

Qualitative comparison between Pyrolyze-diesel and commercial (car)fuels



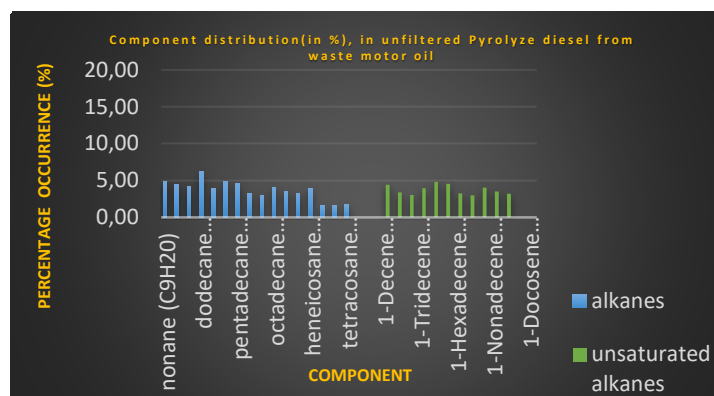
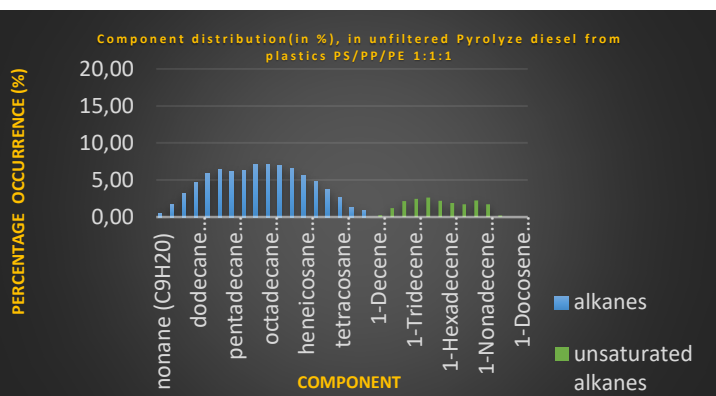
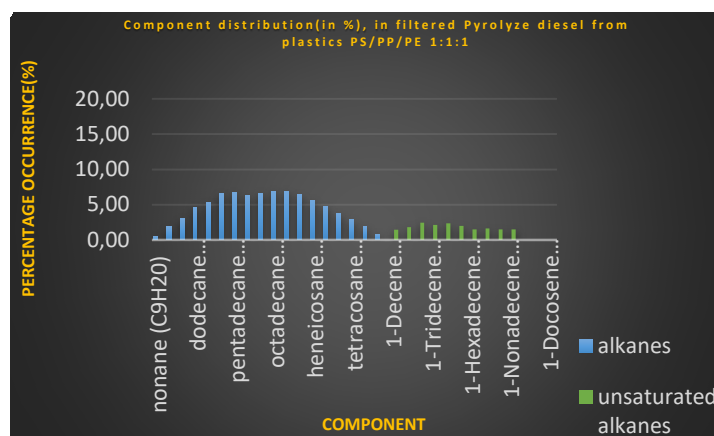
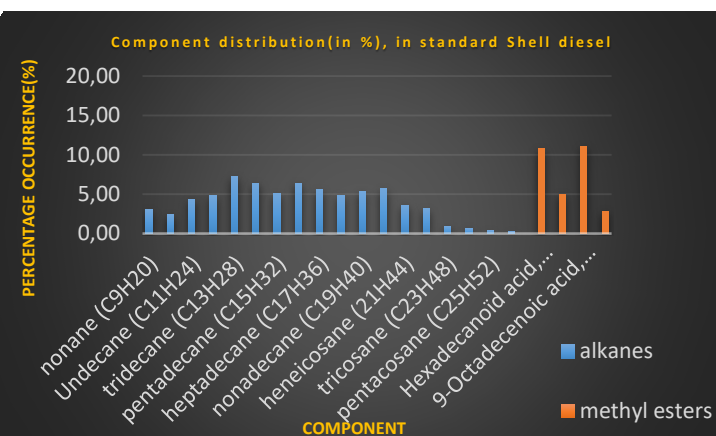
Introduction

- Pyrolyze B.V.
- Standard Shell diesel
- Standard Tinq diesel
- V-power Shell diesel
- Filtered Pyrolyze diesel from plastics (PS/PP/PE 1:1:1)
- Unfiltered Pyrolyze diesel from plastics (PS/PP/PE 1:1:1)
- Unfiltered Pyrolyze diesel from waste motor oil
- (E5- and E10 Shell gasoline)

Methods

- DCM dilution as sample prep.
- GC-FID for relative percentages
- GS-MS for identification

Results



Discussion

- Polystyrene not seen, benzene rings, Probably in naphtha
- Polypropylene seen in alkanes
- Polyethylene seen in unsaturated alkanes/ alkenes
- Between Pyrolyze samples; same main components (alkanes), differences in concentration
- Between commercial fuel samples; same main components, differences in concentration
- Between commercial fuels and Pyrolyze fuels; same main components, difference in other components. Commercial: Methyl esters, Pyrolyze: Unsaturated alkanes.

Conclusion

- Alkanes correspond between commercial- and Pyrolyze diesels
- Differences in concentration
- Differences in additional components Commercial; Methyl esters and Pyrolyze; Unsaturated alkanes

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