

PatBase - Search results 24 January 2018

Search query (6): [SP]: 1. a process of producing partially refined waste glycerol by refining crude glycerol containing organic impurities, said process comprising: subjecting crude glycerol to a hydrophobic solvent to produce a mixture of crude glycerol and hydrophobic solvent separating the mixture of crude glycerol and hydrophobic solvent to produce a deoiled (do) glycerol and a phase containing hydrophobic solvent and organic impurities drying said do glycerol to produce a deoiled and dewatered (dow) glycerol subjecting a polar solvent to said dow glycerol to produce a mixture of polar solvent and dow glycerol and precipitating a salt from the mixture of polar solvent and dow glycerol and separating the mixture of polar solvent and dow glycerol into a light phase containing a deoiled, dewatered and desalted (dows) glycerol and the polar solvent and a heavy phase containing the salt, wherein said process further comprises: partially evaporating about 75 percent of said dow glycerol as a glycerol distillate without salt recovering a remaining portion of said dow glycerol in an evaporation discharge bottom and adding the polar solvent to said evaporation discharge bottom to precipitate salt and create a deoiled, dewatered and desalted (dows) glycerol. 2. the process of claim 1, wherein said dows glycerol is a fermentation grade glycerol. 3. the process of claim 1, wherein said dow glycerol comprises less than about 0.5 percent water. 4. the process of claim 1, further comprising partially evaporating the dow glycerol before subjecting it to the polar solvent. 5. the process of claim 1, further comprising the step of evaporating the polar solvent from the dows glycerol to produce a purified dows glycerol. 6. the process of claim 5, wherein said evaporating comprises flash evaporation. 7. the process of claim 2, wherein said fermentation grade glycerol is salt-containing glycerol. 8. the process of claim 1, wherein said polar solvent is isopropanol.

Results: 16**Search history**

Search FT=(glycerol AND hydrophobic solvent AND polar solvent and alcohol and hexane and dry and butanol) (Results 58)

1:

Search FT=(glycerol and alcohol and hexane and dry and butanol) (Results 14801)

2:

Search AP=(WO2015026870) (Results 0)

3:

Search AP=(US2016200652) (Results 0)

4:

Search FT=(PRODUCTION OF PARTIALLY REFINED WASTE GLYCEROL) (Results 3)

5:

Search [SP]: 1. a process of producing partially refined waste glycerol by refining crude glycerol containing organic impurities, said process comprising: subjecting crude glycerol to a hydrophobic solvent to produce a mixture of crude glycerol and hydrophobic solvent separating the mixture of crude glycerol and hydrophobic solvent to produce a deoiled (do) glycerol and a phase containing hydrophobic solvent and organic impurities drying said do glycerol to produce a deoiled and dewatered (dow) glycerol subjecting a polar solvent to said dow glycerol to produce a mixture of polar solvent and dow glycerol and precipitating a salt from the mixture of polar solvent and dow glycerol and separating the mixture of polar solvent and dow glycerol into a light phase containing a deoiled, dewatered and desalted (dows) glycerol and the polar solvent and a heavy phase containing the salt, wherein said process further comprises: partially evaporating about 75 percent of said dow glycerol as a glycerol distillate without salt recovering a remaining portion of said dow glycerol in an evaporation discharge bottom and adding the polar solvent to said evaporation discharge bottom to precipitate salt and create a deoiled, dewatered and desalted (dows) glycerol. 2. the process of claim 1, wherein said dows glycerol is a fermentation grade glycerol. 3. the process of claim 1, wherein said dow glycerol comprises less than about 0.5 percent water. 4. the process of claim 1, further comprising partially evaporating the dow glycerol before subjecting it to the polar solvent. 5. the process of claim 1, further comprising the step of evaporating the polar solvent from the dows glycerol to produce a purified dows glycerol. 6. the process of claim 5, wherein said evaporating comprises flash evaporation. 7. the process of claim 2, wherein said fermentation grade glycerol is salt-containing glycerol. 8. the process of claim 1, wherein said polar solvent is isopropanol. (Results 16)

1) Family number: 7502767 (US4164507A)

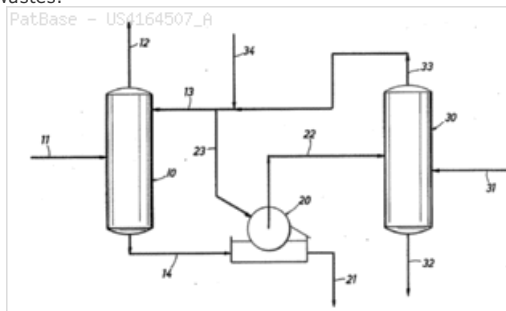
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Title: Process for separation of salt from heavy ends wastes of glycerine manufacture

Abstract: Source: US4164507A A process is described for separating salt (sodium chloride) from the polyglyceride-containing organic phase of the heavy ends waste or glycerine foots still bottoms obtained in conventional manufacture of glycerine via hydrolysis of epichlorohydrin or glycerol dichlorohydrins. In this process, the heavy ends wastes made up primarily of salt and polyglycerides and containing less than about 6 percent by weight water are treated at elevated temperatures with sufficient amounts of n-butanol to bring about precipitation of the salt followed by separation of the n-butanol-containing liquid phase substantially free of salt from the precipitated salt, cooling of the separated liquid phase to a temperature at which the n-butanol phase separates from the substantially salt-free polyglyceride phase without further salt precipitation and recovery of the n-butanol from the phase-separated polyglyceride phase. After recovery from the phase separated, substantially salt free polyglyceride phase, the n-butanol is suitably recycled to the first step of the process for use in precipitating additional quantities of salt from the heavy ends wastes.

Classifications:**International (IPC 8-9):** C01D3/06 (Advanced/Invention);

C01D3/00 (Core/Invention)

International (IPC 1-7): C02B1/20**CPC:** C01D3/06**European:** C01D3/06**US:** 203/14 203/63 210/729 210/737 260/412.500 554/177**Family:**

Publication number	Publication date	Application number	Application date
US4164507 A	19790814	US19780924412	19780713

Priority:

US19780924412 19780713

Probable Assignee: SHELL OIL CO**Assignee(s):** (std): SHELL OIL CO**Assignee(s):** SHELL OIL

2) Family number: 4299878 (US4560812A)

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Title: RECOVERY OF GLYCERINE FROM SALINE WATERS

Abstract: Source: US4560812A Glycerine is recovered from an aqueous waste stream containing but minor amounts of glycerine by the requested steps of; (1) evaporating, (2) contacting with pentanol, (3) separating precipitated salt, (4) flashing to remove pentanol, and (5) vacuum distillation. This process is particularly useful treating saline waste water resulting from the manufacture of epoxy resins.

Classifications:**International (ipc 8-9):** C07C27/00 C07C29/74 C07C29/76

C07C29/80 C07C29/86 C07C31/22 C07C67/00

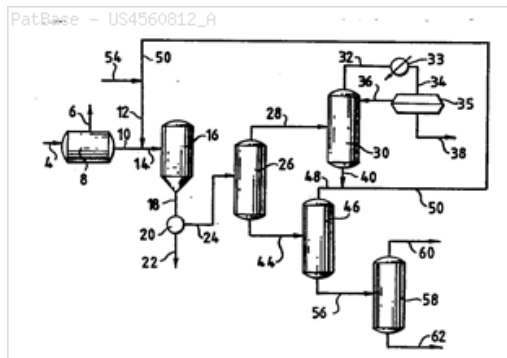
C11D19/00 (Advanced/Invention);

C07C27/00 C07C29/00 C07C31/00 C07C67/00

C11D19/00 (Core/Invention)

International (ipc 1-7): C02B9/00 C02F9/00 C07C29/74 C07C29/76

C07C29/80 C07C29/86 C07C31/22 C11D19/00

CPC: C07C29/80 Y02A20/402**European:** C07C29/80**US:** 423/178 423/206.1 423/206R 568/869**Family:**

Publication number	Publication date	Application number	Application date
AT37020 E	19880915	AT19850201923T	19851120
CA1248971 A1	19890117	CA19850495851	19851121
CN1004695 B	19890705	CN19851009000	19851207
CN1009195 B	19900815	CN19851005641	19850724
CN85105641 A	19870127	CN19851005641	19850724
CN85105641 A	19870128	CN19851005641	19850724
CN85109000 A	19860709	CN19851009000	19851207
DE3564801 D1	19881013	DE19853564801	19851120
EP0184880 A1	19860618	EP19850201923	19851120
EP0184880 B1	19880907	EP19850201923	19851120
ES549714 A0	19861201	ES19850549714	19851209
ES8701704 A1	19861201	ES19850549714	19851209
JP5058610 B4	19930827	JP19850276656	19851209
JP61140532 A2	19860627	JP19850276656	19851209
US4560812 A	19851224	US19840679773	19841210
ZA8509394 A	19860827	ZA19850009394	19851209

Priority:

CA19850495851 19851121 CN19851005641 19850724 EP19850201923 19851120
US19840679773 19841210

Probable Assignee: SHELL OIL CO

Assignee(s): (std): SHELL CANADA LTD ; SHELL INT RESEARCH ; SHELL INT RESEARCH M ; SHELL INTERNATIONAL RESEARCH M ; SHELL OIL CO ; SHELL RES LTD ; SHELL INTERNATL RES MIJ BV ; SHELL INT RESEARCH MIJ BV

Assignee(s): SHELL INT RESEARCH MIJ BV ; BLYTAS GEORGE C ; SHELL CANADA LIMITED ; SHELL OIL COMPANY ; SHERU INTERN RISAACHI MAACHATSUPII BV ; SHELL RESEARCH LIMITED ; SHELL OIL CO A CORP OF DE ; SHELL RESEARCH LTD ; SHELL INTERNATIONAL RESEARCH MAATSCHAPPIJ B V ; SHELL INTERNATIONALE RESEARCH MAATSCHAPPIJ B V ; SHELL INTERNATL RES MAATSCHAPPIJ BV ; SHELL INTERNATIONAL RESEARCH MAATSCHAPPIJ B V

Inventor(s): (std): JOOJI KONTANTEIN BURAITASU ; BLYTAS GEORGE C ; BLITAS GEORGE CONSTANTINE ; JIYOOJI KONTANTEIN BURAITASU ; BLYTAS GEORGE CONSTANTIN

Inventor(s): GEORGE CONSTANTINE BLITAS ; GEORGE CONSTANTIN BLYTAS

Agent(s): SMART AND BIGGAR

Designated states: AT CH DE FR GB IT LI NL

3) Family number: 40845452 (US2010170826A)

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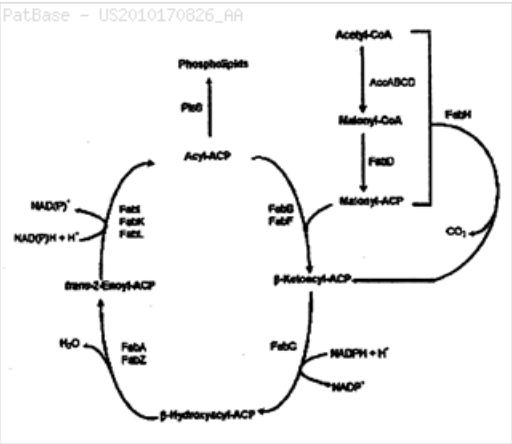
Title: PROCESS FOR PRODUCING LOW MOLECULAR WEIGHT HYDROCARBONS FROM RENEWABLE RESOURCES

Abstract: Source: US2010170826A Described herein are methods for cracking a biocrude, particularly catalytically cracking a biocrude that primarily includes olefinic hydrocarbons. Also described herein are compositions and methods of producing such compositions that are useful as fuels or fuel production feedstock.

Classifications:

International (ipc 8-9): A01K67/027 A61K31/00 C07C11/00
C07C31/02 C07C31/125 C07C33/02 C07C33/025 C07C57/03
C07C67/58 C07C69/24 C07C69/533 C07C69/58 C07H21/04
C07K14/00 C07K14/21 C08G63/48 C10G11/00 C10G11/02
C10G11/05 C10G3/00 C10L1/02 C10L1/04 C10L1/06 C10L1/08
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C12N15/63 C12N15/85 C12N5/10 C12N9/00 C12N9/02 C12N9/04

C12N9/10 C12N9/16 C12N9/20 C12N9/28 C12N9/88 C12P1/00 C12P21/00 C12P5/00 C12P5/02 C12P7/04 C12P7/26 C12P7/62 C12P7/64 C12Q1/02 C12Q1/68 C12R1/01 C12R1/06 C12R1/125 C12R1/19 C12R1/265 C12R1/63 C12R1/645 C12R1/73 C12R1/865 C12R1/89 (Advanced/Invention); C12N1/20 C12N1/21 C12N15/09 C12N15/31 C12N9/00 C12N9/16 C12P7/64 C12R1/01 C12R1/06 C12R1/125 C12R1/19 C12R1/265 C12R1/63 C12R1/645 C12R1/73 C12R1/865 C12R1/89 (Advanced/Non-invention); A01K67/027 C07C11/00 C07C57/00 C07C67/00 C07C69/00 C07H21/00 C07K14/195 C10G11/00 C10G3/00 C10L1/00 C10L1/10 C10L1/32 C11C3/00 C12N1/00 C12N1/12 C12N1/15 C12N1/19 C12N1/20 C12N1/21 C12N1/36 C12N15/09 C12N15/31 C12N15/52 C12N15/53 C12N15/54 C12N15/55 C12N15/63 C12N5/10 C12N9/00 C12N9/02 C12N9/04 C12N9/10 C12N9/16 C12N9/26 C12P1/00 C12P5/00 C12P7/02 C12P7/24 C12P7/62 C12P7/64 C12Q1/68 (Core/Invention); C12N15/09 C12N9/00 C12N9/16 (Core/Non-invention) **International (IPC 1-7):** C12N1/00 C12N9/10 C12P7/64 **CPC:** C07C33/02 C07C31/125 C10G2300/1011 C12N9/16 C12N9/93 C10G2300/301 C12N9/1025 C10G11/00 C10G11/05 C10G11/18 C10L1/00 C10L1/023 C10L1/19 C11C3/003 C12N1/14 C12N1/16 C12P7/6409 C10L1/02 C12P7/04 C12Y604/01002 C12P5/007 C12P23/00 C12P2203/00 C10G3/00 C10G2300/1014 C10G2300/1018 C10G2400/02 C10G2400/04 C10G2400/08 C10G2400/22 C10L1/06 C10L1/08 C12N9/0004 C12Y102/01 C12Y602/01 C12Y301/02 C12Y604/01 Y02P30/20 C12P5/026 C12P5/02 C12P7/26 C12Q1/02 C12N9/88 C10L1/04 C12Y602/01003 C12Y402/03 C10L2200/0469 C10L2270/023 C10L2270/026 C10L2270/04 C10L2290/26 Y02E50/343 C12N9/0008 C12N1/12 C12N15/63 C10L1/026 C10L1/328 C12P7/6436 C12P7/6463 C12P7/649 Y02E50/13 Y02P20/59 C12N15/52 C12N9/0006 C12Y101/01 C12Y101/01001 C12Y102/0105 C12Y103/99003 C12Y203/0102 C12Y203/01075 C12N1/20 C12N9/001 C12N9/1029 **European:** C10G11/00 C10G11/05 C10G11/18 C10G3/00 C10L1/00 C10L1/02 C10L1/02B C10L1/02D C10L1/06 C10L1/08 C10L1/19 C10L1/32D C11C3/00B C12N15/52 C12N9/00P C12N9/00P4 C12N9/00P6 C12N9/10C C12N9/10C1 C12N9/16 C12N9/93 C12P33/00 C12P7/04 C12P7/64C C12P7/64E C12P7/64E2D C12P7/64E4 M10G300/10B Y02E50/13 Y02E50/34B **US:** 1/1 208/106 208/106S 208/118 208/120.01 208/120.010S 208/16 208/16P 435/134 435/134P 435/134S 435/135 435/135S 435/148 435/157 435/157P 435/157S 435/166 435/166S 435/167 435/167S 435/189 435/243 435/243S 435/245 435/245S 435/252.3 435/252.300S 435/252.31 435/252.310S 435/252.32 435/252.320S 435/252.33 435/252.330S 435/252.34 435/252.340S 435/252.35 435/252.350S 435/252.8 435/254.11 435/254.110S 435/254.2 435/254.200S 435/254.21 435/254.210S 435/254.22 435/254.23 435/254.230S 435/254.3 435/254.300S 435/254.4 435/254.400S 435/254.5 435/254.500S 435/254.6 435/254.7 435/254.700S 435/254.8 435/257.2 435/257.200S 435/29 435/320.1 435/320.100S 435/325 435/325S 435/348 435/348S 435/350 435/352 435/357 435/358 435/358S 435/365 435/367 435/367S 435/369 435/41 435/419 435/419S 435/41S 44/313 44/313P 44/388 44/388P 530/350 530/350S 536/23.2 536/23.200S 536/23.7 536/23.700S 554/1 554/1S 554/224 554/224S 568/840 568/840S 568/909.5 568/909.500P 585/16 585/16S 585/20 800/13 800/13P



Family:

Publication number	Publication date	Application number	Application date
AU2007254151 AA	20071129	AU20070254151	20070518
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AU2008256921 AA	20081204	AU20080256921	20080520
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Priority:

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Probable Assignee: LS9 INC

Assignee(s): (std): BERRY DAVID ; BRUBAKER SHANE ; CHURCH GEORGE ; DA COSTA BERNARDO ; DEL CARDAYRE STEPHEN B ; LS9 INC ; FRIEDMAN LISA ; KEASLING JAY D ; HU ZHIHOU ; HU ZHIHAO ; SOMMERVILLE CHRIS ; SCHIRMER ANDREAS ; RUDE MATHEW ; VALLE FERNANDO ; SOMERVILLE CHRIS ; REG LIFE

Assignee(s): SCIENCES LLC
REG LIFE SCIENCES LLC NDGES DES STAATES IOWA SOUTH SAN FRANCISCO ; REG LIFE SCIENCES LLC SOUTH SAN FRANCISCO ; REG LIFESCIENCES LLC ; KEYBANK NATIONAL ASSOCIATION ; LS9 INC100 KIMBALL WAYSOUTH SAN FRANCISCOCA94080US

Inventor(s): (std): ANDREAS SCHIRMER ; BARRY DAVID ; BERNARDO DA COSTA ; BERRY DAVID ; BRUBAKER SHANE ; CARDAYRE STEPHEN B DEL ; CHRIS SOMERVILLE ; CHRUCH GEORGE ; CHURCH GEORGE ; COSTA BERNARDO DA ; DAVID BERRY ; DEL CARDAYRE STEPHEN ; DEL CARDAYRE STEPHEN B ; DEL CARDYRE STEPHEN B ; FERNANDO VALLE ; FRIEDMAN LISA ; FRIEDMAN LISA C ; GEORGE CHURCH ; HU ZHIAO ; HU ZHIHOU ; JAY D KEASLING ; KEASLING JAY ; KEASLING JAY D ; LISA FRIEDMAN ; RUDE MATHEW ; SCHIRMER ANDREAS ; DA COSTA BERNARDO ; SHANE BRUBAKER ; SOMERVILLE CRIS ; SOMMERVILLE CHRIS ; STEPHEN B DEL CARDAYRE ; ZHIHAO HU ; VALLE FERNANDO ; SOMERVILLE CHRIS

Inventor(s): VALLE FERNANDO SOUTH SAN FRANCISCO ; ZHIHOU HU ; SOMERVILLE CHRISUS ; SCHIRMER ANDREASUS ; KEASLING JAY DUS ; HU ZHIHAOUS ; FRIEDMAN LISAS ; DEL CARDAYRE STEPHEN BUS ; CHURCH GEORGEUS ; BRUBAKER SHANEUS ; BERRY DAVIDUS ; STEPHEN B DEL CARDYRE ; SOMERVILLE CHRIS SOUTH SAN FRANCISCO ; DAVID BARRY ; SCHIRMER ANDREAS SOUTH SAN FRANCISCO ; KEASLING JAY D BERKELEY ; KEASLING JAY D BERKELY ; HU ZHIAO CASTRO VALLEY ; HU ZHIHAO SOUTH SAN FRANCISCO ; FRIEDMAN LISA SOUTH SAN FRANCISCO ; DEL CARDAYRE STEPHEN B BELMONT ; DEL CARDAYRE STEPHEN B COURT BELMONT ; CRIS SOMERVILLE ; CHURCH GEORGE SOUTH SAN FRANCISCO ; CHRIS SOMMERVILLE ; BRUBAKER SHANE SOUTH SAN FRANCISCO ; BERRY DAVID SOUTH SAN FRANCISCO

Agent(s): FISHER ADAMS KELLY ; FISHER ADAMS KELLY PTY LTD ; FISHER ADAMS KELLY CALLINANS ; SPRUSON AND FERGUSON ; TORYS LLP ; BERESKIN AND PARR LLP SENCRL SRL ; GRUENECKER PATENT U RECHTSANWAELTE PARTG MBB ; GRUENECKER KINKELDEY STOCKMAIR AND SCHWANHAEUSSER ANWALTSSOZIALTET ; GRUENECKER KINKELDEY STOCKMAIR AND SCHWANHAEUSSER ; GRUENECKER PATENT U RECHTSANWAELTE PARTG MBB ; MILTENYI PETER ; KAWAMOTO KAZUYA ; SHIMIZU HATSUSHI ; OSAKABE SUGURU ; LS9 INC ; LINDA R ; BRIGITTE A ; REG LIFE SCIENCES LLC ; BRIGITTE ; FOLEY AND LARDNER LLP ; DEGRANDIS PAULA A ; SLATER STACEY C ; SUPERKO COLLEEN ET AL ; SONG VICTOR L

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN SV SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

4) Family number: 42257024 (US2008249338A) © PatBase

Title: METHOD FOR PURIFICATION OF GLYCEROL

Abstract: Source: US2008249338A A method for purification of glycerol, especially crude glycerol from biodiesel production. The method uses gel-type acidic ion exchange resin beads to separate fatty acid salts and inorganic salts from the crude glycerol.

Classifications:

International (IPC 8-9): B01D15/36 B01J39/04 C07C29/74 C07C29/76 C07C31/22 (Advanced/Invention); B01D15/36 (Advanced/Non-invention); B01D15/26 B01J39/00 C07C29/00 C07C31/00 (Core/Invention)

International (IPC 1-7): C07C29/62 C07C31/22

CPC: C07C29/76

European: C07C29/76

US: 568/870 568/913

Family:

Publication number	Publication date	Application number	Application date
BRPI0704952 A2	20081118	BR2007PI04952	20071214
CN101279891 A	20081008	CN200710300523	20071220
CN101279891 B	20110810	CN200710300523	20071220
EP1978009 A1	20081008	EP20070254866	20071214
EP1978010 A1	20081008	EP20070290412	20070404
IN02617DE2007 A	20081226	IN2007DE02617	20071214
US2008249338 AA	20081009	US20070004547	20071221
US7667081 BB	20100223	US20070004547	20071221

Priority: EP20070254866 20071214 EP20070290412 20070404 FR20072904121 20070404

Probable Assignee: ROHM AND HAAS CO

Assignee(s): (std): REZKALLAH ARESKI ; ROHM AND HAAS ; ROHM AND HAAS FRANCE SAS

Assignee(s): ROHM AND HAAS CO ; ROHM AND HAAS COMPANY

Inventor(s): (std): ARESKI REZKALLAH ; REZKALLAH ARESKI

Agent(s): KENT VENETIA KATHERINE ET AL; ROHM AND HAAS COMPANY, PATENT DEPARTMENT; KENNETH

Designated states: AL AT BA 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 PL PT RO RS SE SI SK TR

5) Family number: 42965946 (US2009048472A) © PatBase

Title: METHOD FOR PURIFICATION OF GLYCEROL FROM BIODIESEL PRODUCTION

Abstract: Source: US2009048472A A method for purification of crude glycerol, especially crude glycerol derived from biodiesel production using alkaline catalysts. The method comprises combining the crude glycerol with acid, separating a glycerol layer, and treating the glycerol layer to decolorize it.

Classifications:

International (IPC 8-9): C07C27/34 C07C29/74 C07C29/76 C07C29/80 C07C29/86 C07C29/88 C07C31/22 C07C67/58 (Advanced/Invention); C07C29/00 (Core/Invention)

International (IPC 1-7): A61C19/04

CPC: C07C29/88

European: C07C29/88
US: 568/869 568/870 568/913 568/913P

Family:

Publication number	Publication date	Application number	Application date
BRPI0803503 A2	20091020	BR2008PI03503	20080811
BRPI0803503 B1	20170314	BR2008PI03503	20080811
CN101367711 A	20090218	CN200810210495	20080814
CN101367711 B	20120530	CN200810210495	20080814
IN01747DE2008 A	20090403	IN2008DE01747	20080725
IN278564 B	20161230	IN2008DE01747	20080725
US2009048472 AA	20090219	US20080221582	20080805
US7534923 BB	20090519	US20080221582	20080805

Priority:

US20070964901 20070815 US20070964901P 20070815 US20080221582 20080805

Probable Assignee: ROHM AND HAAS

Assignee(s): (std): BANAVALI RAJIV MANOHAR ; HANLON ROBERT TRYON ; ROHM AND HAAS ; SCHULTZ ALFRED KARL

Assignee(s): ROHM AND HASS COMPANY ; ROHM AND HAAS CO ; ROHM AND HAAS COMPANY ; ROHM AND HASS CO

Inventor(s): (std): TRYON HANLON ROBERT ; ROBERT TRYON HANLON ; RAJIV MANOHAR BANAVALI ; ALFRED KARL SCHULTZ ; SCHULTZ ALFRED KARL ; MANOHAR BANAVALI RAJIV ; KARL SCHULTZ ALFRED ; HANLON ROBERT TRYON ; BANAVALI RAJIV MANOHAR

Agent(s): ROHM AND HAAS COMPANY,PATENT DEPARTMENT; ROHM AND HAAS CO PATENT DEPARTMENT; CRIMALDI KENNETH; KENNETH

6) Family number: 43078394 (US2009084025A)

© PatBase

Title: REDUCTION OF THE TOXIC EFFECT OF IMPURITIES FROM RAW MATERIALS BY EXTRACTIVE FERMENTATION

Abstract: Source: US2009084025A There are provided bioproducts and methods of improving production of the bioproducts from engineered microbial cells, the methods comprising: providing a fermentation broth comprising a crude carbon source; inoculating said fermentation broth with said microbial cells; and incubating the inoculated fermentation broth; wherein said bioproduct is a hydrophobic solvent immiscible with said fermentation broth, and wherein a toxic side product present in said crude carbon source is soluble in said hydrophobic solvent. Also, provided are kits for practicing the methods of improving production of bioproducts.

Classifications:

International (IPC 8-9): C10L1/18 C12P5/00 C12P7/04 C12P7/62 C12P7/64 (Advanced/Invention); C10L1/10 C12P5/00 C12P7/02 C12P7/64 (Core/Invention)

International (IPC 1-7): C12P7/64

CPC: C12P7/649 Y02E50/13

European: C12P7/64E4 Y02E50/13

US: 435/134 435/134S 435/135 435/148 435/157 435/157S 435/166 435/166S 435/167 435/167S 435/252.3 435/252.33 435/254.11 44/307 44/307P

Family:

Publication number	Publication date	Application number	Application date
AU2008304180 AA	20090402	AU20080304180	20080926
AU2008304180 BB	20140227	AU20080304180	20080926
CA2692266 AA	20091222	CA20082692266	20080926
CN101802208 A	20100811	CN200880106604	20080926
CN101802208 B	20160518	CN200880106604	20080926
IN00223DN2010 A	20100730	IN2010DN00223	20100112
US2009084025 AA	20090402	US20080239562	20080926
US8313934 BB	20121120	US20080239562	20080926
WO09042950 A1	20090402	WO2008US77996	20080926

Priority:

US20070975798P 20070927 US20080239562 20080926 WO2008US77996 20080926

Probable Assignee: LS9 INC

Assignee(s): (std): DEL CARDAYRE STEPHEN B ; LS9 INC ; BHATIA MONICA ; COCKREM MICHAEL C M ; SANCHEZ RIERA FERNANDO ; SANCHEZ RIERA FERNANDO A

Assignee(s): REG LIFE SCIENCES LLC ; COCKREM MICHAEL CM ; LS9INC

Inventor(s): (std): BHATIA MONICA ; CARDAYRE STEPHEN B DEL ; COCKREM MICHAEL C M ; MONICA BHATIA ; SANCHEZ RIERA FERNANDO ; SANCHEZ RIERA FERNANDO A ; DEL CARDAYRE STEPHEN B ; FERNANDO SANCHEZ RIERA

Inventor(s): MICHAEL C M COCKREM ; STEPHEN B DEL CARDAYRE ; COCKREM MICHAEL CM

Agent(s): FISHER ADAMS KELLY; FISHER ADAMS KELLY PTY LTD; SPRUSON AND FERGUSON; TORYS LLP; BERESKIN AND PARR LLP SENCRL SRL; LS9 INC; LINDA R; SONG VICTOR ET AL

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

7) Family number: 43307876 (US2009137851A)

© PatBase

Title: PURIFICATION OF GLYCERIN OBTAINED AS A BIOPRODUCT FROM THE TRANSESTERIFICATION OF TRIGLYCERIDES IN THE SYNTHESIS OF BIOFUEL

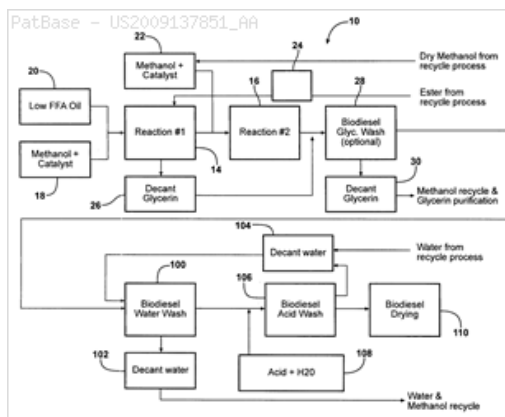
Classifications:

C07C29/00 C07C31/00 (Core/Invention)

CPC: C07C29/80 C07D241/08 C07C29/88

European: C07C29/80 C07C29/88

US: 568/869 568/913



Family:

Publication number	Publication date	Application number	Application date
US2009137851 AA	20090528	US20080290728	20081103
US7718833 BB	20100518	US20080290728	20081103

Priority:

US20070001530P 20071102 US20080290728 20081103

Probable Assignee: JOHANN HALTERMANN LTD

Assignee(s): (std): CHUNG CHI PING : JOHANN HALTERMANN LTD : MATHUR INDRESH : POTTHAST RAINER

Assignee(s): JPMORGAN CHASE BANK NA

Inventor(s): (std): CHUNG CHI PING ; MATHUR INDRESH ; POTTHAST RAINER

Agent(s): BUTZEL LONG,IP DOCKETING DEPT; BUTZEL LONG IP DOCKETING DEPT; BUTZEL

8) Family number: 43426785 (US2010311942A)

Title: GLYCEROL-BASED PRODUCT, PROCESS FOR OBTAINING SAME AND USE THEREOF IN THE MANUFACTURING OF DICHLOROPROPANOL

Abstract: Source: US2010311942A The invention relates to a glycerol-based product comprising at least one nitrogen-containing compound and of which the total content of nitrogen-containing compound expressed as elemental nitrogen (N) is less than or equal to 1 g of nitrogen (N)/kg of product, to a process for obtaining glycerol, and to its use in the manufacture of dichloropropanol and of derived products such as epichlorohydrin and products derived from epichlorohydrin.

Classifications:

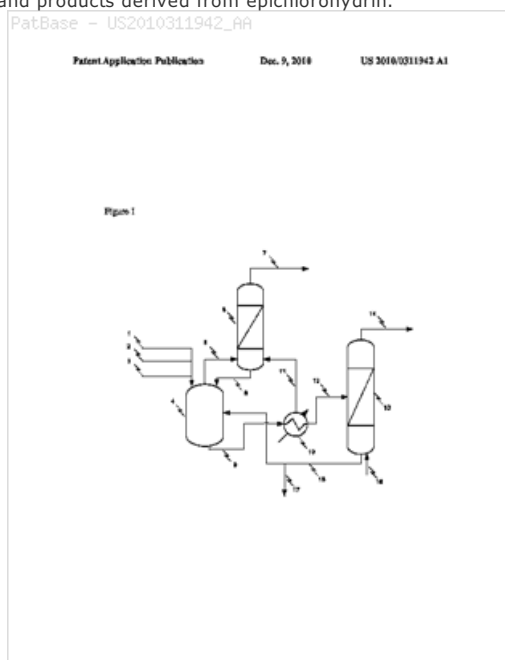
International (IPC 8-9): C07C29/62 C07C29/76 C07C31/22
C07C31/36 C07D301/02 C07D301/26 C07D303/08 C08G65/34
C08G73/00 C11B1/00 C11C3/10 (Advanced/Invention);
C07C27/02 C07C29/62 C07C29/76 C07C31/22 C07D303/08
C08F6/00 C08J3/00 (Advanced/Non-invention);
C07C29/00 C07C31/00 C07D301/00 C07D303/00 C11B1/00
C11C3/00 (Core/Invention);
C07C29/62 C07C31/22 (Core/Non-invention)

International (IPC 1-7): C07C29/62 C07C29/72 C07C31/22
C07D301/26 C07D303/08

CPC: C11C3/003 C07C29/62 C07C29/80 C07C29/86 C07C67/03
C07D301/26 C07D303/08 C07C29/76 C07C31/22

European: C07C29/62 C07C29/80 C07C29/86 C07C67/03
C07D301/26 C07D303/08 C11C3/00B

US: 528/422 528/425 528/425P 528/495 528/501 528/502C
528/502R 549/518 549/518S 568/841 568/841S



Family:

Publication number	Publication date	Application number	Application date
AR071272 AA	20100609	AR2008P105500	20081217
BRPI0821276 A2	20150616	BR2008PI21276	20081216
CA2707992 AA	20090625	CA20082707992	20081216
CN101925566 A	20101222	CN200880125556	20081216
EA201070742 A1	20101230	EA20100070742	20081216

EP2234947 A1	20101006	EP20080862084	20081216
FR2925045 A1	20090619	FR20070059891	20071217
FR2925045 B1	20120224	FR20070059891	20071217
IN04219CN2010 A	20110107	IN2010CN04219	20100707
JP2011506544 T2	20110303	JP20100538650T	20081216
KR20100099297 A	20100910	KR20107015847	20081216
MY157395 A	20160615	MY20100002847	20081216
TW200940487 A	20091001	TW20080148788	20081215
TWI485127 B	20150521	TW20080148788	20081215
US2010311942 AA	20101209	US20080745802	20081216
US8314205 BB	20121120	US20080745802	20081216
WO09077528 A1	20090625	WO2008EP67624	20081216

Priority:

FR20070059891 20071217 WO2008EP67624 20081216

Probable Assignee: SOLVAY SOCIETE ANONYME

Assignee(s): (std): BALTHASART DOMINIQUE ; GILBEAU PATRICK ; SOLVAY ; SOLVAY SOC ANONYME

Assignee(s): SOLVAY (SOCIETE ANONYME) ; SOLVAY S A ; SOLVAY SA ; SOLVAY SOCIETE ANONYME

Inventor(s): (std): BALTHASART DOMINIQUE ; GILBEAU PATRICK ; PATRICK GILBEAU ; DOMINIQUE BALTHASART

Inventor(s): GILBEAU, Patrick ; BALTHASART, Dominique

Agent(s): VANDE GUCHT ANNE; SOLVAY SA; SOLVAY C O B ORTEGO IAM NAFTA; OBLON SPIVAK MCCLELLAND MAIER AND NEUSTADT LLP; VANDE GUCHT ANNE ET AL

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

9) Family number: 43489312 (US2011196180A)

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Title: METHODS AND COMPOSITIONS FOR PRODUCING OLEFINS

Abstract: Source: US2011196180A Compositions and methods for producing olefins are described herein. The olefins can be used to produced biofuels.

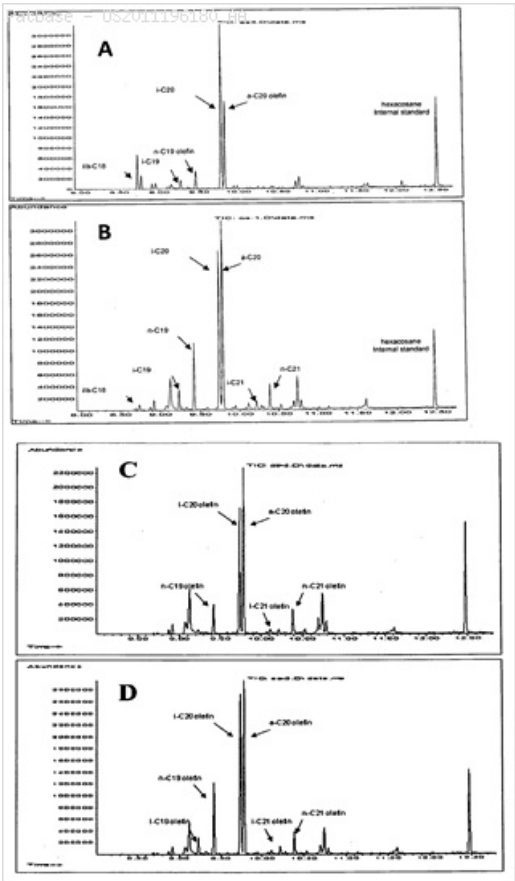
Classifications:

International (IPC 8-9): C07C1/00 C07C11/00 C07C11/02 C07C7/00 C07H21/04 C07K14/00 C10L1/04 C12N1/15 C12N1/19 C12N1/20 C12N1/21 C12N15/63 C12N5/10 C12N9/02 C12N9/14 C12P5/00 C12P5/02 (Advanced/Invention); C12N1/15 C12N1/19 C12N1/21 C12N15/53 C12N5/04 C12N5/06 (Advanced/Non-invention); C10L1/00 C12N9/02 C12P5/00 (Core/Invention); C12N1/15 C12N1/19 C12N1/21 C12N15/53 C12N5/04 C12N5/06 (Core/Non-invention)

CPC: C10G3/00 C10G2400/02 C10G2400/04 C10G2400/08 C10G2400/20 C10G2400/22 C10L1/06 C10L1/08 C12N9/0004 C12N9/88 Y02E50/343 Y02E50/13 C10G2300/1011 C07C11/02 C10L2290/26 C12P5/026 C10L1/04

European: C10G3/00 C12N9/00P C12N9/88 C12P5/02D Y02E50/34B

US: 435/166 435/167 435/167S 435/195 435/195S 435/232 435/252.3 435/252.300S 435/252.31 435/252.33 435/252.330S 435/252.34 435/252.35 435/254.11 435/254.110S 435/254.2 435/254.200S 435/254.21 435/254.23 435/254.3 435/254.4 435/254.5 435/254.6 435/254.7 435/254.8 435/320.1 435/320.100S 435/325 435/325S 435/348 435/348S 435/350 435/352 435/353 435/357 435/358 435/365 435/367 435/369 435/419 435/419S 530/350 530/350S 536/23.1 536/23.100S 536/23.2 585/16 585/16P 585/310 585/310S 585/800 585/800S



Family:

Publication number	Publication date	Application number	Application date
US2011196180 AA	20110811	US20080673752	20081222
US2012253088 AA	20121004	US20120452449	20120420
US2016340694 AA	20161124	US20130068542	20131031
US8183028 BB	20120522	US20080673752	20081222
US8597922 BB	20131203	US20120452449	20120420
WO09085278 A1	20090709	WO2008US14029	20081222

Priority:

US20070016183P 20071221 US20080051886P 20080509 US20080673752 20081222
US20110673752 20110414 US20120452449 20120420 US20080092378P 20080827
WO2008US14029 20081222 US20130068542 20131031

Probable Assignee: LS9 INC

Assignee(s): (std): ALIBHAI MURTAZA ; ALIBHAI MURTAZA F ; LS9 INC ; REG LIFE SCIENCES LLC ; RUDE MATHEW ; RUDE MATHEW A ; SCHIRMER ANDREAS W ; SCHIRMER ANDREAS

Inventor(s): (std): ALIBHAI MURTAZA ; ALIBHAI MURTAZA F ; RUDE MATHEW ; RUDE MATHEW A ; SCHIRMER ANDREAS ; SCHIRMER ANDREAS W

Agent(s): LINDA R ; LS9 INC ; BRIGITTE A ; STONE CHRISTOPHER L ET AL

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

10) Family number: 44006141 (US2010221798A)

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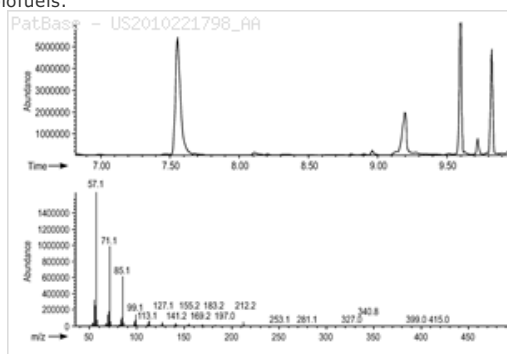
Title: METHODS AND COMPOSITIONS FOR PRODUCING HYDROCARBONS

Abstract: Source: US2010221798A Compositions and methods for producing hydrocarbons such as aldehydes, alkanes, and alkenes are described herein. Certain hydrocarbons can be used in biofuels.

Classifications:

International (IPC 8-9): C07C11/02 C07C29/86 C07C31/125 C07C45/00 C07C45/80 C07C47/02 C07C9/14 C07C9/22 C10L1/02 C10L1/04 C10L1/16 C12N1/13 C12N1/15 C12N1/19 C12N1/20 C12N1/21 C12N15/09 C12N15/52 C12N15/53 C12N15/70 C12N9/00 C12N9/02 C12N9/04 C12N9/10 C12N9/88 C12P1/00 C12P5/00 C12P5/02 C12P7/04 C12P7/24 C12P7/64 C12R1/01 C12R1/19 (Advanced/Invention); C12N1/21 C12R1/01 C12R1/19 (Advanced/Non-invention); C07C11/00 C07C45/00 C07C47/02 C07C9/00 C10L1/00 C10L1/10 C12N1/21 C12N15/53 C12N9/02 C12N9/04 C12N9/88 C12P5/00 C12P7/02 C12P7/24 C12P7/64 (Core/Invention)
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European: C10L1/02 C12N9/00P C12N9/88 C12P7/04 C12P7/24 C12P7/64C C12P7/64E C12P7/64E4 Y02E50/13 Y02T50/67J

US: 435/134 435/147 435/147P 435/157 435/166 435/166S 435/167 435/167S 435/183 435/189 435/23.1 435/252 435/252.3 435/252.300S 435/252.33 435/254.11 435/254.2 435/257.2 435/320.1 435/41 435/41 435/69.1 435/71.1 435/71.100S 530/350 536/23.1 536/23.2 568/420 568/420S 568/449 568/449S 585/14 585/14P 585/16 585/16S



Family:

Publication number	Publication date	Application number	Application date
AU2009246082 AA	20091119	AU20090246082	20090518
AU2009246083 AA	20091119	AU20090246083	20090518
BRPI0912690 A2	20120417	BR2009PI12690	20090518
CA2722441 AA	20101025	CA20092722441	20090518
CA2722442 AA	20101025	CA20092722442	20090518
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CN102027109 A	20110420	CN200980117664	20090518
CN102027109 B	20160106	CN200980117664	20090518
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CN105483068 A	20160413	CN201510870936	20090518
DE602009029342 D1	20150326	DE200960029342T	20090518
EP2283121 A2	20110216	EP20090747777	20090518
EP2283121 B1	20150211	EP20090747777	20090518
EP2288694 A1	20110302	EP20090747776	20090518
EP2927315 A1	20151007	EP20150153942	20090518
EP2998393 A1	20160323	EP20150179791	20090518
ES2536194 T3	20150521	ES20090747777T	20090518
IN07613DN2010 A	20110909	IN2010DN07613	20101028
IN07614DN2010 A	20110909	IN2010DN07614	20101028
JP2011520455 T2	20110721	JP20110509796T	20090518
JP2011522525 T2	20110804	JP20110509795T	20090518
KR101735549 B1	20170516	KR20107028190	20090518
KR101739511 B1	20170524	KR20107028136	20090518
KR20110019744 A	20110228	KR20107028136	20090518
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MX2010012192 A1	20110426	MX20100012192	20090518
MX2010012197 A1	20101206	MX20100012197	20090518
MX343063 B	20161021	MX20100012197	20090518
US2010221798 AA	20100902	US20100710238	20100222
US2010249470 AA	20100930	US20100710237	20100222
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US2013029395 AA	20130131	US20120625107	20120924
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US2015315617 AA	20151105	US20130061512	20131023
US2017240927 AA	20170824	US20160284727	20161004
US8268599 BB	20120918	US20100710238	20100222

US8323924 BB	20121204	US20100710237	20100222
US8658404 BB	20140225	US20120552522	20120718
US8846371 BB	20140930	US20120625107	20120924
US9481899 BB	20161101	US20140472192	20140828
US9670512 BB	20170606	US20130061512	20131023
WO09140695 A1	20091119	WO2009US44403	20090518
WO09140695 A8	20110407	WO2009US44403	20090518
WO09140696 A2	20091119	WO2009US44409	20090518
WO09140696 A3	20100325	WO2009US44409	20090518

Priority:

CN200980117663 20090518 CN200980117664 20090518 US20100710237 20100222
US20080053955P 20080516 EP20090747777 20090518 EP20090747776 20090518
WO2009US44409 20090518 US20100710238 20100222 US20120552522 20120718
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US20130061512 20131023 US20160284727 20161004

Probable Assignee: REG LIFE SCIENCES LLC

Assignee(s): (std): BRUBAKER SHANE ; BRUBAKER SHANE A ; HAJOS BRIGITTE A ; LS9 INC ; REG INC ; REG LIFE SCIENCES LLC ; RUE MATHEW ; SCHIRMER ANDREAS ; RUDE MATHEW ; RUDE MATHEW A ; SCHIRMER ANDREAS W

Assignee(s): REG LIFE SCIENCES LLC SOUTH SAN FRANCISCO

Inventor(s): (std): ANDREAS SCHIRMER ; BRUBAKER SHANE ; BRUBAKER SHANE A ; MATHEW RUDE ; MATHEW RUE ; RUDE MATHEW ; RUE MATHEW A ; RUE MATHEW ; SCHIRMER ANDREAS ; SCHIRMER ANDREAS ; SCHIRMER ANDREAS W ; SHANE BRUBAKER

Inventor(s): ANDREAS SCHIRMER ; SCHIRMER ANDREAS SOUTH SAN FRANCISCO ; RUDE MATHEW SOUTH SAN FRANCISCO ; BRUBAKER SHANE SOUTH SAN FRANCISCO

Agent(s): FISHER ADAMS KELLY; FISHER ADAMS KELLY PTY LTD; FISHER ADAMS KELLY CALLINANS; TORYS LLP; BERESKIN AND PARR LLP SENCRL SRL; GRUENECKER PATENT U RECHTSANWAELTE PARTG MBB; GRUENECKER KINKELDEY STOCKMAIR AND SCHWANHAUESSER ANWALTSSOZIETAET; GRUENECKER KINKELDEY STOCKMAIR AND SCHWANHAUESSER; GRUENECKER PATENT U RECHTSANWAELTE PARTG MBB; MILTENYI PETER; WILMERHALE/BOSTON; WILMERHALE BOSTON; LINDA R; LS9 INC; BRIGITTE A; REG LIFE SCIENCES LLC; FOLEY AND LARDNER LLP; SUPERKO COLLEEN ET AL

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

11) Family number: 44436523 (EP2159212A1)

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Title: METHOD FOR PURIFICATION OF GLYCEROL FROM BIODIESEL PRODUCTION

Abstract: Source: EP2159212A1 A method for purification of crude glycerol, especially crude glycerol derived from biodiesel production using alkaline catalysts. The method comprises combining the crude glycerol with acid, separating a glycerol layer, and treating the glycerol layer to decolorize it.

Classifications:

International (IPC 8-9): C07C29/74 C07C29/88 C07C31/22 (Advanced/Invention); C07C29/00 C07C31/00 (Core/Invention)

CPC: C07C29/88

European: C07C29/88

Family:

Publication number	Publication date	Application number	Application date
DE602008001445 D1	20100715	DE200860001445T	20080901
EP2159212 A1	20100303	EP20080163413	20080901
EP2159212 B1	20100602	EP20080163413	20080901
ES2344172 T3	20100819	ES20080163413T	20080901

Priority:

EP20080163413 20080901

Probable Assignee: ROHM AND HAAS

Assignee(s): (std): ROHM AND HAAS

Assignee(s): ROHM AND HAAS CO ; ROHM AND HAAS COMPANY

Inventor(s): (std): BANAVALI RAJIV MANOHAR ; HANLON ROBERT TRYON ; SCHULTZ ALFRED KARL

Agent(s): KENT VENETIA KATHERINE

Designated states: AL AT BA 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 TR

12) Family number: 44896525 (US2010105955A)

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Title: METHODS AND COMPOSITIONS FOR PRODUCING FATTY ALDEHYDES

Abstract: Source: US2010105955A Methods and compositions, including nucleotide sequences, amino acid sequences, and host cells, for producing fatty aldehydes are described.

Classifications:

International (IPC 8-9): C07C47/02 C12N1/00 C12N1/15 C12N1/19

C12N1/20 C12N1/21 C12N15/00 C12N15/09 C12N15/63 C12N5/10

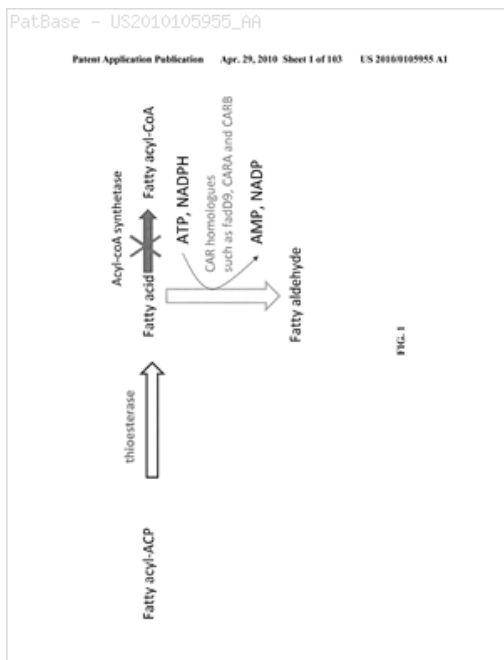
C12N9/00 C12N9/88 C12N9/90 C12P1/00 C12P7/24

C12P7/64 (Advanced/Invention);

C07C45/00 C07C47/00 C07C47/02 C12N1/20 C12N15/09

C12P7/24 (Advanced/Non-invention);

C07C47/02 C12N1/20 C12N15/00 C12P1/00
C12P7/24 (Core/Invention)
CPC: Y02P30/10 C12N9/16 C12N9/0006 C12N9/001 C12N9/1029
C12N9/90 C12N9/93 C12N15/52 C12P7/24 C12N1/00 C12N1/20
C12N15/09 C12P7/6436
European: C12N15/52 C12N9/00P2 C12N9/00P6 C12N9/10C1
C12N9/16 C12N9/90 C12N9/93 C12P7/24
US: 435/147 435/147S 435/252.33 435/252.330S 568/448 568/448P



Family:

Publication number	Publication date	Application number	Application date
AU2009302325 AA	20100415	AU20090302325	20091007
CA2738938 AA	20110329	CA20092738938	20091007
CN102232110 A	20111102	CN200980148338	20091007
CN102232110 B	20160106	CN200980148338	20091007
CN105274043 A	20160127	CN201510875963	20091007
DE602009033423 D1	20151015	DE200960033423T	20091007
EP2352824 A2	20110810	EP20090819847	20091007
EP2352824 A4	20130116	EP20090819847	20091007
EP2352824 B1	20150902	EP20090819847	20091007
EP2975122 A2	20160120	EP20150178817	20091007
EP2975122 A3	20160224	EP20150178817	20091007
ES2550467 T3	20151110	ES20090819847T	20091007
JP2012504963 T2	20120301	JP20110531157T	20091007
KR101717569 B1	20170317	KR20117010451	20091007
KR20110066973 A	20110617	KR20117010451	20091007
KR20170031795 A	20170321	KR20177006851	20091007
MX2011003597 A1	20110620	MX20110003597	20091007
US2010105955 AA	20100429	US20090575427	20091007
US8097439 BB	20120117	US20090575427	20091007
WO10042664 A2	20100415	WO2009US59904	20091007
WO10042664 A3	20100624	WO2009US59904	20091007

Priority:

CN200980148338 20091007 EP20090819847 20091007 US20080103447P 20081007
US20090575427 20091007 WO2009US59904 20091007

Probable Assignee: LS9 INC

Assignee(s): (std): ALIBHAI MURTAZA F ; HU ZHIAO ; LS9 INC ; REG LIFE SCIENCES LLC

Assignee(s): REG LIFE SCIENCES LLC SOUTH SAN FRANCISCO

Inventor(s): (std): ALIBHAI MURTAZA F ; HU ZHIAO ; ZHIAO HU

Inventor(s): MURTAZA F ALIBHAI

Agent(s): FISHER ADAMS KELLY; FISHER ADAMS KELLY PTY LTD; FISHER ADAMS KELLY CALLINANS; TORYS LLP; BERESKIN AND PARR LLP SENCRL SRL; GRUENECKER PATENT U RECHTSANWAELTE PARTG MBB; GRUENECKER KINKELDEY STOCKMAIR AND SCHWANHAUSSER ANWALTSSOZIETAT; GRUENECKER PATENT U RECHTSANWAELTE PARTG MBB; MILTENYI PETER; WILMERHALE/BOSTON; WILMERHALE BOSTON; LINDA R; LS9 INC; SUPERKO COLLEEN ET AL

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PE PG PH PL PT RO RS RU SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

13) Family number: 50808908 (US2012070868A)

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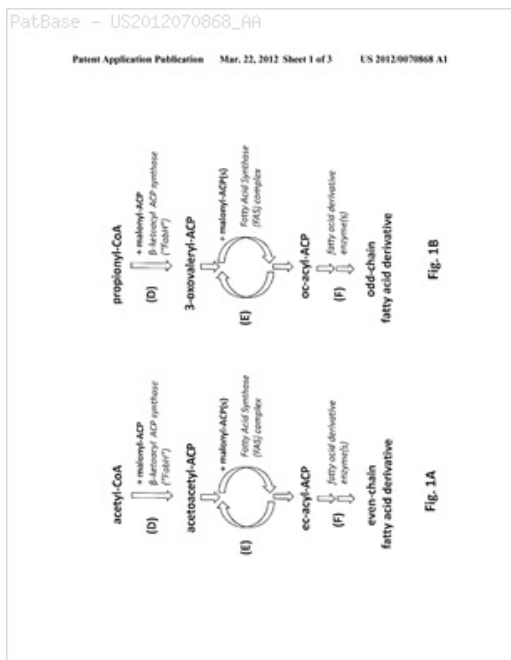
Title: PRODUCTION OF ODD CHAIN FATTY ACID DERIVATIVES IN RECOMBINANT MICROBIAL CELLS

Abstract: Source: US2012070868A Recombinant microbial cells are provided which have been engineered to produce fatty acid derivatives having linear chains containing an odd number of carbon atoms by the fatty acid biosynthetic pathway. Also provided are methods of making odd chain fatty acid derivatives using the recombinant microbial cells, and compositions comprising odd chain fatty acid derivatives produced by such methods.

Classifications:

International (IPC 8-9): C07C31/02 C07C317/02 C07C53/126
C07C57/03 C07C9/00 C11C1/00 C11C3/00 C12N1/13 C12N1/15

C12N1/19 C12N1/20 C12N1/21 C12N15/00 C12N15/09 C12N15/63
C12N15/74 C12N5/10 C12P11/00 C12P5/00 C12P5/02 C12P7/04
C12P7/64 (Advanced/Invention)
CPC: C07C53/126 C07C57/03 C12N9/0006 C12N9/1018
C12N9/1029 C12N9/1217 C12N9/16 C12N9/18 C12N9/88 C12N9/90
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C12Y301/02001 C12Y401/01041 C12Y401/03022 C12Y402/01033
C12Y402/03001 C12Y403/01019 C12Y504/99002 C12P7/6409
C12Y201/03001 C12N9/93 C12Y301/01005 C12Y301/01067
C12Y301/02014 C12Y602/01
European: C12N9/00P2 C12N9/10A3 C12N9/10C1 C12N9/12D
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C12Y101/01003 C12Y101/01085 C12Y201/03001 C12Y203/01041
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C12Y402/01033 C12Y402/03001 C12Y403/01019 C12Y504/99002
US: 435/130 435/130S 435/134 435/134P 435/136 435/157
435/157S 435/166 435/166S 435/167 435/167S 435/252.3
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435/254.110S 435/254.2 435/254.200S 435/254.21 435/254.210S
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435/254.300S 435/254.4 435/254.400S 435/254.5 435/254.500S
435/254.6 435/254.600S 435/254.7 435/254.700S 435/254.8
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435/366S 435/367 435/367S 435/412 435/412S 435/419 435/419S
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554/223S 568/28 568/28P 568/840 568/840S 585/16 585/16S



Family:

Publication number	Publication date	Application number	Application date
BR112014005938 A2	20170404	BR20141105938	20120308
CA2848253 AA	20140310	CA20122848253	20120308
CN103906845 A	20140702	CN201280054084	20120308
CN103906845 B	20170929	CN201280054084	20120308
CN107365733 A	20171121	CN201710682902	20120308
EP2756090 A1	20140723	EP20120709480	20120308
IN01856DN2014 A	20160624	IN2014DN01856	20140311
JP2014526262 T2	20141006	JP20140530656T	20120308
JP2017131219 A2	20170803	JP20170011738	20170126
JP6141282 B2	20170607	JP20140530656T	20120308
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US2015167033 AA	20150618	US20120344658	20120308
US8372610 BB	20130212	US20110232927	20110914
WO13039563 A1	20130321	WO2012US28256	20120308

Priority:

CN201280054084 20120308 JP20140530656T 20120308 US20110233489 20110915
US20110232927 20110914 US20100383086P 20100915 JP20170011738 20170126
WO2012US28256 20120308 US20120344658 20120308

Probable Assignee: REG LIFE SCIENCES LLC

Assignee(s): (std): HALIBURTON JOHN R ; HU ZHILAO ; LEE GRACE J ; LS9 INC ; REG LIFE SCIENCES LLC ; SCHIRMER ANDREAS W ; RUDE MATHEW A

Inventor(s): (std): ANDREAS SCHIRMER ; ANDREAS W SCHIRMER ; GRACE J LEE ; HALIBURTON JOHN R ; HU ZHILAO ; JOHN R HALIBURTON ; LEE GRACE J ; RUDE MATHEW A ; SCHIRMER ANDREAS W ; ZHILAO HU

Agent(s): TORYS LLP; BERESKIN AND PARR LLP SENCRL SRL; GRUENECKER KINKELDEY STOCKMAIR AND SCHWANHAUESSER; KAWAMOTO KAZUYA; SHIMIZU HATSUSHI; OSAKABE SUGURU; LINDA R; LS9 INC; JUDGE LINDA R

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PE PG PH PL PT QA RO RS RU RW SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

14) Family number: 58582764 (US2016200652A)

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Title: PRODUCTION OF PARTIALLY REFINED WASTE GLYCEROL

Abstract: Source: US2016200652A The disclosure relates to a novel glycerol purification process that produces partially refined waste glycerol for a variety of industrial applications. The disclosure encompasses a salt-containing partially refined glycerol composition that is suitable as a fermentation grade glycerol.

Classifications:

International (IPC 8-9): C07C29/76 C07C29/78 C07C29/80
C07C29/86 C07C29/88 C07C29/94 C07C31/22 (Advanced/Invention)

CPC: C07C29/94 C07C29/86 C07C29/76 C07C29/88 C07C31/22S

US: 568/852 568/869

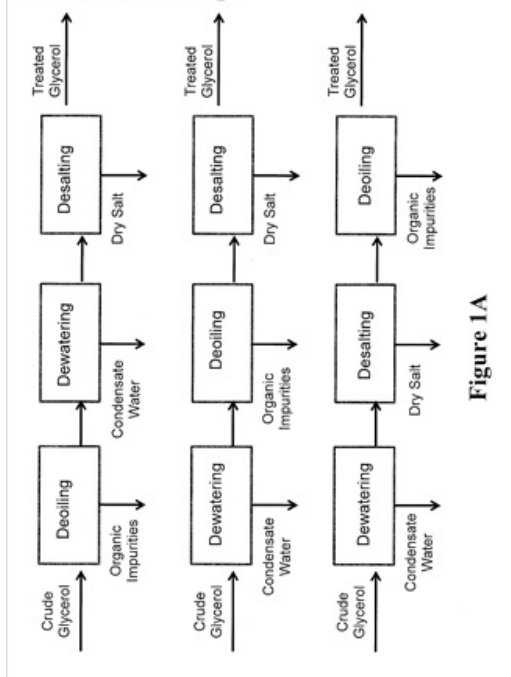


Figure 1A

Family:

Publication number	Publication date	Application number	Application date
AU2014308977 AA	20150226	AU20140308977	20140819
AU2014308977 BB	20170302	AU20140308977	20140819
CA2921625 AA	20160217	CA20142921625	20140819
CN105579426 A	20160511	CN201480053627	20140819
CO16056244 A2	20160930	CO20160056244	20160304
EP3019461 A1	20160518	EP20140766256	20140819
ID201708812 A	20170811	ID2016P0001462	20140819
IN201617006124 A	20160805	IN201617006124	20160222
JP2016529259 T2	20160923	JP20160536390T	20140819
KR20160060643 A	20160530	KR20167007133	20140819
MX2016002009 A1	20160518	MX20160002009	20140819
US2016200652 AA	20160714	US20140912104	20140819
US9868682 BB	20180116	US20140912104	20140819
WO15026870 A1	20150226	WO2014US51757	20140819

Priority:

US20130867473P 20130819 US20140912104 20140819 WO2014US51757 20140819

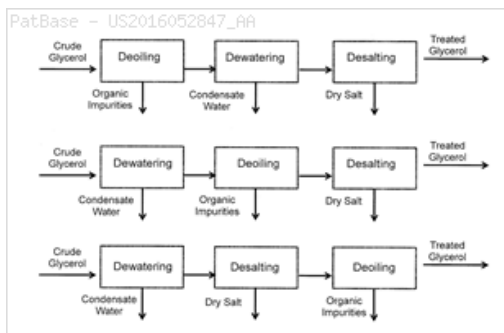
Probable Assignee: REG LIFE SCIENCES LLC**Assignee(s):** (std): KO MYONG K ; REG LIFE SCIENCES LLC**Assignee(s):** SANCHEZ RIERA FERNANDO A ; LI SIMON ; LIAO PERRY Y**Inventor(s):** (std): KO MYONG K ; LI SIMON ; LIAO PERRY Y ; SANCHEZ RIERA FERNANDO A**Inventor(s):** SIMON LI ; FERNANDO A SANCHEZ RIERA ; MYONG K KO ; PERRY Y LIAO**Agent(s):** SPRUSON AND FERGUSON; BERESKIN AND PARR LLP SENCRL SRL; CAROLINA MERCEDES DAZA MONTALVO; GRUENECKER PATENT U RECHTSANWALTE PARTG MBB; ACHMAD FATCHY; KAWAMOTO KAZUYA; SHIMIZU HATSUSHI; OSAKABE SUGURU; FOLEY AND LARDNER LLP; HAJOS BRIGITTE A**Designated states:** AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW**15) Family number: 61741656 (US2016052847A)**

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Title: PRODUCTION OF PARTIALLY REFINED WASTE GLYCEROL**Abstract:** Source: US2016052847A The disclosure relates to a novel glycerol purification process that produces partially refined waste glycerol for a variety of industrial applications. The disclosure encompasses a salt-containing partially refined glycerol composition that is suitable as a fermentation grade glycerol.**Classifications:****International (IPC 8-9):** C07C29/86 C07C31/22

C11D19/00 (Advanced/Invention)

CPC: C07C29/86 C11D19/00 C07C31/225**US:** 1/1 568/852 568/869



Family:

Publication number	Publication date	Application number	Application date
US2016052847 AA	20160225	US20140463635	20140819
US2017096379 AA	20170406	US20160295336	20161017
US9469586 BB	20161018	US20140463635	20140819

Priority:

US20130867473P 20130819 US20140463635 20140819 US20160295336 20161017

Probable Assignee: REG LIFE SCIENCES LLC

Assignee(s): (std): REG LIFE SCIENCES LLC

Inventor(s): (std): KO MYONG ; KO MYONG K ; LI SIMON ; LIAO PERRY ; LIAO PERRY Y ; SANCHEZ RIERA FERNANDO ; SANCHEZ RIERA FERNANDO A

Agent(s): FOLEY AND LARDNER LLP

16) Family number: 66345342 (WO17119007A1)

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Title: PROCESS FOR PURIFICATION AND REFINING OF GLYCEROL

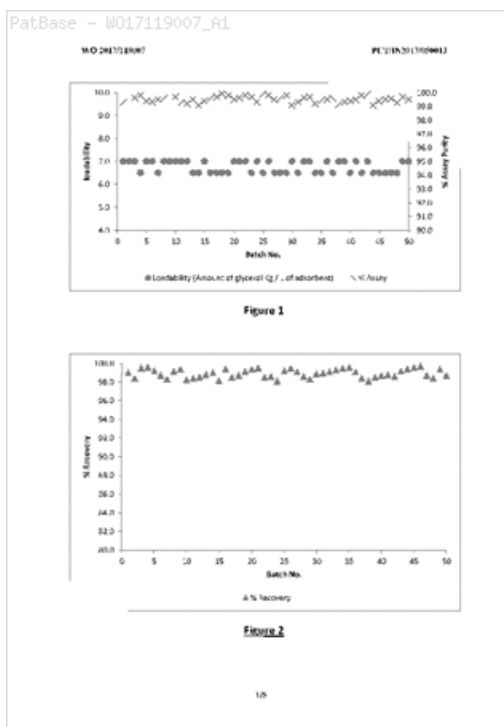
Abstract: The present disclosure describes a process for purification and refining of glycerol, relying primarily on at least one hydrophobic impurity affinity adsorbent and at least one polar impurity affinity adsorbent. The process yields pure and refined glycerol with high recovery and very high purity, wherein the percentage of impurities is well within the acceptable limits.

Classifications:

International (IPC 8-9): C07C29/76 C07C31/22

C11B3/00 (Advanced/Invention)

CPC: C07C29/76



Family:

Publication number	Publication date	Application number	Application date
IN201621000574 A	20170714	IN201621000574	20160107
WO17119007 A1	20170713	WO2017IN50013	20170109

Priority:

IN201621000574 20160107

Probable Assignee: CHEMICAL TECHNOLOGY INST

Assignee(s): (std): INNOW LLC ; INST OF CHEMICAL TECH

Assignee(s): OF CHEMICAL TECHNOLOGY INST ; CHEMICAL TECHNOLOGY INST

Inventor(s): (std): GUPTA VINOD ; JHA PAMELA ; KALE SANDEEP BHASKAR ; KOHLI ASHWANI KUMAR ; LALI ARVIND MALLINATH ; MITAL VINEET ; PATEL BHAVIN MANUBHAI ; VANZA MEGHNA JATINKUMAR ; YELNE PAYAL MEGHSHYAM

Inventor(s): BHAVIN MANUBHAI PATEL ; SANDEEP BHASKAR KALE
Agent(s): PHILLIPS PRASHANT ET AL
Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR
CU CY CZ DE DJ DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU
ID IE IL IN IR IS IT JP KE KG KH KM KN KP KR KW KZ LA LC LK LR LS LT LU LV LY MA MC MD ME MG
MK ML MN MR MT MW MX MY MZ NA NE NG NI NL NO NZ OM PA PE PG PH PL PT QA RO RS RU RW SA SC
SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW