CLAIMS

1. An integrated process for removing sulfur containing hydrocarbons from a hydrocarbon feedstock and activating a hydroprocessing catalyst, comprising:

(i) contacting said hydrocarbon feedstock to an alkaline extraction solution in an extraction vessel, to remove sulfides, disulfides, and mercaptans;

(ii) reacting the mercaptans removed from said hydrocarbon feedstock with an alkali present in said alkaline extraction solution to form thiolates;

(iii) contacting said thiolates in said alkaline extraction solution with an acid in the presence of a catalyst, to form a mixture of mercaptans and sulfides from said thiolates;

(iv) removing any mercaptans and sulfides produced in (iii) from said alkaline solution to form a mixture;

(v) removing any non-sulfur compounds from said mixture, and

(vi) activating a hydroprocessing catalyst by contact of said mercaptans and sulfides to said hydroprocessing catalyst.

2. The process of claim 1, comprising carrying out (i) and (ii) at a temperature of 15 °C to 80 °C .

3. The process of claim 2, comprising carrying out (i) and (ii) at a temperature of 40 °C to 60 °C.

4. The process of claim 1, comprising carrying out (i) and (ii) at a pressure of 10–50 bars.

5. The process of claim 1, comprising carrying out (iii) at a temperature of from 20 °C to 100 °C.

6. The process of claim 5, comprising carrying out (iii) at a temperature of 20 °C to 80 °C.

7. The process of claim 1, comprising removing water soluble sulfur containing compounds in (iv) via a water wash.

8. The method of claim 1, wherein removing any said mercaptans and sulfides comprises adsorbing said sulfur containing compounds to an adsorbent.

9. The method of claim 8, wherein said adsorbent is activated carbon, alumina, silica alumina, sand, a zeolite, or a regenerated spent catalyst.

10. The method of claim 1, wherein said hydrocarbon feedstream is natural gas, fuel gas, liquefied petroleum gas, a pentane mixture, light straight run naphtha, light thermally cracked naphtha, full straight run naphtha, full FCC cracked naphtha, heavy FCC cracked naphtha, heavy SR naphtha, aviation turbine fuel, kerosene, or a distillate fuel having a boiling point of up to 350 °C.

11. The process of claim 1, wherein said extraction vessel comprises a plurality of liquid – liquid contacting decks.

12. The process of claim 1, comprising carrying out step (iii) at a pressure of 1-30 bars.

13. The process of claim 1, comprising carrying out step (iii) for 15-60 minutes.