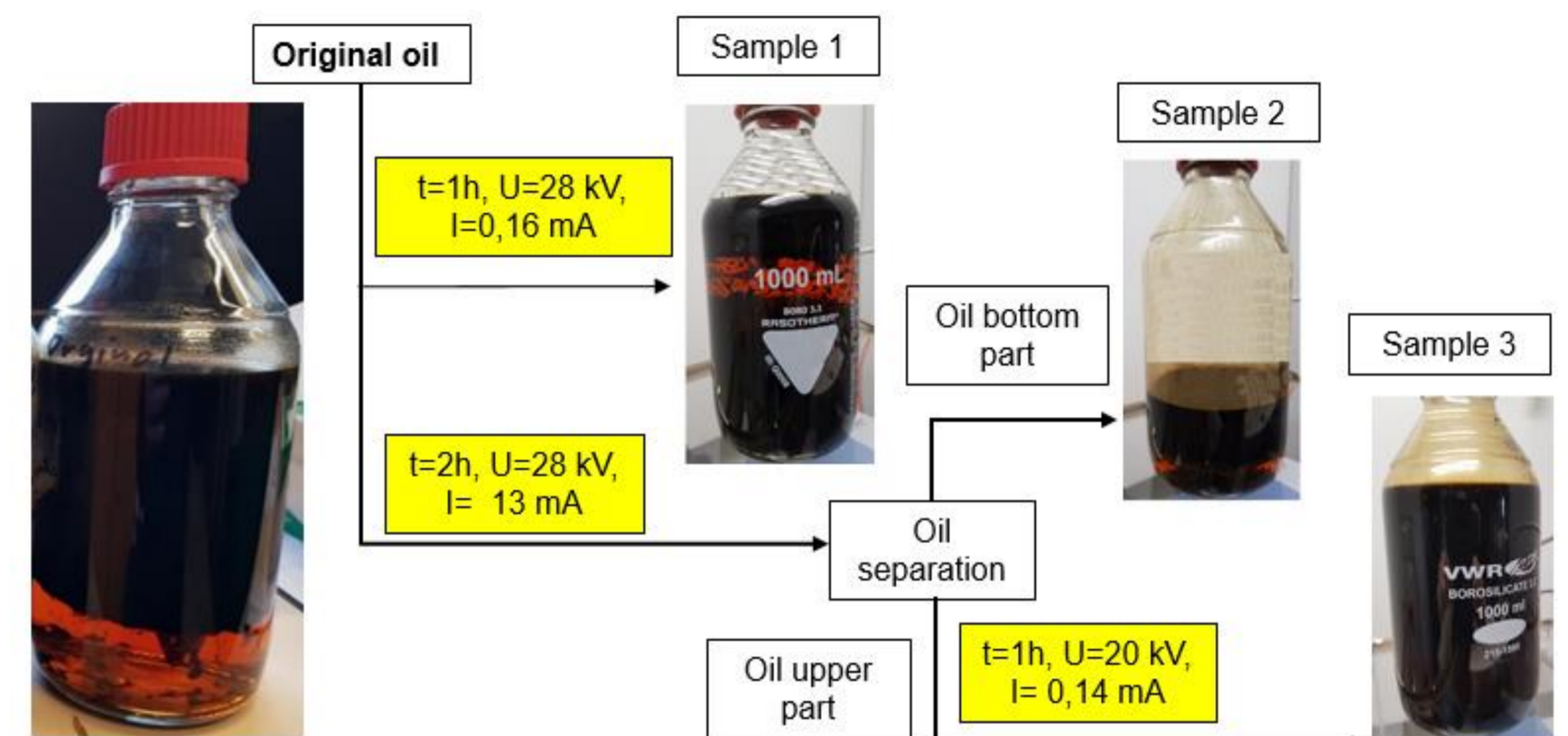
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Test facility



Test conditions



EHD treatment in a DC corona discharge of pyrolysis oil, collected from a condensation system of the pyrolysis reactor for plastic wastes.

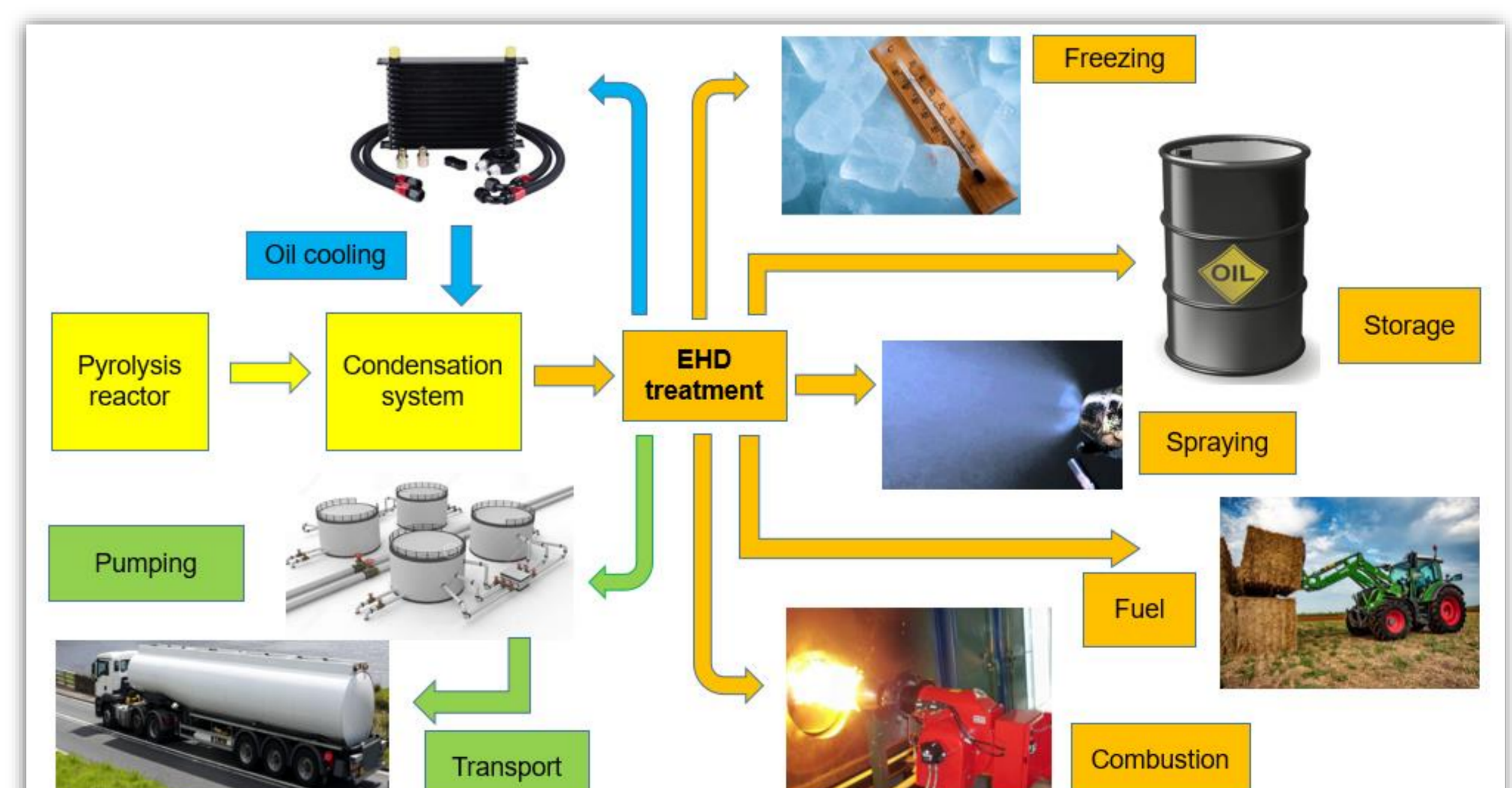
Results



Observations

- Before the treatment, pyrolysis oil is spilled.
- Without treatment, a separation of oil takes place (rose-colour liquid in the bottom part of the bottle).
- During the treatment in a DC corona discharge, colourless liquid is joined on the surface of pyrolysis oil.
- Further, EHD spraying from liquid surface takes place.
- Change in gas composition above the liquid surface, when DC corona is applied (FTIR measurements).
- Change of pyrolysis oil properties and chemical composition.

Application



Conclusions

- Treatment in a DC corona discharge results in the change in pyrolysis oil properties and chemical composition.
- EHD spraying of oil means the change of oil viscosity through the treatment in a DC corona discharge.
- Long-term stability of treated pyrolysis oil.