CLAIMS

1- PROCESS FOR GENERATING RENEWABLE STREAM FROM BIO-OIL characterized by producing a new filler for refining conversion processes, including hydroconversion through HEFA technologies, integrating a fatty stream with a fraction of bio-oil through the following process scheme:

(a) extraction of lignocellulosic bio-oil components by a fatty acid stream at temperatures in the range of 30 to 100 ºC, residence times from 0 to 10 h and grease:bio-oil stream ratios between 0.1 and 5 (w/w);

(b) separation of the extract and raffinate phases, where the extract contains fatty compounds and substances extracted from bio-oil;

(c) extract conversion process, such as hydrogenation of the extract phase under conditions typically employed in HEFA processes.

2. PROCESS, according to claim 1, characterized in that the separation of extract and raffinate phases occurs due to density differences.

3. PROCESS, according to claim 1, characterized in that the extract contains fatty compounds and compounds extracted from bio-oil.

4. PROCESS, according to claim 1, characterized in that the raffinate is composed of remaining bio-oil products.

5. PROCESS, according to claim 1, characterized in that the extract phase can be used again in other extractions, replacing the pure fatty stream and increasing the concentration of compounds from bio-oil.

6. PROCESS, according to claim 1, characterized in

that the bio-oil used in the extraction phase is obtained via thermochemical conversion processes of lignocellulosic biomass.

7. PROCESS, according to claim 1, characterized in that in the hydrogenation step two streams are generated: a gaseous stream, rich in CO_2, and an organic liquid stream composed of the hydrogenated product that can be used in the composition of the pool of Otto, Diesel and Brayton cycle fuels.

8. RENEWABLE STREAM BASED ON BIO-OIL FOR THE PRODUCTION OF RENEWABLE FUELS, obtained according to the process defined in claim 1, characterized in that the extract generated in step (b) comprises a mixture of fatty compound and compounds from bio-oil.

9. RENEWABLE STREAM BASED ON BIO-OIL, according to claim 8, characterized in that it contains between 0.1% and 50% m/m of compounds with renewable aromatic rings.

10. RENEWABLE STREAM BASED ON BIO-OIL, according to claim 8, characterized in that it has a water content of less than 2% m/m.

11. RENEWABLE STREAM BASED ON BIO-OIL, according to claim 8, characterized in that the bio-oil comes from lignocellulosic biomass, which is widely available.

12. RENEWABLE STREAM BASED ON BIO-OIL, according to claim 8, characterized in that its composition is suitable for processing in refining units, more specifically in hydroconversion units, such as HEFA units.

13. RENEWABLE STREAM BASED ON BIO-OIL FOR THE PRODUCTION OF RENEWABLE FUELS, obtained according to the process defined in claim 1, characterized in that the

converted extract originating from step (c) comprises mostly a mixture of aromatic and paraffinic compounds of renewable origin, whereby the aromatic compound content is at least 8% v/v.

14. RENEWABLE STREAM BASED ON BIO-OIL, according to claim 13, characterized in that it contains between 0.1% and 50% m/m of aromatic compounds in a mixture with paraffinic compounds of renewable origin.

15. RENEWABLE STREAM BASED ON BIO-OIL, according to claim 13, characterized in that it has a total acidity index equal to or less than 26 mg KOH/g, an oxygen content equal to or less than 2.8% m/m and a water content equal to or less than 0.18% mm.

16. RENEWABLE STREAM BASED ON BIO-OIL, according to claim 13, characterized in that the bio-oil comes from lignocellulosic biomass, which is widely available.

17. RENEWABLE STREAM BASED ON BIO-OIL, according to claim 13, characterized in that its composition is suitable for addition to the aviation biokerosene pool.