

Title (en)

ELECTROCHEMICAL GENERATION OF QUATERNARY AMMONIUM COMPOUNDS

Title (de)

ELEKTROCHEMISCHE HERSTELLUNG QUARTÄRER AMMONIUMVERBINDUNGEN

Title (fr)

GÉNÉRATION ÉLECTROCHIMIQUE DE COMPOSÉS D'AMMONIUM QUATERNAIRES

Publication

**EP 2683417 A4 20150513 (EN)**

Application

**EP 12755483 A 20120308**

Priority

- US 201161450735 P 20110309
- US 2012028316 W 20120308

Abstract (en)

[origin: US2012228149A1] Method and apparatus for electrochemical generation of quaternary ammonium hypohalite salts, which may be combined with the capabilities of free chlorine to form a novel biocidal system. An aqueous solution preferably comprising dissolved quaternary ammonium halide salts is electrolyzed, which converts the halide component of the quaternary ammonium salt to the corresponding halogen. The halogen dissolves in the aqueous solution producing hypohalous acid and hypohalite anion. A combination of one or more quaternary ammonium compounds and a halide salt, surfactant, and/or germicide may be electrolyzed. The solution may be incorporated into a delivery system for example, a spray bottle or hand sanitizer, or as part of a dispensing system whereby quaternary ammonium halide salts absorbed onto wipes can be dispensed as quaternary ammonium hypohalite salts.

IPC 8 full level

**A61L 2/16** (2006.01); **A61L 2/18** (2006.01); **C07C 211/62** (2006.01)

CPC (source: EP US)

**C25B 1/24** (2013.01 - EP US); **C25B 1/26** (2013.01 - EP US); **C25B 1/30** (2013.01 - EP US); **C25B 3/27** (2021.01 - EP US);  
**C25B 9/00** (2013.01 - EP US); **C25B 11/02** (2013.01 - EP US)

Citation (search report)

- [XI] JP 2004130264 A 20040430 - KAO CORP
- See references of WO 2012122395A2

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)

**US 2012228149 A1 20120913**; CA 2866348 A1 20120913; EP 2683417 A2 20140115; EP 2683417 A4 20150513; JP 2014508779 A 20140410;  
SG 193364 A1 20131030; WO 2012122395 A2 20120913; WO 2012122395 A3 20121101

DOCDB simple family (application)

**US 201213415589 A 20120308**; CA 2866348 A 20120308; EP 12755483 A 20120308; JP 2013557873 A 20120308; SG 2013067582 A 20120308;  
US 2012028316 W 20120308