

Search history

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Search 4: 1 and 2 (Results 1752)
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Search 6: organic said (Results 121)
Search 7: 6 and 5 (Results 0)
Search 8: organic (Results 1000000)
Search 9: 8 and 5 (Results 462)
Search 10: organic acid (Results 173210)
Search 11: 10 and 5 (Results 125)
Search 12: sugar (Results 541738)
Search 13: 12 and 11 (Results 125)
Search 14: methane (Results 304773)
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Title: ENHANCING FERMENTATION OF STARCH- AND **SUGAR**-BASED FEEDSTOCKS

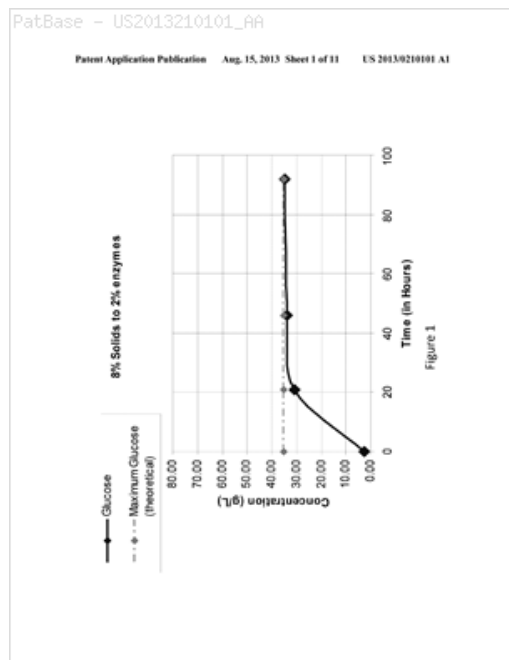
Abstract: Provided are methods, systems, and compositions for increasing the rate and/or yield of fermentation processes using blended feedstocks. Also provided are methods, systems, and compositions for decreasing the yield of one or more undesirable products during fermentation.

Classifications:

International (IPC 8-9): C12N C12N1/00 C12N1/16 C12N1/18 C12N1/20 C12P C12P19/02 C12P19/12 C12P19/14 C12P7/06 C12P7/10 C12P7/14 C12P7/20 C12P7/40 C12P7/64 C13K1/02 (Advanced/Invention); C12R1/645 C12R1/85 (Advanced/Non-invention)

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Family:

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Priority:

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US20140254441	20140416	US20140340179	20140724		

Probable Assignee: SWEETWATER ENERGY INC

Assignee(s): (std): SWEETWATER ENERGY INC ; PAREKH SARAD ; STAUBER BENJAMIN ; FELICE CARL P

Assignee(s): GRAANUL INVEST AS ; OU BIOFUEL ; CORNERSTONE COLLATERAL CORP ; SWEETWATER ENERGY INC500
LEE ROADROCHESTERNY14606US

Inventor(s): (std): STAUBER BENJAMIN ; PAREKH SARAD ; FELICE CARL P ; FELICE CARL

Inventor(s): STAUBER BENJAMINUS ; SARAD PAREKH ; PAREKH SARADUS ; FELICE CARL PUS ; CARL P FELICE ;
BENJAMIN STAUBER

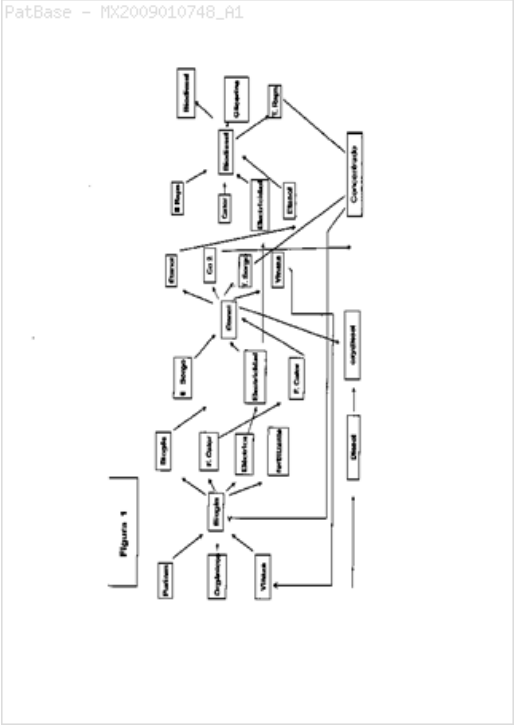
Agent(s): PIZZEYS; PIZZEYS PATENT AND TRADE MARK ATTORNEYS PTY LTD; GOWLING LAFLEUR HENDERSON LLP;
ROQUES SARAH ELIZABETH; J A KEMP; WILSON SONSINI GOODRICH AND ROSATI PC; VAN GOOR DAVID
ET AL

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 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 PA 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

Title: INTEGRATED ENERGETIC SYSTEM AND BIO-REFINERY.

Abstract: DESCRIBED IS THE RELATIONSHIP OCCURRED BETWEEN THE ROW MATERIALS AND THE DIFFERENT INDUSTRIAL PLANTS. - BIOGAS PLANT: INCLUDES THE FOLLOWING ROW MATERIALS; 1 PURINES, 2 VINASSES (RESULTING FROM THE ETHANOL PLANT) AND 3 ORGANIC WASTES (LIQUID AND SOLID). ON THE OTHER HAND, THIS PLANT GENERATES THE FOLLOWING: 1. ELECTRIC POWER (USED IN THE ETHANOL AND BIODIESEL PLANTS), 2. A HEAT SOURCE (TRANSPORTED TO THE SILOS AND WAREHOUSES WHERE THE ROW MATERIAL OF THE ETHANOL AND BIODIESEL PLANTS ARE RECEIVED), 3. BIO-FERTILIZERS WHICH MAY BE SELL IN A DIRECT FORM OR MAY BE REFINED FOR WHICH A CALCAREOUS SOURCE MAY BE

Classifications:
International (IPC 8-9): H02P31/00 (Core/Invention)



Family:

Publication number	Publication date	Application number	Application date
MX2009010748 A1	20110504	MX20090010748	20091002

Priority:

MX20090010748 20091002

Probable Assignee: SALAZAR CRISTIAN AUGUSTO ROMERO
Assignee(s): (std): SALAZAR CRISTIAN AUGUSTO ROMERO
Assignee(s): CRISTIAN AUGUSTO ROMERO SALAZAR
Inventor(s): (std): SALAZAR CRISTIAN AUGUSTO ROMERO
Inventor(s): CRISTIAN AUGUSTO ROMERO SALAZAR

Title: PROCESS, PLANT AND BIOFUEL FOR INTEGRATED BIOFUEL PRODUCTION

Abstract: This invention relates to a process, a plant, and a biofuel for integrated biofuel production, such as with biogasoline, biodiesel, and/or **sugar** product. The integrated process includes the step of removing hexose from a feedstock to form a lignocellulosic material. The process also includes the step of converting the hexose to a biogasoline and/or a biodiesel material, and the step of depolymerizing lignocellulosic material to form pentose and a residue. The process also includes the step of converting the pentose to a biogasoline and/or a biodiesel material.

Classifications:

International (IPC 8-9): B01J19/00 B01J8/00 C10L1/00 C10L1/18

C12M1/00 C12P1/00 C12P19/02 C12P19/14 C12P7/10 C12P7/14

C12P7/16 C12P7/64 (Advanced/Invention);

B01J19/00 C10L1/10 C12M1/00 C12P1/00 C12P19/00

C12P7/02 (Core/Invention)

CPC: Y02P20/125 C12P7/10 C10L1/04 C12P7/14 C12P7/649 Y02E50/13

Y02E50/16 C12P2203/00

European: C10L1/04 C12P7/10 C12P7/14 C12P7/64E4 M12P203/00

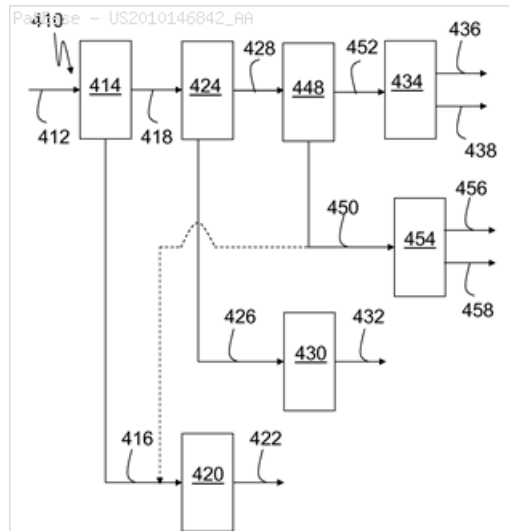
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US: 422/187 422/187S 422/188 422/188S 422/600 422/600S 435/134

435/134S 435/165 435/165S 435/170 435/170S 435/171 435/171S

435/289.1 435/289.100S 435/99 435/99S 44/307 44/307P 44/307S

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Family:

Publication number	Publication date	Application number	Application date
BR112012031276 A2	20151124	BR20121131276	20110615
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EA201100702 A1	20111230	EA20110000702	20091216
EA201201494 A1	20130430	EA20120001494	20110615
EP2373800 A2	20111012	EP20090801692	20091216
EP2582830 A1	20130424	EP20110725100	20110615
US2010146842 AA	20100617	US20080336619	20081217
US2011126448 AA	20110602	US20100815853	20100615
WO10079065 A2	20100715	WO2009EP67335	20091216
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WO11157773 A1	20111222	WO2011EP59979	20110615

Priority:

US20080336619 20081217 WO2009EP67335 20091216 US20100815853 20100615
WO2011EP59979 20110615

Probable Assignee: BP PLC

Assignee(s): (std): BP BIOFUELS UK LTD ; BP CORP NORTH AMERICA INC ; DUMENIL JEAN CHARLES ; BP PLC

Assignee(s): BP NORTH AMERICA INC CORP

Inventor(s): (std): DUMENIL JEAN CHARLES

Inventor(s): JEAN CHARLES DUMENIL

Agent(s): HAMER CHRISTOPHER K; CAROL WILSON BP AMERICA INC; HAMER CHRISTOPHER ET AL; HAMER CHRISTOPHER

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 TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

Title: PROCESS, PLANT AND BIOFUEL FOR INTEGRATED BIOFUEL PRODUCTION

Abstract: This invention relates to a process, a plant, and a biofuel for integrated biofuel production, such as with butanol, biodiesel, and/or **sugar** product. The integrated process includes the step of removing hexose from a feedstock to form a lignocellulosic material. The process also includes the step of converting the hexose to butanol and/or a biodiesel material, and the step of depolymerizing lignocellulosic material to form pentose and a residue. The process also includes the step of converting the pentose to butanol and/or a biodiesel material.

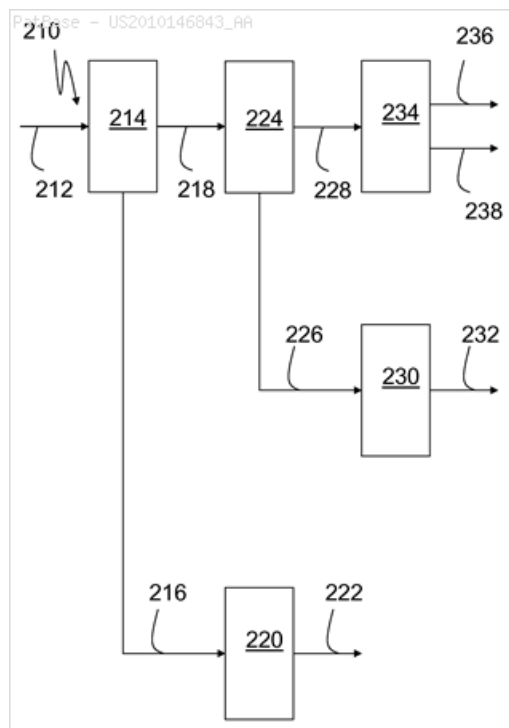
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CPC: Y02E50/10 C12P7/16 C10L1/02 C10L1/04 C10L1/18 C12P7/649 Y02E50/13 C10L1/026 C10L1/19 C12P7/10 C12P19/02 Y02E50/16 Y02P20/125

European: C10L1/02 C10L1/02D C10L1/04 C10L1/18 C10L1/19 C12P19/02 C12P7/10 C12P7/16 C12P7/64E4 Y02E50/13 Y02E50/16

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Priority:

US20080336719 20081217 WO2009EP67337 20091216 US20100815903 20100615
WO2011EP59977 20110615

Probable Assignee: BP PLC

Assignee(s): (std): BP BIOFUELS UK LTD ; BP CORP NORTH AMERICA INC ; DUMENIL JEAN CHARLES ; BP PLC

Assignee(s): BP OIL UK LTD ; BP NORTH AMERICA INC CORP

Inventor(s): (std): DUMENIL JEAN CHARLES

Inventor(s): JEAN CHARLES DUMENIL

Agent(s): HAMER CHRISTOPHER K; CAROL WILSON BP AMERICA INC; JOHN P; HAMER CHRISTOPHER 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 TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

Title: METHODS FOR PRODUCING ETHANOL FROM CARBON SUBSTRATES

Abstract: The present invention provides means for the production of desired end-products of in vitro and/or in vivo bioconversion of biomass-based feed stock substrates, including but not limited to such materials as starch and cellulose. In particularly preferred embodiments, the methods of the present invention do not require gelatinization and/or liquefaction of the substrate. In particularly preferred embodiments, the present invention provides means for the production of ethanol.

Classifications:

International (IPC 8-9): C12N1/00 C12N1/20 C12N1/21 C12N15/00 C12P1/00 C12P17/04 C12P19/02 C12P19/14 C12P19/16 C12P19/18 C12P19/20 C12P19/22 C12P19/24 C12P7/02 C12P7/04 C12P7/06 C12P7/08 C12P7/10 C12P7/14 C12P7/16 C12P7/18 C12P7/20 C12P7/40 C12P7/42 C12P7/44 C12P7/46 C12P7/56 C12P7/58 C12P7/60 (Advanced/Invention); C12R1/66 (Advanced/Non-invention); C12N1/21 C12P1/00 C12P17/02 C12P19/00 C12P7/02 C12P7/40 (Core/Invention)

International (IPC 1-7): C12N1/00 C12N1/18 C12N1/20 C12N1/21 C12N15/00 C12N9/02 C12P1/00 C12P17/04 C12P19/02 C12P19/14 C12P19/16 C12P19/18 C12P19/20 C12P19/22 C12P19/24 C12P7/02 C12P7/06 C12P7/08 C12P7/10 C12P7/16 C12P7/18 C12P7/20 C12P7/40 C12P7/44 C12P7/56 C12P7/58 C12P7/60

CPC: C12P7/46 C12P7/42 C12P2201/00 C12P7/56 C12P7/06 C12P7/10 C12P7/18 C12P7/20 C12P7/44 C12P7/58 C12P7/60 C12P19/02 Y02E50/16 Y02E50/17

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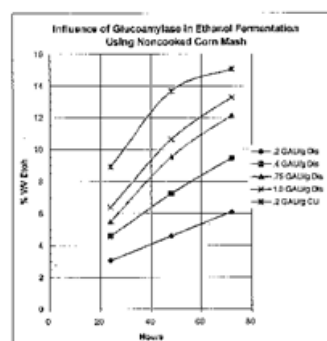
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PatBase - US2003180900_AA

Patent Application Publication Sep. 25, 2003 Sheet 1 of 5 US 2003/018990 A1

Figure 1.**Family:**

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Priority:

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Probable Assignee: GENENCOR INT INC

Assignee(s): (std): CHOTANI GOPAL K ; DANISCO US INC ; GENENCOR INT ; GENENCOR INT INC ; KUMAR MANOJ ; PUCCI JEFF P ; SANFORD KARL J ; SHETTY JAYARAMA K ; LANTERO ORESTE J JR ; ORESTE LANTERO ; LANTERO ORESTE

Assignee(s): LANTERO ORESTE J ; LANTERO ORESTE JJR ; GENENCOR INTERNATIONAL INC

Inventor(s): (std): KARL J SANFORD ; KUMAR MANOJ ; LANTERO ORESTE ; LANTERO ORESTE J ; LANTERO ORESTE J JR ; MANOJ KUMAR ; ORESTE J ; PUCCI JEFF P ; SANDFORD KARL J ; SANFORD KARL J ; SHETTY JAYARAMA K ; SHETTY JAYARAMA ; SANFORD KARL ; PUCCI JEFFREY P ; PUCCI JEFF ; GOPAL K CHOTANI ; JAYARAMA K SHETTY ; JEFF P PUCCI ; CHOTANI GOPAL K ; CHOTANI GOPAL K KUMAR MANOJ PU ; CHOTANI GOPAL

Inventor(s): CHOTANI GOPAL K KUMAR MANOJ PUCCI JEFF P SANFORD K ; KARL J SANDFORD ; LANTERO ORESTE JJR

Agent(s): PHILLIPS ORMONDE FITZPATRICK; BERESKIN AND PARR LLP SENCRL SRL; BERESKIN AND PARR LLP; FORREST GRAHAM ROBERT; HOSHI TAKAKO; YAMASAKI YUKUZO; AKAMATSU TOSHIKI; SHIROGANE HIROSHI; SHIGEMORI KAZUKI; SUGIYAMA NAOTO; KAMRIN T MACKNIGHT GENENCOR INT INC; GENENCOR INT INC; GENENCOR INT INC ATTENTION LEGAL DEPARTMENT; DANISCO US INC

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

Title: METHOD FOR ENHANCING SOIL GROWTH USING BIO-CHAR

Abstract: A method is described for rendering char from a biomass fractionator apparatus (BMF char) suitable for addition to soil in high concentrations, the method relying on multiple processes comprising removing detrimental hydrocarbons from BMF char, removing adsorbed gases from BMF char, introducing microorganisms to the BMF char, and adjusting soil pH.

Classifications:

International (IPC 8-9): A01B49/06 A01C1/06 A01C21/00 A01G1/00 A01G17/02 A01G22/00 A01N25/08 A01N61/00 A1N25/08 A23K10/18 A23K20/10 A23K20/163 A23K20/20 A23K40/00 A23K40/30 A23K50/10 A23K50/20 A23K50/30 A23K50/75 A23K50/80 A23K50/90 A61K33/44 A61K47/02 A61K9/16 A61K9/50 A61L9/012 A61L9/014 B01J2/00 B01J2/28 B01J20/12 B01J20/20 B01J20/24 B01J20/28 B01J20/30 B01J20/32 B09B3/00 C01B31/00 C01B31/02 C01B31/08 C01B32/00 C01B32/05 C02F1/28 C02F1/52 C02F9/00 C05B17/00 C05C5/00 C05C9/00 C05D9/00 C05D9/02 C05F C05F11/00 C05F11/02 C05F11/08 C05F15/00 C05F17/00 C05F5/00 C05F9/04 C05G1/00 C05G3/00 C05G3/04 C05G5/00 C07C7/148 C09K101/00 C09K17/00 C09K17/02 C09K17/04 C09K17/16 C09K17/32 C09K17/48 C09K17/50 C10B53/02 C10B57/00 C10B57/02 C10G2/00 C10J3/60 C10K1/20 C10L1/00 C10L1/10 C10L1/182 C10L1/185 C10L1/19 C12M1/00 C12N1/14 C12N1/16 C12N1/20 C12N11/12 C12N11/14 C12P5/02 (Advanced/Invention); A01G13/02 A23K20/142 A23K20/158 A23K20/174 A23K20/189 A23K20/20 A61K9/00 C02F101/10 C02F101/32 C02F103/36 C05B17/02 C05C1/00 C05C11/00 C05C3/00 C05C5/04 C05D1/00 C05D3/00 C05D9/00 C05D9/02 C09K101/00 C09K17/04 C09K17/40 (Advanced/Non-invention); C05F11/00 C05F11/08 (Core/Invention); C05F (Subclass/Invention)

CPC: A01N61/00 C01P2006/11 C01P2006/14 A01C21/002 C05G3/007 C05G3/0088 C12N1/14 C12N1/16 C12N1/20 A01C21/005 A61K9/5036 A61K9/167 C05B17/00 C09K17/00 A61L9/012 A61L9/014 C05F17/0045 A23K20/10 C05G3/0058 B01J20/20 B01J20/3028 B01J20/3042 B01J20/3007 B01J20/24 B01J20/12 B01J20/3078 B01J20/28019 C05G3/0064 C05G3/0076 C05F17/009 C05F9/04 A23K30/00 A23K50/90 A61L2/18 A61L2/22 C10B57/005 C05F17/0036 A01G17/02 A23K10/37 B01J20/28004 B01J20/28011 B01J20/28069 B01J20/3204 B01J20/3236 B01J20/3268 B01J2220/4831 B01J2220/485 B01J2220/4887 B01J2220/4893 Y02E50/343 Y02W30/47 Y02P60/877 C05C5/00 C05G3/04 C12N11/14 A23K50/00 C05G1/00 Y02A40/229 Y02A40/216 A23K10/18 A23K20/142 A23K20/158 A23K20/174 A23K20/189 A23K20/30 A23K40/00 A23K40/30 A23K50/20 A23K50/75 A61K9/0056 A61K9/1682 A61K47/02 Y02P20/145 Y02W30/43 C02F1/283 C02F1/288 C02F1/52 C02F2303/16 A01G20/00 A01G2/00 A01G24/00 C01B32/00 A01G22/00 C10L1/04 C05F17/0063 C10B47/02 C10B47/12 C10G1/008 C10G1/02 C10G1/10 C10G2/32 C10G2300/1011 C10G2400/02 C10G2400/04 C10G2400/08 C10J3/002 C10J3/62 C10J2300/0903 C10J2300/0916 C10J2300/092 C10J2300/0946 C10J2300/1656 C10L1/02 C10L5/447 C10L2200/0469 C10L2290/02 C10L2290/06 E21B41/0064 G06Q30/018 Y02E50/10 Y02E50/30 Y02P30/20 Y02T50/678 A01N25/08 A61K9/1652 C01B32/354 C01B32/366 C01B32/50 C01B32/05 C05B17/02 C05C1/00 C05C3/00 C05C5/04 C05C9/00 C05C11/00 C05D1/00 C05D3/00 C05G3/0005 C05G3/0047 C09K17/02 C12N11/12 C09K17/04 B01J2/00 A61K33/44 B01J2/28 C09K17/50 C05D9/00 A61K9/1611 Y02P60/218 Y02E50/32 B01J2220/4825 B01J2220/4875 C09K17/48 A01C1/06 A23K50/10 A23K50/30 A23K50/80 Y02C10/08 A23K10/30 A23K20/163 A23K40/10 B01J2/12 A01G13/0262 C05D9/02 C05F11/00 C05F11/08 C05G3/00 C09K17/40 C10B53/02 C10B57/02 Y02E50/14 Y10S71/903 C02F2101/10 C10J2300/0913 C10J3/60 C02F2101/32 C02F2103/365 C10J2300/169 C10J2300/1665 C10K1/20 Y02E50/18 Y02P20/129

European: C05F11/02 C05F3/00

US: 1/1 210/175 210/180 210/251 210/660 210/670 210/694 423/445.00R 423/445R 47/58.1SC 71/1 71/11 71/23 71/24 71/31 71/32 71/54 71/6 71/63 71/7 71/903



Family:

Publication number	Publication date	Application number	Application date
AU2012268661 AA	20121213	AU20120268661	20120529
AU2012268661 BB	20170518	AU20120268661	20120529
AU2015328022 AA	20170420	AU20150328022	20151001
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EP2718246 A2	20140416	EP20120797129	20120529
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Priority:

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US20180973191	20180507	US20180035177	20180713	US20180111822	20180824

Probable Assignee: COOL PLANET ENERGY SYSTEMS INC

Assignee(s): (std): COOL PLANET BIOFUELS INC ; CHEIKY MICHAEL ; JARAND MARK L ; COOL PLANET ENERGY SYSTEMS INC ; COOL PLANET ENERGY SYSTEMS INC ; CHEIKY MICHAEL C ; SILLS RONALD A ; COOL PLANET ENERGY STYSTEMS INC

Assignee(s): CHEYNE CAMERON ; BELCHER RICHARD WILSON ; BONTCHEV RANKO ; BONTCHEV RANKO PANAYOTOV ; BUEGE BRIAN ; BUTLER GREG DEAN ; NORTH BRIDGE VENTURE PARTNERS 7 LP ; NORTH BRIDGE VENTURE PARTNERS VI LP ; TALIPOT HOLDING DE CV SA ; WILSON RICHARD W ; WAN HAIJUN ; MANZER LEO E ; MALYALA RAJASHEKHARAM ; MACKAY JULIETTE ; TRAXLER VERN ; SMITH MATTHEW WILLIAM ; KIM HAN SUK

Inventor(s): (std): WILSON RICHARD ; HAGO WILSON ; BONTCHEV RANKO PANYOTOV ; TRAXLER VERN S ; FAUST PAUL ; BELCHER RICHARD W ; DOLINAR KEVIN DANIEL ; WAHLGREN NEIL CHRISTOPHER ; BUEGE BRIAN ; THOMPSON TIMOTHY ALAN ; TRAXLER VERN ; JARAND MARK LAHMAN ; BONTCHEV RANKO PANAYATOV ; BUTLER GREG DEAN ; SMITH MATTHEW WILLIAM ; MACKAY JULIETTE ; BUTLER GREGORY DEAN ; DAUGAARD DAREN EINAR ; METIER MICHAEL WILLIAM ; BONTCHEV RANKO PANAYOTOV ; CHEIKY MICHAEL C ; SILLS RONALD A A ; JARAND MARK L L ; BONTCHEV RANKO ; KIM HAN SUK ; BELCHER RICHARD WILSON ; CHEYNE CAMERON ; MALYALA RAJASHEKHARAM ; WAN HAIJUN ; WILSON RICHARD W ; MANZER LEO E ; RONALD A SILLS ; MICHAEL CHEIKY ; SILLS RONALD A ; JARAND MARK L ; CHEIKY MICHAEL

Inventor(s): JARAND MARK ; SILLS RONALD ; MARK L JARAND

Agent(s): SPRUSON AND FERGUSON; AJ PARK; BALDWINS INTELLECTUAL PROPERTY; SMART AND BIGGAR; PERRY AND CURRIER; STAINTHORPE VANESSA JULIET; ZACCO SWEDEN AB; GRUENECKER PATENT U RECHTSANWAELTE PARTG MBB; CHAN TANG AND KWOK; SHEPPARD MULLIN RICHTER AND HAMPTON; DAVID E; SHEPPARD MULLIN RICHTER AND HAMPTON LLP; DAVID; WILMER CUTLER PICKERING HALE AND DORR LLP; AVYNO LAW PC; HEISEY DAVID E; KANE JOHN F ET AL; HAMILTON JENNIFER H ET AL; HAMILTON JENNIFER H

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 JO JP KE KG KH KM KN KP KR KW 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

Title: HIGH FORCE AND HIGH STRESS DESTRUCTURING OF CELLULOSIC BIOMASS

Abstract: A process for mechanical destructuring of cellulosic biomass was developed that makes use of a short application of high compression, impact, and shearing forces. The biomass may be destructured using a specific energy input that is less than 40 percent of the total combustible energy of the biomass. The destructured biomass, with or without saccharification and/or in-feed glycosyl hydrolase enzymes, may be used in feed applications.

Classifications:

International (IPC 8-9): A23K1/12 A23K1/14 A23K1/165 A23K10/30 A23K10/32 A23K20/163 A23K20/189 A61K31/717 A61K38/47 C08B30/02 C08B30/12 C08H8/00 C12P19/02 C12P19/14 C12P19/20 C12P7/10 C12P7/14 C13K1/02 C13K13/00 (Advanced/Invention)

CPC: C12P19/14 A61K31/717 A61K38/47 C12Y302/01004 C12P2201/00 C08B30/02 C12P19/20 C12P7/14 C08B30/12 C12P19/02 A23K10/30 A23K20/189 C08H8/00 C12P7/10 C13K1/02 C13K13/002 Y02E50/16 Y02P60/877

US: 127/29 127/67 424/94.61 426/2 426/61 426/623 426/63 426/72 435/106 435/110 435/115 435/125 435/126 435/134 435/136 435/137 435/139 435/144 435/145 435/158 435/160 435/162 435/167 435/95 435/96 435/99 514/57 536/56

PatBase - US2015147311_AA

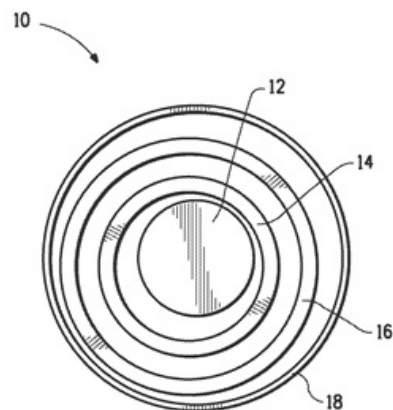


FIG. 1

Family:

Publication number	Publication date	Application number	Application date
BR112016011654 A2	20170808	BR20161111654	20141121
BR112016011693 A2	20170808	BR20161111693	20141121
CN106028831 A	20161012	CN201480064129	20141121
CN106414561 A	20170215	CN201480073884	20141121
EP3087190 A1	20161102	EP20140809245	20141121
EP3094668 A1	20161123	EP20140809569	20141121
US2015147311 AA	20150528	US20140546225	20141118
US2015147786 AA	20150528	US20140546250	20141118
US10227623 BB	20190312	US20140546225	20141118
WO15077573 A1	20150528	WO2014US66835	20141121
WO15077576 A1	20150528	WO2014US66846	20141121

Priority:

US20130908158P 20131124 US20140014313P 20140619 US20140546225 20141118
US20140546250 20141118 WO2014US66846 20141121 WO2014US66835 20141121

Probable Assignee: E I DU PONT DE NEMOURS AND CO

Assignee(s): (std): DU PONT ; EIDU PONT DE NEMOURS AND CO

Assignee(s): E I DU PONT DE NEMOURS AND CO ; DANISCO UK LTD ; DANISCO US INC

Inventor(s): (std): CLARKSON KATHLEEN A ; DE SILVA WATHUDURA INDIKA NAMAL ; FAGAN PAUL JOSEPH ; GALLAGHER F GLENN ; PERELMAN AARON ; ROMERO MILLAN LUIS FERNANDO ; SHARMA VIVEK ; SHETTY JAYARAMA K ; SHPILSKY ANTON ; SLANAC DANIEL A ; TEUNISSEN PAULA JOHANNA MARIA ; HUANG ZHENG ZHENG ; LIU GUANGLIANG GARY ; MILLAN LUIS FERNANDO ROMERO ; WALSH MARIA

Inventor(s): WATHUDURA INDIKA NAMAL DE SILVA ; ZHENG ZHENG HUANG ; PAUL JOSEPH FAGAN ; PAULA JOHANNA MARIA TEUNISSEN ; LUIS FERNANDO ROMERO MILLAN ; MARIA WALSH ; JAYARAMA K SHETTY ; KATHLEEN A CLARKSON ; VIVEK SHARMA ; GUANGLIANG GARY LIU ; F GLENN GALLAGHER ; DANIEL A SLANAC ; AARON PERELMAN ; ANTON SHPILSKY

Agent(s): MATTHEWS DEREK PETER; HERRELL JR ROGER W

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

Title: PRODUCTION OF FERMENTATION PRODUCTS IN BIOFILM REACTORS USING MICROORGANISMS IMMOBILISED ON STERILISED GRANULAR SLUDGE

Abstract: Production of fermentation products, such as ethanol and lactic acid in biofilm reactors by microorganisms immobilised on sterilised granular sludge.

Classifications:

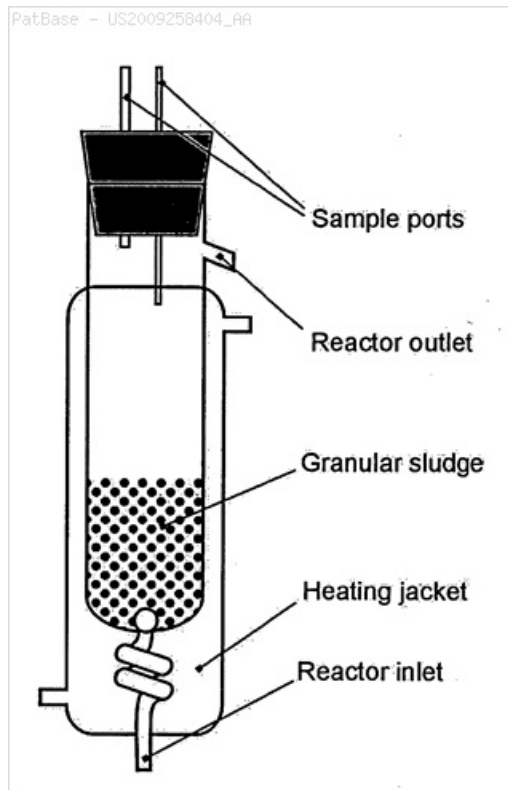
International (IPC 8-9): C12M1/00 C12N5/00 C12P1/00 C12P3/00 C12P7/02 C12P7/06 C12P7/16 C12P7/18 C12P7/26 C12P7/28 C12P7/54 C12P7/56 (Advanced/Invention); C12M1/00 C12N5/00 C12P1/00 C12P3/00 C12P7/02 C12P7/24 C12P7/40 (Core/Invention)

International (IPC 1-7): C12M1/00 C12M1/16 C12M3/00 C12P7/04 C12P7/10 C12P7/26 C12P7/40

CPC: C12M21/12 C12M25/16 C12M25/20 C12M41/18 Y02E50/10 C12P7/10 C12P7/04 C12P7/16 C12P7/18 C12P7/28 C12P7/40 C12P7/46 C12P7/52 C12P7/54 C12P7/56 Y02E50/16 Y02E50/17

European: C12M1/16 C12P7/04 C12P7/10 C12P7/16 C12P7/18 C12P7/28 C12P7/40 C12P7/46 C12P7/52 C12P7/54 C12P7/56 Y02E50/16 Y02E50/17

US: 435/139 435/140 435/148 435/150 435/155 435/158 435/160 435/161 435/168 435/41



Family:

Publication number	Publication date	Application number	Application date
AR061738 AA	20080917	AR2007P102910	20070629
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CL2007001922 A1	20080118	CL20070001922	20070629
EP2057263 A1	20090513	EP20070786912	20070628
TH95769 A	20090529	TH20071003285	20070629
US2009258404 AA	20091015	US20070306773	20070628
WO08000809 A1	20080103	WO2007EP56526	20070628

Priority:

DK20060000901 20060630 WO2007EP56526 20070628

Probable Assignee: BIOGASOL IPR APS

Assignee(s): (std): AHRING BIRGITTE KIAER ; BIOGASOL IPR APS ; BIOGASOL IPR APS ; MIKKELSEN MARIE JUST

Inventor(s): (std): AHRING BIRGITTE KIAER ; MIKKELSEN MARIE JUST ; MIKKELSEN MARIE JUST AHRING BIGITTE KIAER

Inventor(s): AHRING BIGITTE KIAER

Agent(s): SIM AND MCBURNEY; SARGENT; INSPICOS A/S; ROBERTS MLOTKOWSKI SAFRAN AND COLE PC
INTELLECTUAL PROPERTY DEPARTMENT

Designated states: AE AG AL AM 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

Title: CENTER-FILL CONFECTIONERY AND CHEWING GUM COMPOSITIONS CONTAINING SUSPENDED SACCHARIDE PARTICLES

Abstract: The present invention relates to compositions for a center-filled confectionery or chewing gum product. The individual confectionery or gum pieces include a center-fill composition surrounded by a confectionery or gum region and optionally further surrounded by a coating. The center-fill composition includes a fluid carrier and saccharide particles suspended therein, which impart an enhanced cooling and/or textural perception upon consumption.

Classifications:

International (IPC 8-9): A23G3/00 A23G3/02 A23G3/34 A23G3/54

A23G4/00 A23G4/06 A23G4/20 (Advanced/Invention);

A23G3/00 A23G3/02 A23G3/34 A23G4/00 A23G4/06

A23G4/18 (Core/Invention)

International (IPC 1-7): A23G3/00 A23G3/54

CPC: A23G4/20 A23G3/0068 A23G3/346 A23G3/42 A23G3/54 A23G3/54S

A23G4/10 A23G4/205 A23G2200/06

European: A23G3/00P20F4 A23G3/34E A23G3/42 A23G3/54 A23G3/54H

A23G4/10 A23G4/20 A23G4/20H K23G200/06

US: 426/514 426/514S 426/6 426/658 426/658S 426/6P

JP F-Term: 4B014 4B014/GB13 4B014/GB14 4B014/GE03 4B014/GL03

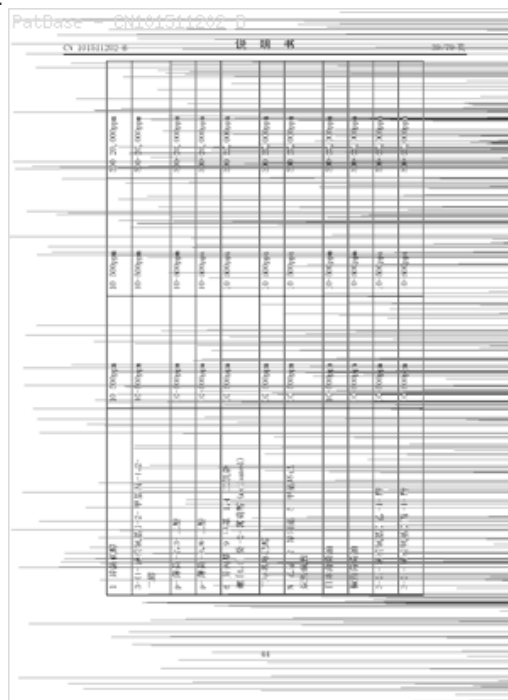
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4B014/GU08

JP F-Index: A23G3/30 A23G4/00 A23G4/08 A23G4/10 A23G4/20

A23G3/00 A23G3/42 A23G3/54 A23G4/02



Family:

Publication number	Publication date	Application number	Application date
AU2007293466 AA	20080313	AU20070293466	20070416
AU2007293466 BB	20110512	AU20070293466	20070416
CA2661395 AA	20090223	CA20072661395	20070416
CA2661395 C	20121113	CA20072661395	20070416
CN101511202 A	20090819	CN200780033317	20070416
CN101511202 B	20141015	CN200780033317	20070416
EP2059133 A1	20090520	EP20070755477	20070416
IN00484KN2009 A	20090515	IN2009KN00484	20090204
JP2010502216 T2	20100128	JP20090527338T	20070416
JP2011045388 A2	20110310	JP20100247742	20101104
JP4902742 B2	20120321	JP20090527338T	20070416
JP5379108 B2	20131225	JP20100247742	20101104
MX2009002434 A1	20090320	MX20090002434	20070416
US2008063748 AA	20080313	US20070707713	20070216
WO08030274 A1	20080313	WO2007US09223	20070416

Priority:

US20060843056P 20060908 US20070707713 20070216 JP20090527338 20070416
JP20090527338T 20070416 WO2007US09223 20070416

Probable Assignee: INTERCONTINENTAL GREAT BRANDS LLC

Assignee(s): (std): CADBURY ADAMS USA LLC ; KRAFT FOODS GLOBAL BRANDS LLC ; MASSEY CRAIG

Assignee(s): KUNCEWITCH THOMAS ; KRAFT FOODS GLOBAL INC ; INTERCONTINENTAL GREAT BRANDS LLC

Inventor(s): (std): CRAIG MASSEY ; KUNCEWITCH THOMAS ; MASSEY CRAIG

Agent(s): GRIFFITH HACK; BERESKIN AND PARR LLP SENCRL SRL; WILSON GUNN; FUJITA KAZUKO; HOFFMANN AND BARON LLP; SCOLA DANIEL A ET AL

Designated states: AE AG AL AM 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 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 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

Title: METHOD FOR PRODUCING CHEMICAL BY CONTINUOUS FERMENTATION

Abstract: A method produces a chemical through continuous fermentation including: (a) culturing a cell in a culture medium in a fermentor to ferment a feedstock to produce a chemical; (b) conducting filtration of the culture medium with a separation membrane module; (c) separating a permeate containing the chemical from the culture medium while retaining a non-permeated liquid in the fermentor, and (d) supplying a gas from at least one of a lower portion of the separation membrane module and a pipe communicating between the fermentor and the separation membrane module to adjust a gas linear velocity in the separation membrane module to 0.15 cm/s to 70 cm/s while supplying the separation membrane module with a liquid.

Classifications:

International (IPC 8-9): C12M1/00 C12M1/08 C12M1/12 C12M1/26

C12M1/34 C12P1/00 C12P1/04 C12P13/00 C12P13/04 C12P13/08

C12P7/40 C12P7/56 (Advanced/Invention);

C12P13/00 C12P13/04 (Core/Invention)

CPC: C12P13/08 C12P7/56 C12M29/02 C12M29/18 C12M33/14

C12M41/40 C12M47/10 C12P7/40 C12P13/001 C12P13/04

European: C12P13/00C C12P7/40 C12P7/56

US: 1/1 435/106 435/107 435/108 435/109 435/110 435/113 435/114

435/115 435/116 435/128 435/139 435/170 435/171

JP F-Term: 4B024 4B024/AA03 4B024/BA80 4B024/CA04 4B024/CA20

4B024/DA12 4B024/EA04 4B024/GA30 4B064 4B064/AD33 4B064/AE01

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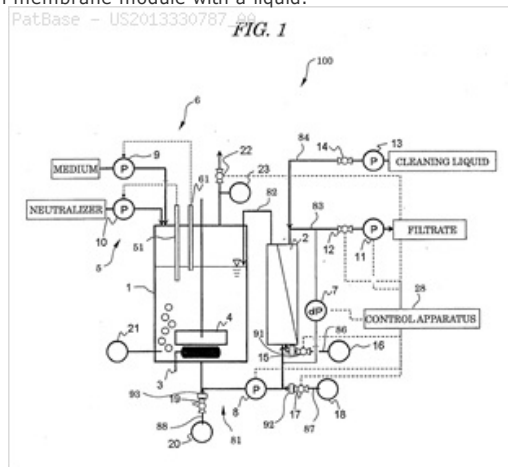
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JP F-Index: C12N15/00/A C12P1/04/Z C12P13/00 C12P13/04/ZNA

C12P13/08/A C12P13/08/C C12P7/56

JP Facet: ZNA



Family:

Publication number	Publication date	Application number	Application date
AU2011339328 AA	20120614	AU20110339328	20111208
BR112013014359 A2	20170801	BR20131114359	20111208
CA2820876 AA	20130607	CA20112820876	20111208
CN103249840 A	20130814	CN201180058917	20111208
EP2650375 A1	20131016	EP20110847535	20111208
EP2650375 A4	20141217	EP20110847535	20111208
JP2012077742 A1	20140522	JP20120510058T	20111208
JP5978995 B1	20160824	JP20120510058T	20111208
TH129944 A	20131128	TH20131003111	20111208
TW201307567 A	20130216	TW20110145590	20111209
US2013330787 AA	20131212	US20110992443	20111208
US9365876 BB	20160614	US20110992443	20111208
WO12077742 A1	20120614	WO2011JP78392	20111208

Priority:

JP20100274324 20101209 WO2011JP78392 20111208

Probable Assignee: TORAY IND INC

Assignee(s): (std): AIR TONY CO LTD ; CHEON JIHOON ; KANAMORI SATOKO ; MIMITSUKA TAKASHI ; NISHIDA MAKOTO ; TANAKA YUJI ; TORAY INDUSTRIES ; TAKEUCHI NORIHIRO ; TORAY IND INC ; TORAY IND

Assignee(s): NISHISA MAKOTO ; TORAY INDUSTRIES INC

Inventor(s): (std): CHEON JIHOON ; JIHOON CHEON ; KANAMORI SATOKO ; MAKOTO NISHIDA ; MIMITSUKA TAKASHI ; NISHIDA MAKOTO ; NISHISA MAKOTO ; NORIHIRO TAKEUCHI ; SATOKO KANAMORI ; TAKASHI MIMITSUKA ; TAKEUCHI NORIHIRO ; TANAKA YUJI ; YUJI TANAKA ; XI TIANCHENG ; QIAN ZHIXUN ; ER ZHONGXIAO

Agent(s): DAVIES COLLISON CAVE; DAVIES COLLISON CAVE PTY LTD; SMART AND BIGGAR; HAGER THOMAS JOHANNES; DLA PIPER LLP

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

Title: BUTANOL FERMENTATION USING ACID PRETREATED BIOMASS

Abstract: The present invention provides the use of acid pretreated biomass such as jatropha seed cake, pongamia seed cake and banana stems as renewable feedstock for butanol production by the mutant *Clostridium acetobutylicum* MTCC 587. Chemical mutagenesis was carried out for improvement of the strain for better butanol tolerance and production. This present invention for the first time has reported an efficient process for high yield of butanol obtained in single batch fermentation using acid pretreated jatropha seed cake.

Classifications:

International (IPC 8-9): C12N1/20 C12N1/38 C12N15/01 C12N15/74

C12P5/00 C12P7/16 C12R1/145 (Advanced/Invention);

C12R1/145 (Advanced/Non-invention)

CPC: C12N15/74 C12N15/01 Y02E50/10 C12P7/16 C12N1/20 C12R1/145

US: 1/1 435/160 435/252.3 435/441

PatBase - US2014178955_AA

Fig. 1. Tolerance and growth of the mutant strain in presence of different concentrations of butanol.

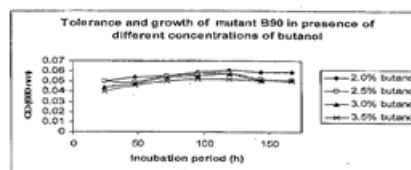
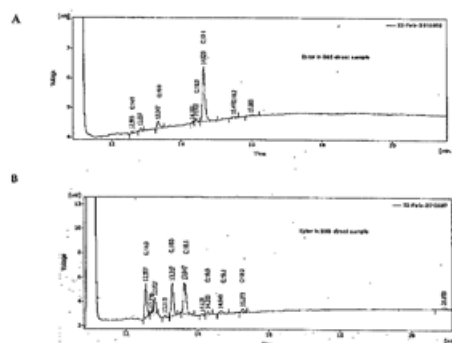


Fig. 2. Comparison of the fatty acid profile of wild type (A) and mutant strain (B)



Family:

Publication number	Publication date	Application number	Application date
BR112014002615 A2	20170301	BR20141102615	20120801
CN103781899 A	20140507	CN201280042219	20120801
CN103781899 B	20160406	CN201280042219	20120801
EP2739722 A1	20140611	EP20120813531	20120801
EP2739722 B1	20171122	EP20120813531	20120801
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IN02181MU2011 A	20130208	IN2011MU02181	20110801
KR101832431 B1	20180413	KR20147005604	20120801
KR20140147798 A	20141230	KR20147005604	20120801
US2014178955 AA	20140626	US20120236444	20120801
US9260731 BB	20160216	US20120236444	20120801
WO13072919 A1	20130523	WO2012IN00536	20120801

Priority:

IN2011MM02181 20110801 IN2011MU02181 20110801 EP20120813531 20120801
WO2012IN00536 20120801

Probable Assignee: RELIANCE IND LTD

Assignee(s): (std): HARSHVARDHAN JOSHI ; ISAR JASMINE ; JASMINE ISAR ; JOSHI HARSHVARDHAN ; RANGASWAMY VIDHYA ; VIDHYA RANGASWAMY ; RELIANCE LIFE SCIENCES PVT LTD ; RELIANCE IND LTD

Assignee(s): RELIANCE LIFE SCIENCES PRIVATE LTD

Inventor(s): (std): HARSHCARDHAN JOSHI ; VIDHYA RANGASWAMY ; JASMINE ISAR ; HARSHVARDHAN JOSHI ; RANGASWAMY VIDHYA ; JOSHI HARSHVARDHAN ; ISAR JASMINE

Agent(s): GOODMAN SIMON JOHN NYE; CARPINTERO MARIO; COLLARD AND ROE PC; PURNIMA MALKANI

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 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

Title: METHODS FOR DETERMINING THE DEGRADATION OF A BIOMASS MATERIAL

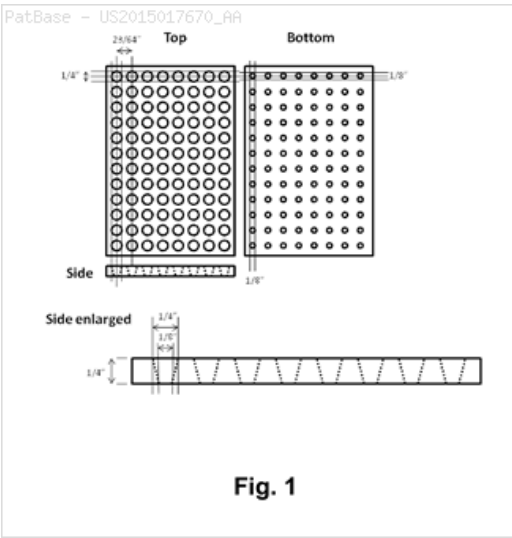
Abstract: The present invention relates to methods for analyzing degradation of a biomass material at a high dry weight percentage.

Classifications:

International (IPC 8-9): B01L3/00 C12M1/00 C12P19/00 C12Q1/34 G01N33/00 G01N33/50 (Advanced/Invention)

CPC: B01L3/5085 B01L3/5635 B01L2200/0642 B01L2300/0829 G01N33/0098 C12Q1/34 G01N2333/942 G01N33/5097

US: 435/18 435/288.4



Family:

Publication number	Publication date	Application number	Application date
EP2794899 A1	20141029	EP20120813671	20121220
US2015017670 AA	20150115	US20120367194	20121220
WO13096652 A1	20130627	WO2012US71006	20121220

Priority:

US20110578809P 20111221 US20120367194 20121220 WO2012US71006 20121220

Probable Assignee: NOVOZYMES INC

Assignee(s): (std): NOVOZYMES INC

Inventor(s): (std): MCBRAYER BRETT ; OSBORN DAVID ; QUINLAN JASON ; VLASENKO ELENA

Agent(s): SHENKER PAUL DHAN; STARNES ROBERT

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 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 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

Title: METHODS AND COMPOSITIONS FOR INCREASING THE EFFICACY OF BIOLOGICALLY-ACTIVE INGREDIENTS

Abstract: The invention provides methods and compositions for modulating the sensitivity of cells to cytotoxic compounds and other active agents. In accordance with the invention, compositions are provided comprising combinations of ectophosphatase inhibitors and active agents. Active agents include antibiotics, fungicides, herbicides, insecticides, chemotherapeutic agents, and plant growth regulators. By increasing the efficacy of active agents, the invention allows use of compositions with lowered concentrations of active ingredients.

Classifications:

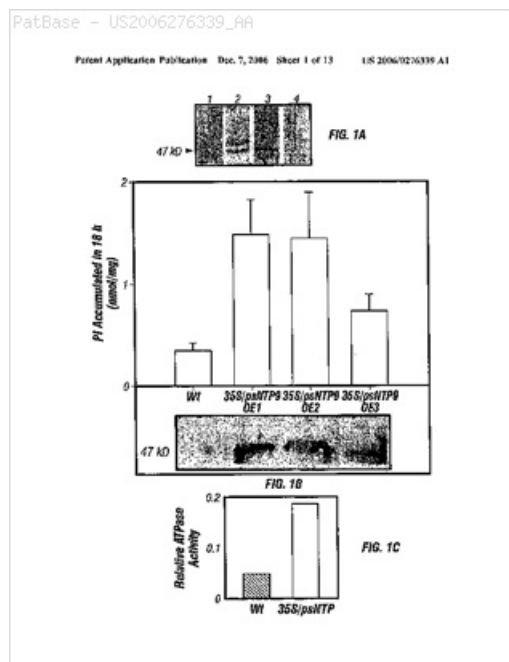
International (IPC 8-9): A01N25/00 A01N37/00 A01N37/10 A01N37/18 A01N37/22 A01N37/28 A01N37/30 A01N37/38 A01N37/46 A01N41/06 A01N43/12 A01N43/16 A01N43/38 A01N43/40 A01N43/78 A01N47/06 A01N47/30 A01N47/34 A01N47/44 A01N57/00 A01N57/16 A01N61/00 A01N63/00 A61K31/165 A61K31/18 A61K31/235 A61K31/24 A61K31/405 A61K31/425 A61K31/426 A61K31/43 A61K31/545 A61K45/06 A61K45/08 A61K47/46 A61P35/00 C12N15/00 C12N7/00 (Advanced/Invention); A01N25/00 A01N37/00 A01N37/18 A01N63/00 C12N7/00 (Core/Invention); C12N (Subclass/Invention)

International (IPC 1-7): A01N25/00 A01N37/00 A01N37/18 A01N47/34 A01N61/00 A01N63/00 A61K45/08 A61K47/46 A61P35/00 C12N7/00

CPC: A01N25/32 A01N37/10 A01N37/22 A01N37/28 A01N37/30 A01N37/38 A01N37/46 A01N41/06 A01N43/12 A01N43/16 A01N43/38 A01N43/40 A01N43/78 A01N47/06 A01N47/30 A01N47/44 A01N57/16 A01N61/00 A61K31/165 A61K31/18 A61K31/235 A61K31/24 A61K31/405 A61K31/425 A61K31/426 A61K31/43 A61K31/545 A61K45/06

European: A01N25/32 A01N37/10 A01N37/22 A01N37/28 A01N37/30 A01N37/38 A01N37/46 A01N41/06 A01N43/12 A01N43/16 A01N43/38 A01N43/40 A01N43/78 A01N47/06 A01N47/30 A01N47/44 A01N57/16 A01N61/00 A61K31/165 A61K31/18 A61K31/235 A61K31/24 A61K31/405 A61K31/425 A61K31/426 A61K31/43 A61K31/545 A61K45/06

US: 504/127 504/128 504/128S 514/192 514/192S 514/200 514/200S 514/369 514/369S 514/370 514/370S 514/414 514/414S 514/443 514/443S 514/457 514/457S 514/512 514/512S 514/532 514/532S 514/533 514/533S 514/535 514/535S 514/602 514/602S 514/615 514/615S 514/616 514/616S 514/617 514/617S



Family:

Publication number	Publication date	Application number	Application date
AU2003304398 AA	20050225	AU20030304398	20031016
CA2502148 AA	20050412	CA20032502148	20031016
EP1576150 A2	20050921	EP20030816736	20031016
EP1576150 A3	20051102	EP20030816736	20031016
EP1576150 A4	20060503	EP20030816736	20031016
US2006276339 AA	20061207	US20030531744	20031016
WO05014777 A2	20050217	WO2003US32667	20031016
WO05014777 A3	20050915	WO2003US32667	20031016

Priority:

US20020418803P 20021016 US20020418803P 20021016 US20030531744 20031016
 WO2003US32667 20031016 US20060531744 20060123

Probable Assignee: BOARD OF REGENTS UNIV OF TEXAS SYSTEM

Assignee(s): (std): UNIV TEXAS ; WINDSOR J BRIAN ; THOMAS COLLIN E ; WINDSOR J B ; LLOYD ALAN M ; ROUX STAN J

Assignee(s): WINDSOR J ; BOARD OF REGENTS THE UNIVERSITY OF TEXAS SYSTEM ; BOARD OF REGENTS UNIV ; BOARD OF REGENTS UNIV OF TEXAS SYSTEM ; BOARD OF REGENTS UNIV TEXAS SYSTEM

Inventor(s): (std): LLOYD ALAN M ; ROUX STAN J ; WINDSOR J B ; WINDSOR J BRIAN ; STAN J ROUX ; J ; COLLIN E THOMAS ; ALAN M LLOYD ; THOMAS COLLIN E

Inventor(s): WINDSOR J ; LLOYD ALAN ; THOMAS COLLIN ; ROUX STAN

Agent(s): PIZZEYS; PIZZEYS PATENT AND TRADE MARK ATTORNEYS PTY LTD; BERESKIN AND PARR LLP SENCRL SRL; FULBRIGHT AND JAWORSKI LLP

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

Title: CO-CONVERSION OF CARBOHYDRATES TO FERMENTATION PRODUCTS IN A SINGLE FERMENTATION STEP

Abstract: Provided are methods for the production of a fermentation product comprising co-fermenting a **sugar** stream with a pretreated lignocellulosic biomass. Lignocellulosic biomass feedstocks useful in the methods include grass, switch grass, cord grass, rye grass, reed canary grass, miscanthus, **sugar**-processing residues, **sugarcane** bagasse, agricultural wastes, rice straw, rice hulls, barley straw, corn cobs, cereal straw, wheat straw, canola straw, oat straw, oat hulls, corn fiber, stover, soybean stover, corn stover, forestry wastes, recycled wood pulp fiber, paper sludge, sawdust, hardwood, softwood, agave, and combinations thereof. **Sugar** streams useful in the methods include **molasses**, **sugar** cane, **sugar beet**, corn starch, wheat starch, and potato starch. Fermentation products include alcohols (including, e.g., ethanol), lactic acid, and acetic acid. The methods can be performed at existing fermentation facilities, which will increase yield of fermentation products and reduce the costs of production.

Classifications:
International (IPC 8-9): C12P7/10 C12P7/54 C12P7/56 D21C5/00 (Advanced/Invention)
CPC: C12P7/54 C12P7/56 C12P7/10 D21C5/005 Y02E50/16

Family:

Publication number	Publication date	Application number	Application date
WO14160402 A1	20141002	WO2014US26499	20140313

Priority:
US20130783138P 20130314

Probable Assignee: MASCOMA CORP
Assignee(s): (std): MASCOMA CORP
Inventor(s): (std): LYND LEE R ; VAN ROOYEN JUSTIN D
Agent(s): JACKMAN PETER A 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 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 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

Title: ABSORBENT ARTICLE COMPRISING A SYNTHETIC POLYMER DERIVED FROM A RENEWABLE RESOURCE AND METHODS OF PRODUCING SAID ARTICLE

Abstract: An element of an absorbent article is provided. The element has a bio-based content of at least about 50 percent based on the total weight of the element, and comprises a synthetic polymer derived from a renewable resource via a first intermediate compound selected from the group consisting of crotonic acid, propiolactone, ethylene oxide, i-propanol, butanol, butyric acid, propionic acid, 2-acetoxypropanoic acid, methyl 2-acetoxypropanoate, methyl lactate, ethyl lactate, polyhydroxybutyrate, and a polyhydroxyalkanoate comprising 3-hydroxypropionate monomers. An absorbent article comprising the element and a method of making an element for an absorbent article also are provided.

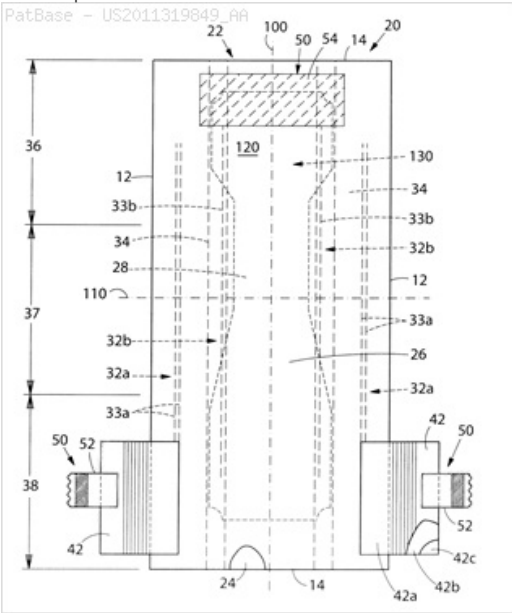
Classifications:

International (IPC 8-9): A61L15/22 B01J20/26 (Advanced/Invention)

CPC: A61L15/60 A61L15/22 B01J2220/68

European: A61L15/22 A61L15/60

US: 502/402 502/402S 604/372 604/372P



Family:

Publication number	Publication date	Application number	Application date
US2011319849 AA	20111229	US20110175145	20110701

Priority:

US20110175145 20110701

Probable Assignee: PROCTER AND GAMBLE CO

Assignee(s): (std): COLLIAS DIMITRIS IOANNIS ; KELLETT PATTI JEAN ; LINGOES JANETTE VILLALOBOS

Assignee(s): PROCTER AND GAMBLE CO

Inventor(s): (std): COLLIAS DIMITRIS IOANNIS ; LINGOES JANETTE VILLALOBOS ; KELLETT PATTI JEAN

Title: EXTRACTION SOLVENTS DERIVED FROM OIL FOR ALCOHOL REMOVAL IN EXTRACTIVE FERMENTATION

Abstract: In an alcohol fermentation process, oil derived from biomass is hydrolyzed into an extractant available for in situ removal of a product alcohol such as butanol from a fermentation broth. The glycerides in the oil can be catalytically (e.g., enzymatically) hydrolyzed into free fatty acids, which form a fermentation product extractant having a partition coefficient for a product alcohol greater than a partition coefficient of the oil of the biomass for the product alcohol. Oil derived from a feedstock of an alcohol fermentation process can be hydrolyzed by contacting the feedstock including the oil with one or more enzymes whereby at least a portion of the oil is hydrolyzed into free fatty acids forming a fermentation product extractant, or the oil can be separated from the feedstock prior to the feedstock being fed to a fermentation vessel, and the separated oil can be contacted with the enzymes to form the fermentation product extractant. The fermentation product extractant can be contacted with a fermentation broth for in situ removal of a product alcohol.

Classifications:

International (IPC 8-9): A23D9/00 A23J1/14 A23K1/00 A23K1/06 A23K10/38 B01D B01D1/00 B01D11/04 B01D21/26 B01D3/00 B01D3/06 B01D3/10 B01D3/14 B01D3/34 B01D53/14 B01D53/62 C07C C07C231/02 C07C233/09 C07C27/02 C07C29/04 C07C29/147 C07C29/76 C07C29/80 C07C29/86 C07C31/12 C07C33/02 C07C57/12 C07C67/03 C07C67/31 C07C69/732 C07H21/04 C11B1/02 C11B13/00 C11C C11C1/02 C11C1/04 C11C3/00 C11C3/10 C12F3/10 C12M C12M1/00 C12M3/00 C12N1/00 C12N1/12 C12N1/14 C12N1/15 C12N1/16 C12N1/19 C12N1/20 C12N1/21 C12N15/00 C12N15/09 C12N15/52 C12N9/00 C12N9/06 C12N9/10 C12N9/16 C12N9/18 C12N9/20 C12P C12P1/00 C12P13/02 C12P19/00 C12P7/02 C12P7/04 C12P7/06 C12P7/10 C12P7/16 C12P7/18 C12P7/20 C12P7/22 C12P7/40 C12P7/62 C12P7/64 (Advanced/Invention); C07B61/00 C12M1/00 C12N15/09 C12N15/60 (Advanced/Non-invention); B01D C07C C11C C12P (Subclass/Invention)

IPC: B01D3/06 B01D5/0027 C12N1/38 C12N9/88 C12N9/18 C07C29/80 C07C29/76 B01D2257/708 C11B1/025 C11B13/00 C12P7/6418 C12M45/04 C12N15/52 C12P7/649 C12P2203/00 Y02E50/10 Y02E50/13 C12M21/12 C12M45/09 Y02W30/74 C12N1/16 C12N9/1085 C12N9/0016 C12Y205/01072 C12Y104/01021 Y02P20/152 Y02P70/34 Y02P60/873 C12P7/18 C12N1/14 C12N15/00 Y02E50/16 Y02E50/17 A23K10/38 C12P7/62 B01D1/28 B01D3/002 B01D3/143 B01D3/146 B01D3/148 B01D53/1475 B01D53/1487 B01D2251/306 B01D2251/606 B01D2252/202 B01D2252/2025 B01D2252/2026 B01D2252/2028 B01D2252/20484 B01D2252/20489 B01D2252/30 B01D2257/504 B01D2257/70 B01D2257/704 B01D2257/80 Y02C10/06 C12F3/10 B01D11/0492 B01D21/262 C07C29/86 C12P7/16 B01D21/26 C12M1/00 A23K10/12

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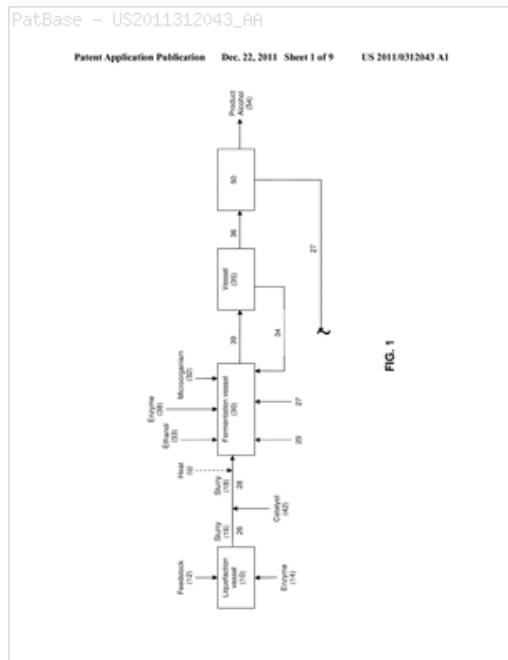
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JP F-Term: 4D020 4D020/AA03 4D020/AA10 4D020/BA12 4D020/BA16 4D020/BA19 4D020/BC01 4D020/CC21 4D020/DA03 4D020/DB02 4D020/DB20 4D076 4D076/AA16 4D076/AA22 4D076/BB05 4D076/BB13 4D076/BB18 4D076/BB21 4D076/DA02 4D076/EA08/Z 4D076/EA12/Z 4D076/EA14/Z 4D076/FA02 4D076/FA03 4D076/FA04 4D076/FA11 4D076/FA15 4D076/FA31 4D076/HA20 4D076/JA03 4H006 4H006/AA02 4H006/AD18 4H006/BB14 4H006/BB19 4H006/BB31 4H006/BC51 4H006/BC52 4H006/BD60 4H006/FE11 4B024 4B024/AA03 4B024/BA80 4B024/CA02 4B024/DA12 4B024/EA04 4B024/FA02 4B024/FA20 4B064 4B064/AC04 4B064/AD85 4B064/AD87 4B064/CA06 4B064/CA19 4B064/CA21 4B064/CB03 4B064/CB07 4B064/CC03 4B064/CD22 4B064/CD23 4B064/DA16 4B064/AC02 4B064/AC03 4B064/AF02 4B064/AF04 4B064/BJ01 4B064/CA02 4B064/CC24 4B064/CD09 4B064/CD19 4B024/AA05 4B024/BA77 4B024/CA01 4B024/CA09 4B024/CA11 4B024/CA20 4B024/DA05 4B024/DA11 4B024/GA11 4B024/HA01 4B024/HA11 4B064/AC01 4B064/CA01 4B064/DA10 4B065 4B065/AA01/X 4B065/AA01/Y 4B065/AA57/X 4B065/AA57/Y 4B065/AB01 4B065/AC14 4B065/BA01 4B065/BD29 4B065/BD30 4B065/BD43 4B065/CA05 4B065/CA41 4B065/CA50 4B065/CA60 4H006/AC14 4H006/AB80 4H006/AC41 4H006/AC46 4H006/AC53 4H006/AD16 4H006/BA34 4H006/BA51 4H006/BA72 4H006/BD70 4H006/BD84 4H006/BE10 4H006/BE14 4H006/BE22 4H006/BE32 4H006/BS10 4H006/BV31 4H006/FG30 4H006/KA03 4H006/KA31 4H006/KC14 4H039 4H039/CA66 4H039/CA71 4H039/CD40 4H039/CE10 4H039/CE20 4H039/CE30 2B150 2B150/AA01 2B150/AA02 2B150/AA03 2B150/AA05 2B150/AA06 2B150/AD07 2B150/AD08 2B150/CE01 2B150/CE02 2B150/CE04 2B150/CE05 2B150/CE07 2B150/DE01 2B150/DF09 2B150/DF11 2B150/DF15 4B064/AD61 4B064/CC30 4B064/DA11 4B065/AA72 4B065/BB22 4B065/CA06 4B065/CA12 4B065/CA43 4B029 4B029/AA02 4B029/BB01 4B029/DG10 4B064/AA01 4B064/CC21 4B064/CE01 4D020/AA08 4D020/BA01 4D020/BA09 4D020/BA15 4D020/BA18 4D020/BB03 4H006/BE12

JP F-Index: B01D3/06/Z B01D3/10 B01D3/14/A B01D53/14/C B01D53/14/102 B01D53/14/200 B01D53/14/210 C07C29/76 C07C31/12 C12N15/00/A C12N15/00/100/P C12P7/16 C12P7/64/ZNA C12P7/10 C07B61/00/300 C07C231/02 C07C233/09/Z C07C27/02 C07C29/147 C07C29/86 C07C33/02 C07C57/12 C07C67/03 C07C67/31 C07C69/732/Z C12N1/00/P C12P7/02 A23K1/00/101 A23K20/142 A23K20/147 A23K20/158 A23K20/163 A23K20/174 A23K20/179 A23K20/20 C12N1/19 C12P7/06 C12P7/40 C12P7/62 C12P7/64 B01D53/14/103 B01D53/14/220 C12M1/00/C

Family:

Publication number	Publication date	Application number	Application date
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Probable Assignee: BUTAMAX TM ADVANCED BIOFUELS LLC

Assignee(s): (std): BUTAMAX TM ADVANCED BUOFUELS LLC ; BUTAMAX TM ADVANCED BIOFUELS LLC ; BUTAMAX TM ADVANCED BIOFUELS ; BUTAMAXTM ADVANCED BIOFUELS LLC ; BUTAMAX AND TRADE ADVANCED BIOFUELS LLC ; BUTAMAX ADVANCED BIOFUELS LLC ; BUTAMAX ADVANCED BUOFUELS LLC ; SYLVESTER ROBERT W ; PARTEN WILLIAM D ; ZAHER JOSEPH J ; GRADY MICHAEL CHARLES ; DICOSIMO ROBERT ; PATNAIK RANJAN ; LOWE DAVID J ; HALLAM JOHN W ; ROESCH BRIAN MICHAEL ; WOERNER FRANCIS J ; DINER BRUCE A ; CIRAKOVIC JELENA ; ZAHER JOEHP J ; GRADY MICHAEL C ; ANTON DOUGLAS ROBERT ; BAZZANA STEPHANE FRANCOIS ; BURLEW KEITH H ; JAHIC MEHMEDALIJA ; DAUNER MICHAEL

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Inventor(s): STEPHANE FRANCOIS BAZZANA ; JOSEF J ZAHER ; WILLIAM D PARTEN ; ROBERT W SYLVESTER ; ROBERT DICOSIMO ; KEITH H BURLEW ; MICHAEL CHARLES GRADY ; RANJAN PATNAIK ; FRANCIS J WOERNER ; JELENA CIRAKOVIC ; DOUGLAS ROBERT ANTON ; BRUCE A DINER ; DAVID J LOWE ; BRIAN MICHAEL ROESCH ; JOHN W HALLAM ; JOSEPH J ZAHER ; SYLVESTER ROBERT WUS ; ZAHER JOSEPH JUS ; PARTEN WILLIAM DUS ; GRADY MICHAEL CUS

Agent(s): HOULIHAN2; HOULIHAN2; HOULIHAN2 PTY LTD; TORYS LLP; TOWLER PHILIP DEAN; OWEN DEBORAH JANE; DEHNS; HOFFMANN BENJAMIN; TANI AND ABE PC; CHRISTINE M; LHULIER CHRISTINE M

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

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MZ NA NE NG NI NL NO NZ OM PE PG PH PL PT QA RO RS RU 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

Title: FUNCTIONALIZING CELLULOSIC AND LIGNOCELLULOSIC MATERIALS

Abstract: Irradiated lignocellulosic or cellulosic materials are provided which contain carboxylic acid groups and/or other functional groups not present in a naturally occurring cellulosic or lignocellulosic material from which the irradiated material was obtained

Classifications:

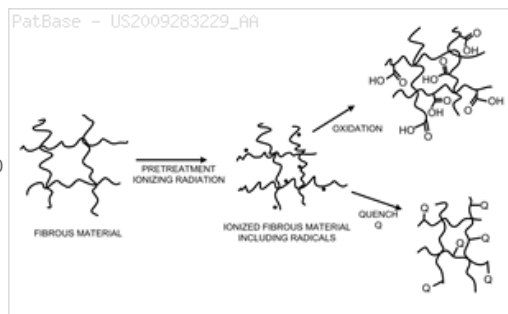
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Priority:

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US20180054399	20180803				

Probable Assignee: XYLECO INC

Assignee(s): (std): KSILEKO INK ; MEDOFF MARSHALL ; XYLECO INC

Assignee(s): XYLECO INC WAKEFIELD ; XYLECO INCL-271 SALEM STREETWOBURNMA01801US ; MEDOFF MARSHALL90 ADDINGTON ROADBROOKLINEMA02146US

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Inventor(s):
Agent(s):

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SPRUSON AND FERGUSON; SMART AND BIGGAR; STOLMAR AND PARTNER PATENT ANWALTE PARTG MBB;
SIMPSON MARK GEOFFREY; VON FUENER NICOLAI; PONS ANGEL; REINHOLD COHN AND PARTNERS;
EVROMARKPAT; FULYA SUEMERALP; FISH AND RICHARDSON PC; XYLECO INC; XYLECO INC CELIA LEBER;
CELIA H; CELIA; LEBER PATENT LAW PC; LEBER PATENT LAW P; FRANCESCO; LEBER IP LAW; LEBER CELIA
H; LEBER CELIA H 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
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Title: ANAEROBIC FERMENTATION METHODS AND APPARATUS

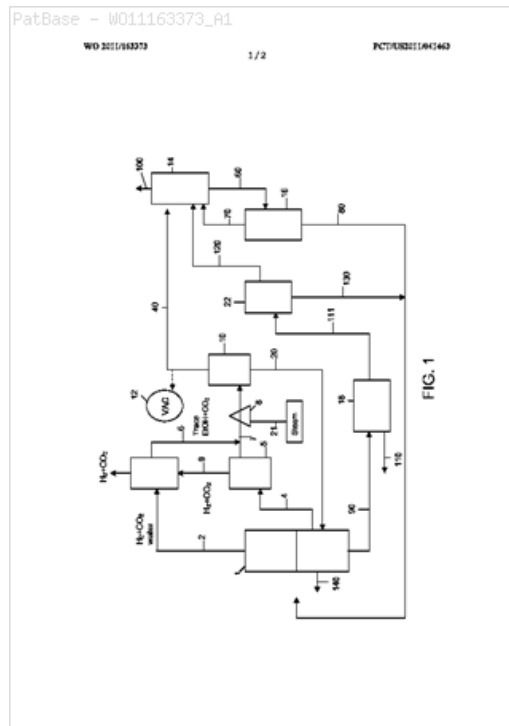
Abstract: Improved methods and apparatus for the highly efficient, cost effective production of desired chemical products by anaerobic biofermentation are provided. In a preferred embodiment, the method is a process for anaerobic fermentation of glycerol to produce ethanol using a biofermentation process that couples a fermentation zone to a vacuum assisted purification zone and ultimately a product recovery zone. The process is characterized in that vacuum assisted evaporation is used to produce a product enriched vapor from which the product may be efficiently isolated and collected wherein the vacuum assisted evaporation is carried out in a zone that is separate from the fermenter.

Classifications:

International (IPC 8-9): C12M1/00 C12P7/06 (Advanced/Invention)

CPC: Y02E50/17 B01D3/002 B01D3/06 C12M21/12 C12M43/02 C12P7/08 C12P7/40 Y02P20/582

European: B01D3/00A2 B01D3/06 C12M21/12 C12M43/02 C12P7/08 C12P7/40

**Family:**

Publication number	Publication date	Application number	Application date
WO11163373 A1	20111229	WO2011US41463	20110622

Priority:

US20100358214P 20100624

Probable Assignee: GLYCOS BIOTECHNOLOGIES INC

Assignee(s): (std): CAMPBELL PAUL ; COCKREM MICHAEL C ; GASKIN DAVID JEFFERSON ; GLYCOS BIOTECHNOLOGIES INC ; KHANKAL REZA ; MONTICELLO DANIEL J

Inventor(s): (std): CAMPBELL PAUL ; COCKREM MICHAEL C ; GASKIN DAVID JEFFERSON ; KHANKAL REZA ; MONTICELLO DANIEL J

Agent(s): VANSTONE DARLENE A 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 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 TH TJ TM TN TR TT TZ UA UG US UZ VC VN ZA ZM ZW

Title: CONFECTIONERY COMPOSITION INCLUDING AN ELASTOMERIC COMPONENT, A COOKED SACCHARIDE COMPONENT, AND A SENSATE

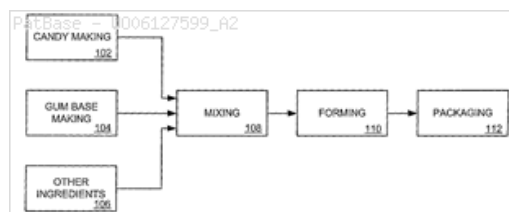
Abstract: The present invention relates to confectionery compositions including cooked saccharide portion and an elastomeric material portion, each portion also including sensates

Classifications:

International (IPC 8-9): A23G3/36 A23G3/38 A23G3/42 A23G3/54 A23G4/00 A23G4/10 A23G4/12 A23G4/20 A23G9/00 (Advanced/Invention); A23G4/00 A23G9/00 (Core/Invention)

CPC: A23G4/20 A23G3/364 A23G3/42 A23G3/54 A23G4/10 A23G4/12

European: A23G3/36M A23G3/42 A23G3/54 A23G4/10 A23G4/12 A23G4/20



Family:

Publication number	Publication date	Application number	Application date
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EP1919297 A2	20080514	EP20060770844	20060523
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Priority:

US20050683634P 20050523	US20050683634P 20050523	US20050683634P 20050523
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Probable Assignee: INTERCONTINENTAL GREAT BRANDS LLC

Assignee(s): (std): BOGHANI NAVROZ ; CADBURY ADAMA USA LLC ; CADBURY ADAMS USA LLC ; GEBRESELASSIE PETROS ; INTERCONTINENTAL GREAT BRANDS LLC ; LUO SHIUH JOHN ; KABSE KISHOR ; LUO SHIUJ JOHN

Assignee(s): KRAFT FOODS GLOBAL BRANDS LLC ; KRAFT FOODS GLOBAL INC ; INTERCONTINENTAL GREAT BRANDS LLC EAST HANOVER

Inventor(s): (std): GEBRESELASSIE PETROS ; BOGHANI NAVROZ ; LUO SHIUH JOHN ; KABSE KISHOR ; LUO SHIUJ JOHN ; LUO SHIUH

Inventor(s): PETROS GEBRESELASSIE ; NAVROZ BOGHANI ; SHIUH JOHN LUO ; KISHOR KABSE ; LUO SHIUH JOHN LIVINGTON ; KABSE KISHOR MORRIS PLAINS ; BOGHANI NAVROZ FLANDERS

Agent(s): GRIFFITH HACK; BERESKIN AND PARR LLP SENCRL SRL; WILSON GUNN; GOODWIN MARK ET AL; GOODWIN MARK; DEL VALLE SONIA

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