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(54) Title: A PROCESS FOR EXTRACTING ANTIOXIDANTS FROM OIL PALM BIOMASS

(57) Abstract: This present invention relates to a process for extracting and recovering of water soluble compounds with anti-oxidative properties from oil palm biomass such as oil palm leaves, palm pressed fibre and empty fruit bunches. The process can be a sub critical water extraction, sub critical carbon dioxide extraction, supercritical water extraction or supercritical carbon dioxide extraction. Concentration of total phenolic compounds, a type of water soluble antioxidants in the oil palm leaves, pressed fibre and empty fruit bunches ranges from 5 to 20mg/g of biomass. These water soluble antioxidants can be extracted and recovered by way of solvent free process which is more favorable as the usage of organic solvents during extraction may pose problems of toxicity, waste disposal, storage as well as health issues. There are four different embodiments for extracting water soluble compounds with anti-oxidative properties. The four different embodiments are as follows: i) a process without solvent and without adsorbent; ii) a process without solvent but with adsorbent; iii) a process with solvent and with adsorbent; and iv) a process with solvent but without adsorbent. The adsorbent is silica gel and the solvent is alcohol such as methanol.

