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(54) Title: METHOD TO PRODUCE A CARBOXYLIC ACID ESTER FROM A CARBOXYLIC ACID AMMONIUM SALT BY ALCOHOLYSIS

(57) Abstract: The present invention relates to a method for obtaining a carboxylic acid ester from an aqueous solution of the corresponding carboxylic acid ammonium salt using alcoholysis. The recovered carboxylic acid ester may be subsequently hydrolyzed to produce the corresponding carboxylic acid.

INTERNATIONAL SEARCH REPORT

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A. CLASSIFICATION OF SUBJECT MATTER

INV. C07C67/08 C07C69/675

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
C07C

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, PAJ, INSPEC, COMPENDEX

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	FILACHIONE E M ET AL: "Preparation of Esters by Reaction of Ammonium Salts with Alcohols" JOURNAL OF THE AMERICAN CHEMICAL SOCIETY, AMERICAN CHEMICAL SOCIETY, WASHINGTON, DC, US, vol. 73, 1951, pages 5265-5267, XP002201046 ISSN: 0002-7863 cited in the application the whole document	1-44
Y	US 2 565 487 A (FILACHIONE EDWARD M ET AL) 28 August 1951 (1951-08-28) cited in the application the whole document	1-44
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Further documents are listed in the continuation of Box C.

See patent family annex.

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- * & * document member of the same patent family

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C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X Y	US 3 935 238 A (NORTON ET AL) 27 January 1976 (1976-01-27) column 1, line 45 - column 2, lines 17,27-42; claims 1-9; examples 1-9,11	1,4,7,9, 10,21-25 2,3,5,6, 8,11-20, 26-44
Y	----- US 6 291 708 B1 (COCKREM MICHAEL CHARLES MILNER) 18 September 2001 (2001-09-18) cited in the application the whole document -----	1-44

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No
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Patent document cited in search report	Publication date	Publication date	Patent family member(s)	Publication date	
US 2565487	A	28-08-1951	NONE		
<hr style="border-top: 1px dashed black;"/>					
US 3935238	A	27-01-1976	CA	1018992 A1	11-10-1977
			DE	2401332 A1	18-07-1974
			GB	1415814 A	26-11-1975
			IT	1006769 B	20-10-1976
			JP	49095935 A	11-09-1974
<hr style="border-top: 1px dashed black;"/>					
US 6291708	B1	18-09-2001	AU	4473200 A	10-11-2000
			BR	0011220 A	18-11-2003
			CN	1382114 A	27-11-2002
			EP	1173402 A1	23-01-2002
			WO	0064850 A1	02-11-2000
<hr style="border-top: 1px dashed black;"/>					