

Title (en)

METHODS OF PRODUCING BIOFUELS, CHLOROPHYLLS AND CAROTENOIDS

Title (de)

VERFAHREN ZUR HERSTELLUNG VON BIOKRAFTSTOFFEN, CHLOROPHYLLEN UND CAROTINOIDEN

Title (fr)

PROCÉDÉS DE PRODUCTION DE BIOCARBURANTS, DE CHLOROPHYLLES ET DE CAROTÉNOÏDES

Publication

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Application

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Abstract (en)

[origin: WO2012138438A1] A method for producing biofuels along with valuable food and nutraceutical products is provided. A method of making biofuels includes dewatering substantially intact algal cells to make an algal biomass, extracting neutral lipids along with carotenoids and chlorophylls from the algal biomass, and separation of the carotenoids and chlorophylls using adsorption or membrane diafiltration or other methods. The remaining neutral lipids are esterified with a catalyst in the presence of an alcohol. The method also includes separating a water soluble fraction comprising glycerin from a water insoluble fraction comprising fuel esters and distilling the fuel esters under vacuum to obtain a C 16 or shorter fuel esters fraction, a C16 or longer fuel ester fraction, and a residue comprising omega-3 fatty acids esters and remaining carotenoids. The method further includes hydrogenating and deoxygenating at least one of (i) the C16 or shorter fuel esters to obtain a jet fuel blend stock and (ii) the C16 or longer fuel esters to obtain a diesel blend stock.

IPC 8 full level

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Citation (search report)

See references of WO 2012138438A1

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