

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property
Organization
International Bureau

(43) International Publication Date
14 September 2023 (14.09.2023)



(10) International Publication Number
WO 2023/172039 A1

(51) International Patent Classification:

C10G 53/02 (2006.01) C10G 1/00 (2006.01)
C10G 29/02 (2006.01) C10G 1/10 (2006.01)
C10G 31/08 (2006.01)

(21) International Application Number:

PCT/KR2023/003121

(22) International Filing Date:

07 March 2023 (07.03.2023)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

10-2022-0028536 07 March 2022 (07.03.2022) KR

(71) Applicants: **SK INNOVATION CO., LTD.** [KR/KR]; 26, Jong-ro, Jongno-gu, Seoul 03188 (KR). **SK GEO CENTRIC CO., LTD.** [KR/KR]; 51, Jong-ro, Jongno-gu, Seoul 03161 (KR).

(72) Inventors: **JEON, Heejung**; 325 Expo-ro, Yuseong-gu, Daejeon 34124 (KR). **KIM, Okyoun**; 325 Expo-ro, Yuseong-gu, Daejeon 34124 (KR). **KIM, Kayoung**; 325 Expo-ro, Yuseong-gu, Daejeon 34124 (KR). **PARK, Gyu-tae**; 325 Expo-ro, Yuseong-gu, Daejeon 34124 (KR). **PARK, Youngmoo**; 325 Expo-ro, Yuseong-gu, Daejeon 34124 (KR). **LEE, Jaehwan**; 325 Expo-ro, Yuseong-gu, Daejeon 34124 (KR).

(74) Agent: **PLUS INTERNATIONAL IP LAW FIRM**; 10F, 809, Hanbat-daero, Seo-Gu, Daejeon 35209 (KR).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BN, BR, BW, BY, BZ,

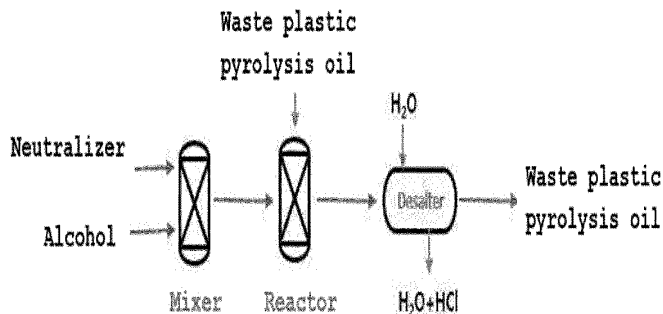
CA, CH, CL, CN, CO, CR, CU, CV, CZ, DE, DJ, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IQ, IR, IS, IT, JM, JO, JP, KE, KG, KH, KN, KP, KW, KZ, LA, LC, LK, LR, LS, LU, LY, MA, MD, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PA, PE, PG, PH, PL, PT, QA, RO, RS, RU, RW, SA, SC, SD, SE, SG, SK, SL, ST, SV, SY, TH, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, WS, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, CV, GH, GM, KE, LR, LS, MW, MZ, NA, RW, SC, SD, SL, ST, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, RU, TJ, TM), European (AL, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, ME, MK, MT, NL, NO, PL, PT, RO, RS, SE, SI, SK, SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, KM, ML, MR, NE, SN, TD, TG).

Published:

— with international search report (Art. 21(3))

(54) Title: METHOD FOR REMOVING CHLORINE FROM WASTE PLASTIC PYROLYSIS OIL



(57) Abstract: The present disclosure relates to a method for removing chlorine from waste plastic pyrolysis oil, the method including: (S1) mixing and reacting waste plastic pyrolysis oil with a neutralizing solution that contains a neutralizer containing M-OR₁ and a solvent; and (S2) subjecting a fluid generated in the step (S1) to a water treatment to remove chlorine, wherein M is an alkali metal or an alkaline earth metal, and R₁ is a C₁ to C₁₀ alkyl group.

WO 2023/172039 A1