

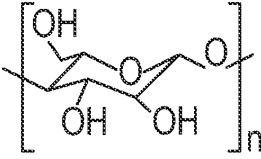
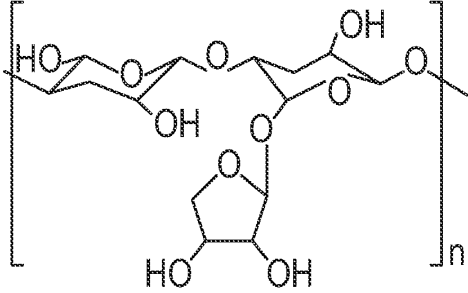
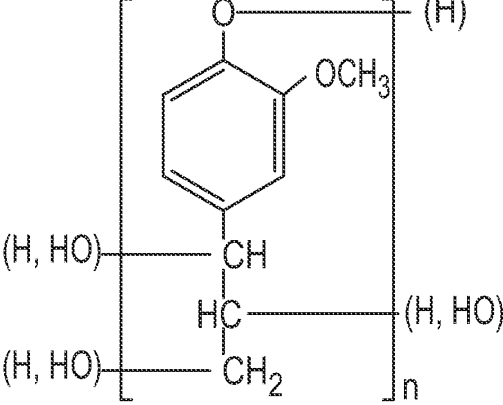
Biomass Polymer	Typical Polymer Structure	Monomer	MW
Cellulose		Glucose	>100,000
Hemicellulose		Various C5/C6 sugars	>10,000 - 35,000
Lignin		Guaiacyl-propane, <i>p</i> -Hydroxy-phenylpropane, Syringyl-propane	5,000 - 10,000

FIG. 1

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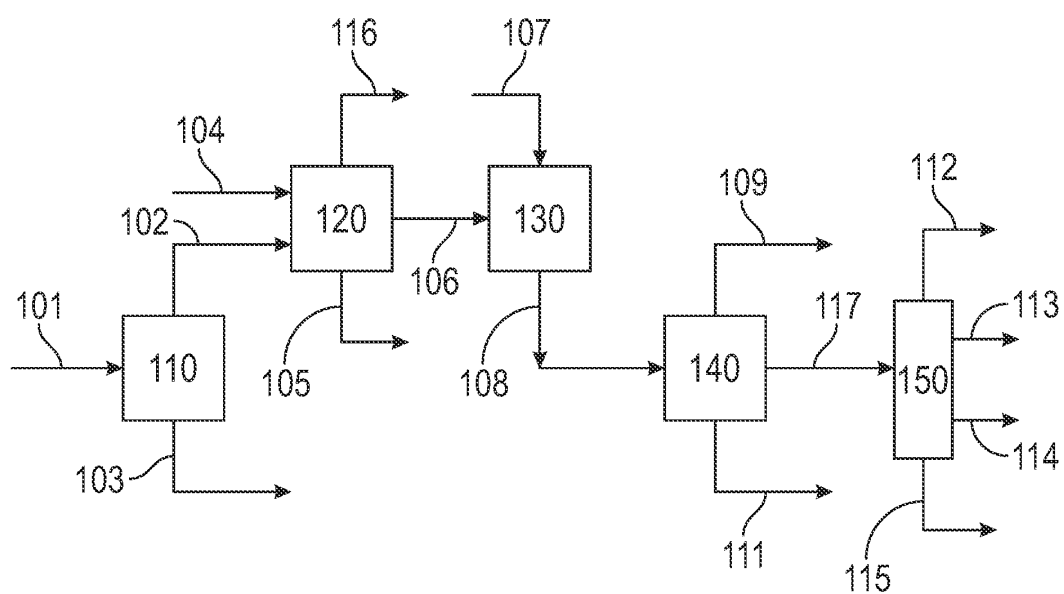


FIG. 2

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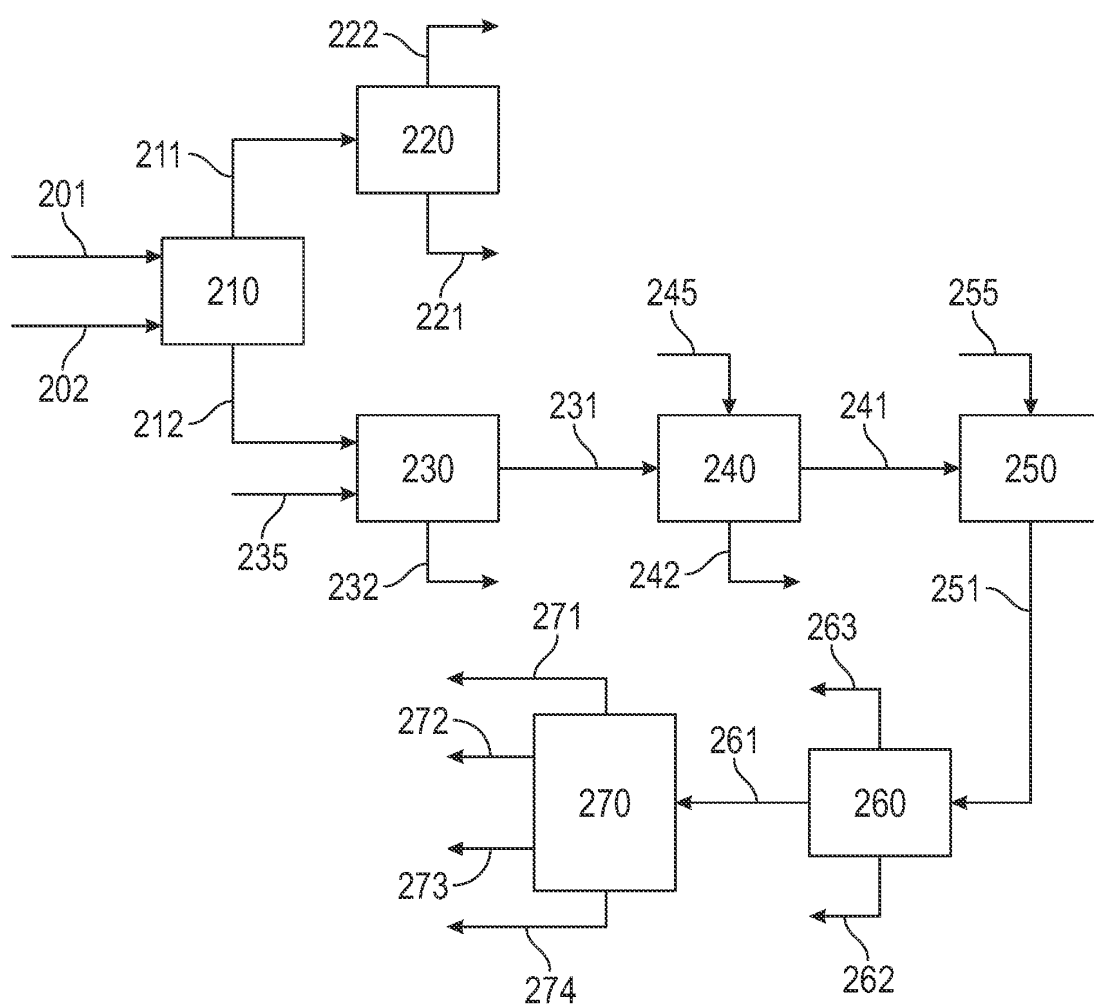
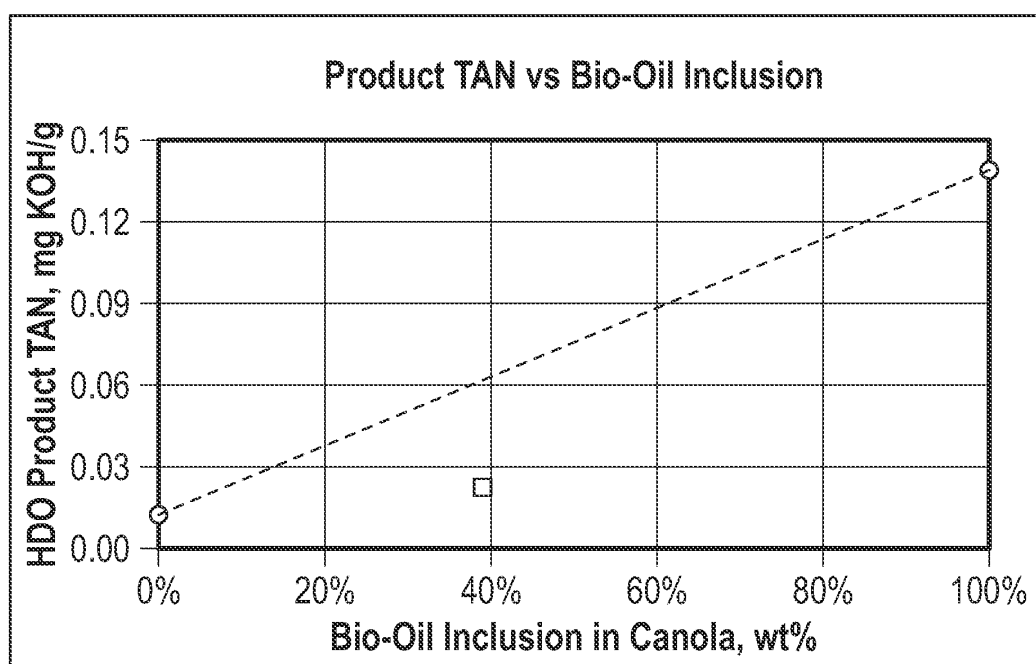


FIG. 3

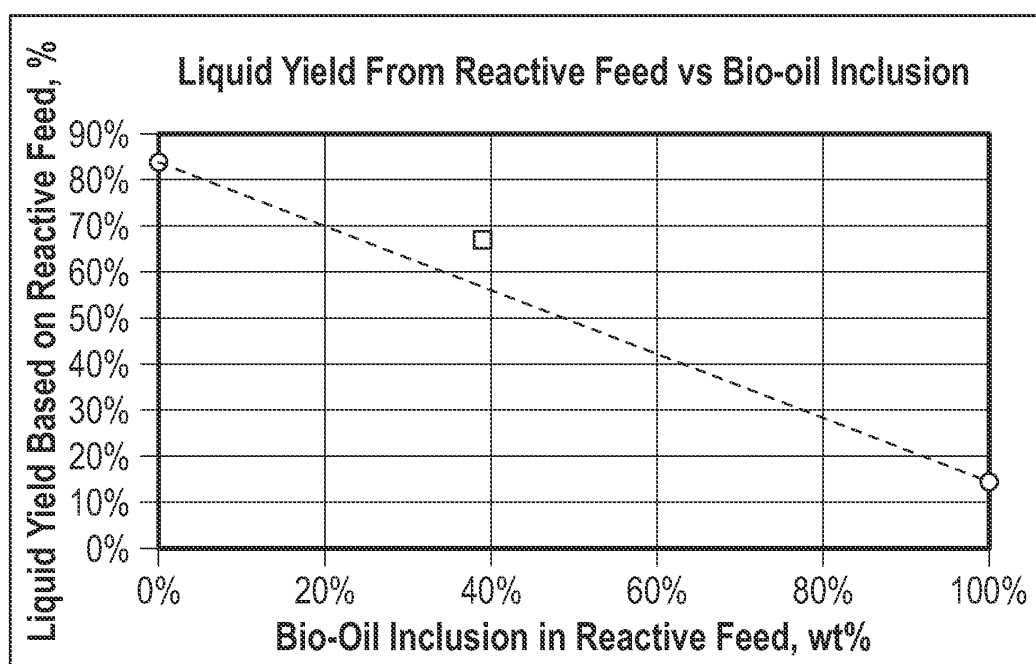
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Total Acid Number (TAN) of final reaction products relative to bio-oil inclusion in canola oil. TAN was significantly lower for bio-oil blended in canola oil than anticipated by the unity line between.

FIG. 4

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Liquid product yields relative to bio-oil inclusion in canola. Yield was significantly higher for bio-oil blended in canola oil than anticipated by the unity line between.

FIG. 5