Claims

1. A process for the production of a hydrocarbon product comprising contacting a feedstock, optionally a hydrogen-containing gas and optionally a solvent with a catalyst composition comprising an active metal selected from platinum, palladium, nickel, cobalt, copper, ruthenium, rhodium and rhenium and an active porous material which is active for the isomerisation of unsaturated hydrocarbons, characterised in that the feedstock consists essentially of at least one compound selected from the group consisting of a fatty acid, a fatty acid ester and mixtures of these compounds and optionally a diluent selected from at least one hydrocarbon.

2. A process as claimed in claim 1, wherein said catalyst composition comprises an active metal in dispersed form supported on particles of a support material.

3. A process as claimed in claim 2, wherein said support material comprises particles of said active porous material.

4. A process as claimed in claim 2, wherein said support material comprises particles of silica-alumina, silica, a transition alumina, carbon, titania or zirconia.

5. A process as claimed in any one of the preceding claims, wherein said catalyst composition comprises particles of said active porous material having no active metal supported thereon.

6. A process as claimed in any one of the preceding claims, wherein said active metal comprises at least one of platinum, palladium, nickel, cobalt, copper, ruthenium, rhodium and rhenium.

7. A process as claimed in claim 6, wherein said active metal comprises platinum and/or palladium.

8. A process as claimed in any one of the preceding claims, wherein said active porous material comprises at least one of a zeolite, a silico-alumino-phosphate (SAPO) or sulphated zirconia.

9. A process as claimed in claim 8, wherein said active porous material comprises a zeolite having a molar ratio of silica to alumina of from 15 to 55.

10. A process as claimed in any one of the preceding claims, wherein said fatty acid contains from 4 to 26 carbon atoms.

11. A process as claimed in any one of the preceding claims, wherein the feedstock is contacted with the catalyst composition in the presence of a hydrogen-containing gas.

12. A process as claimed in any one of the preceding claims, wherein said hydrocarbon product comprises at least one branched hydrocarbon.

13. A process as claimed in any one of the preceding claims, wherein said hydrocarbon product comprises at least one cyclic hydrocarbon.

14. A process as claimed in any one of the preceding claims, wherein said hydrocarbon product comprises at least one aromatic hydrocarbon.

Claims

1. A process for the production of a hydrocarbon product comprising contacting a feedstock, optionally a hydrogen-containing gas and optionally a solvent with a catalyst composition comprising an active metal selected from platinum, palladium, nickel, cobalt, copper, ruthenium, rhodium and rhenium and an active porous material which is active for the isomerisation of unsaturated hydrocarbons comprising at least one of a zeolite, a silico-alumino-phosphate (SAPO) or sulphated zirconia, characterised in that the feedstock consists essentially of at least one compound selected from the group consisting of a fatty acid, an ester of a fatty acid with monofunctional alcohol and mixtures of these compounds and optionally a diluent selected from at least one hydrocarbon, and wherein the contacting causes the at least one compound to be hydrodeoxygenated and converted into the branched or cyclic hydrocarbon, the branched or cyclic hydrocarbon product having the same number of carbons as the at least one compound.

2. A process as claimed in claim 1, wherein said catalyst composition comprises an active metal in dispersed form supported on particles of a support material.

3. A process as claimed in claim 2, wherein said support material comprises particles of said active porous material.

4. A process as claimed in claim 2, wherein said support material comprises particles of silica-alumina, silica, a transition alumina, carbon, titania or zirconia.

5. A process as claimed in any one of the preceding claims, wherein said catalyst composition comprises particles of said active porous material having no active metal supported thereon.

6. A process as claimed in any one of the preceding claims, wherein said active metal comprises at least one of platinum, palladium, nickel, cobalt, copper, ruthenium, rhodium and rhenium.

7. A process as claimed in claim 6, wherein said active metal comprises platinum and/or palladium.

8. A process as claimed in claim 1, wherein said active porous material comprises a zeolite having a molar ratio of silica to alumina of from 15 to 55.

9. A process as claimed in any one of the preceding claims, wherein said fatty acid contains from 4 to 26 carbon atoms.

10. A process as claimed in any one of the preceding claims, wherein the feedstock is contacted with the catalyst composition in the presence of a hydrogen-containing gas.

11. A process as claimed in any one of the preceding claims, wherein said hydrocarbon product comprises at least one branched hydrocarbon.

12. A process as claimed in any one of the preceding claims, wherein said hydrocarbon product comprises at least one cyclic hydrocarbon.

13. A process as claimed in any one of the preceding claims, wherein said hydrocarbon product comprises at least one aromatic hydrocarbon.