

Title (en)

WASHING OR CLEANING AGENT WITH ELECTROCHEMICALLY ACTIVATABLE MEDIATOR COMPOUND

Title (de)

WASCH- ODER REINIGUNGSMITTEL MIT ELEKTROCHEMISCH AKTIVIERBARER MEDIATORVERBINDUNG

Title (fr)

LESSIVE OU PRODUIT DE NETTOYAGE PRÉSENTANT UN COMPOSÉ MÉDIATEUR ACTIVABLE ÉLECTROCHIMIQUEMENT

Publication

EP 2737042 B1 20180314 (DE)

Application

EP 12740133 A 20120724

Priority

- DE 102011080099 A 20110729
- EP 2012064491 W 20120724

Abstract (en)

[origin: WO2013017476A1] The cleaning performance of washing or cleaning agents, more particularly in relation to bleachable contamination, needs to be improved without usage thereof causing damage to the textile being treated. This has been achieved essentially by using an active bleach species produced electrolytically from an organic mediator compound by a redox reaction.

IPC 8 full level

C11D 3/28 (2006.01); **C11D 3/30** (2006.01); **C11D 3/395** (2006.01); **C11D 11/00** (2006.01)

CPC (source: EP US)

C11D 3/28 (2013.01 - EP US); **C11D 3/30** (2013.01 - EP US); **C11D 3/3951** (2013.01 - US); **C11D 3/3955** (2013.01 - EP US); **C11D 3/3956** (2013.01 - EP US); **C11D 2111/46** (2024.01 - EP US)

Citation (examination)

- DE 19843571 A1 20000330 - DEGUSSA [DE]
- KIM H-C ET AL: "Electrochemically mediated bleaching of pulp fibers", ELECTROCHIMICA ACTA, ELSEVIER SCIENCE PUBLISHERS, BARKING, GB, vol. 47, no. 5, 3 December 2001 (2001-12-03), pages 799 - 805, XP004328058, ISSN: 0013-4686, DOI: 10.1016/S0013-4686(01)00760-5

Citation (opposition)

Opponent : PROCTER & GAMBLE COMPANY

- WO 9605283 A1 19960222 - PROCTER & GAMBLE [US], et al
- WO 2006032327 A1 20060330 - UNILEVER PLC [GB], et al
- DE 4445088 A1 19960620 - IBV IND BIOVERFAHREN [DE]
- WO 9748786 A1 19971224 - CALL HANS PETER [DE]
- WO 2010135499 A1 20101125 - DANISCO US INC [US], et al
- WO 2005116320 A1 20051208 - PROCTER & GAMBLE [US], et al
- WO 2009106406 A1 20090903 - UNILEVER NV [NL], et al
- BARRECA ET AL.: "Catalytic Efficiency of some Mediators in Laccase-Catalysed Alcohol Oxidation", BIOCATALYSIS AND BIOTRANSFORMATION, vol. 22, no. 2, 2004, pages 105 - 112, XP055542820

Opponent : Procter & Gamble

- US 2969329 A 19610124 - ALLEN HEININGER SAMUEL
- EP 1614742 A1 20060111 - PROCTER & GAMBLE [US]
- WO 2006128525 A2 20061207 - UNILEVER PLC [GB], et al
- ANONYMOUS: "Chemical Book entry: 1-Hydroxybenzotriazole", CHEMICALBOOK, 30 July 2020 (2020-07-30), pages 1 - 4, XP055809975, Retrieved from the Internet <URL:https://www.chemicalbook.com/ChemicalProductProperty_EN_CB2420172.htm> [retrieved on 20210602]
- ANONYMOUS: "Wikipedia entry: 4-Hydroxy-TEMPO", WIKIPEDIA, 24 June 2020 (2020-06-24), pages 1 - 3, XP055809969, [retrieved on 20210602]
- ANONYMOUS: "Ammonyx LO Product Bulletin", STEPAN PRODUCT BULLETIN, 1 January 2010 (2010-01-01), pages 1 - 2, XP055809961

Designated contracting state (EPC)

AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

DOCDB simple family (publication)

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DOCDB simple family (application)

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