

(51) International Patent Classification:
B01D 3/00 (2006.01)

(21) International Application Number:

PCT/US2012/022718

(22) International Filing Date:

26 January 2012 (26.01.2012)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

61/437,589 29 January 2011 (29.01.2011) US

(71) Applicant (for all designated States except US): **EMERY OLEOCHEMICALS LLC** [US/US]; 4900 Este Avenue, Cincinnati, OH 45232 (US).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **WALKER, Thomas, Chad** [US/US]; 1513 Shirepeak Way, Independence, KY 41051 (US). **TURNER, Stephen, Wayne** [US/US]; 6028 Meadow Falls Drive, Hamilton, OH 45011 (US). **LANDWEHR, Jay, William** [US/US]; 1044 Cedar Brook Drive, Villa Hills, KY 41017 (US). **DA SILVA ROSA, Douglas** [BR/US]; 8794 Applesseed Drive, Cincinnati, OH 45249 (US). **DURCHHOLZ, Mark, Elliot** [US/US]; 8127 Fox Knoll Drive, West Chester, OH 45069 (US).(74) Agents: **CAREY, James, P.** et al.; Wood, Herron & Evans, LLP, 2700 Carew Tower, 441 Vine Street, Cincinnati, OH 45202-2917 (US).

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

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LR, LS, MW, MZ, NA, RW, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, 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, MK, MT, NL, NO, PL, PT, RO, RS, SE, SI, SK, SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

— without international search report and to be republished upon receipt of that report (Rule 48.2(g))

(54) Title: AN IMPROVED METHOD OF PURIFYING A DICARBOXYLIC ACID

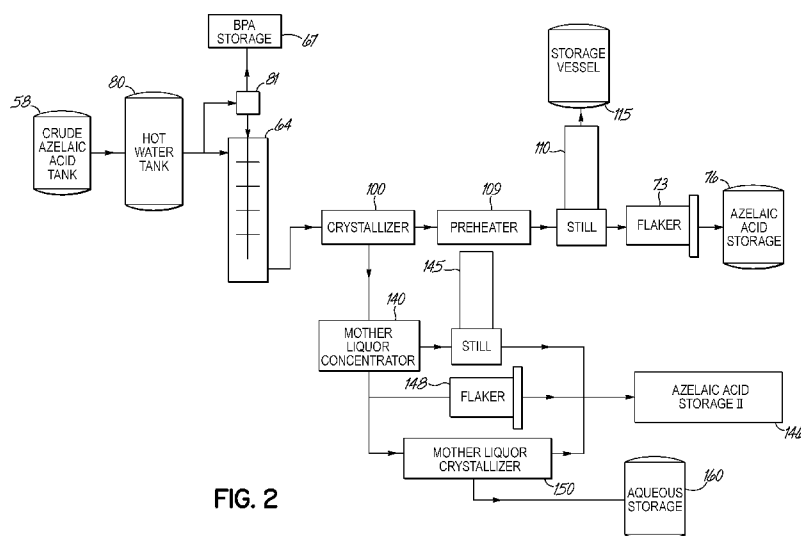


FIG. 2

(57) Abstract: A process for purifying a dicarboxylic acid that is derived from the mixed oxidation products from an ozonization of a mixture containing an ethylenically unsaturated compound having between 6 to 24 carbons, the process includes distilling the mixed oxidation products to provide a first distillate, and a second distillate, where the second distillate includes the dicarboxylic acid and impurity acids, partitioning the second distillate between water and a organic solvent, separating the organic solvent layer from the water layer, lowering the temperature of the water layer to crystallize at least a portion of the dicarboxylic acid, separating the crystallized dicarboxylic acid solid, melting the crystallized dicarboxylic acid, and distilling the liquid dicarboxylic acid to provide a purified dicarboxylic acid.

