

Title (en)  
Process for the preparation of methyl esters of fatty acids.

Title (de)  
Verfahren zur Herstellung von Fettsäuremethylestern.

Title (fr)  
Procédé de préparation d'esters méthyl d'acides gras.

Publication  
**EP 0184740 A2 19860618 (DE)**

Application  
**EP 85115217 A 19851130**

Priority  
DE 3444893 A 19841208

Abstract (en)  
[origin: ES8606242A1] Fatty acid alkyl esters are produced by catalytic transesterification of natural fats and oils containing free fatty acids. In a preliminary esterifying step, the free fatty acids present are reacted with a C1-C4 alkanol (e.g., methanol) in the presence of an acidic esterification catalyst, at a temperature of about 50 DEG to 120 DEG C. and at substantially atmospheric pressure. The resulting reaction mixture is allowed to separate into two phases: (1) an alcohol phase containing the acidic esterification catalyst and part of the water of reaction and (2) an oil phase. These phases separately recovered. The oil phase is then extracted with an immiscible extractant, preferably comprising a mixture of glycerol and methanol, to remove residual water of reaction. In the final step the extracted oil phase is transesterified with a C1-C4 alkanol, e.g. methanol, in the presence of an alkali catalyst and at substantially atmospheric pressure.

Abstract (de)  
Ausgehend von freie Fettsäuren enthaltenden natürlichen Fetten und Ölen können Fettsäuremethylester dadurch erhalten werden, daß man a) die im Ausgangsmaterial vorhandenen freien Fettsäuren in Gegenwart von sauren Veresterungskatalysatoren bei 50 bis 120 °C und Drucken von Normaldruck bis 5 bar mit Methanol, das gegenüber den freien Fettsäuren im Überschuß vorhanden ist, verestert und die den Katalysator und einen Teil des Reaktionswassers enthaltende Alkoholphase abtrennt, b) die verbleibende Ölphase zur Entfernung des restlichen Reaktionswassers mit einem Glycerin-Methanol-Gemisch extrahiert und c) die behandelte Ölphase der alkalikatalysierten drucklosen Umesterung mit Methanol unterwirft.

IPC 1-7  
**C07C 67/02**

IPC 8 full level  
**C07C 67/02** (2006.01); **C07C 67/03** (2006.01); **C07C 67/58** (2006.01); **C07C 69/24** (2006.01); **C07C 69/52** (2006.01); **C07C 69/58** (2006.01); **C11B 3/02** (2006.01); **C11C 3/00** (2006.01); **C11C 3/04** (2006.01)

CPC (source: EP US)  
**C11C 3/003** (2013.01 - EP US); **C11C 3/04** (2013.01 - EP US)

Cited by  
WO2012054946A1; CN103013678A; DE3707563A1; EP1308498A1; AT399336B; US7951967B2; US7256301B2; WO9115452A1; WO2009123369A1; US8530684B2; WO2015012538A1; US9938487B2; WO2010053258A2; US7828978B2; US8895765B2; WO2011008058A2; US9322004B2; EP1322588B1; EP2358851B2

Designated contracting state (EPC)  
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