

Title (en)  
LIQUID DETERGENTS COMPRISING LIPASE AND BLEACH CATALYST

Title (de)  
FLÜSSIGWASCHMITTEL MIT LIPASE UND EINEM BLEICHEKATALYSATOR

Title (fr)  
DÉTERGENTS LIQUIDES COMPRENANT UNE LIPASE ET UN CATALYSEUR DE BLANCHIMENT

Publication  
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Application  
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Abstract (en)  
[origin: WO2013092051A1] A detergent liquid composition comprising: . a) from 20 to 70 wt% surfactant, comprising at least 5 wt% (based on total liquid composition) anionic surfactant, . b) at least 1000 LU per gram of the liquid composition lipase, . c) 0.05 to 0.3 wt% of a transition metal catalyst, the catalyst being a ligand of the formula (I) complexed with a transition metal, selected from Fe(II) and Fe(III), . Where R1 and R2 are independently selected from: . C1-C4-alkyl, . C6-C10-ary, and, . a group containing a heteroatom capable of coordinating to a transition metal, wherein at least one of R1 and R2 is the group containing the heteroatom; preferably at least one of R1 or R2 is pyridin-2-ylmethyl, more preferably R1 is pyridin-2-ylmethyl and R2 is methyl; . R3 and R4 are independently selected from hydrogen, C1-C8 alkyl, Cl-C8-alkylene-0-C1-C8-alkyl, C1-C8-alkylene-0-C6-C10- aryl, C6-C10-aryl, C1-C8-hydroxyalkyl, and -(CH2)nC(0)ORS, . wherein R5 is independently selected from: hydrogen, C1-C4- alkyl, n is from 0 to 4, and mixtures thereof; preferably R3=R4= - C(0)OMe; and, each R is independently selected from: hydrogen, F, Cl, Br, hydroxyl, C1-C4-alkylene-0-, -NH-CO-H, -NH-CO-C1-C4- alkyl, -NH2, -NH-C1-C4-alkyl, and Cl-C4-alkyl; preferably each R is hydrogen; . X is selected from C=0, -[C(R6)2]y- wherein Y is from 0 to 3, preferably 1, each R6 is independently selected from hydrogen, hydroxyl, C1-C4-alkoxy and C1-C4-alkyl preferably X is C=0. The invention also includes the method of use of the composition.

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