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Search 2: residu+ or waste or residuum (Results 1000000)
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Search 32: 31 not ferment+ (Results 13)

1) Family number: 55797019 (US2014045226A)

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Title: PROCESS FOR TREATING LIGNOCELLULOSIC BIOMASS

Abstract: A process for treating lignocellulosic biomass is described. The process includes treating particulate biomass with alkali to partially remove hemicellulose sheath on cellulose microfibrils of the biomass; and carrying out an oxidation reaction on the alkali treated biomass to form a treated biomass having a disrupted cellulose crystalline structure. The treated biomass may be further processed to form free sugars and lignin and the free sugars can be used to produce bio-ethanol or used as sugar source in fermentation processes.

Classifications:

International (IPC 8-9): C12P19/14 C12P7/08 C12P7/14

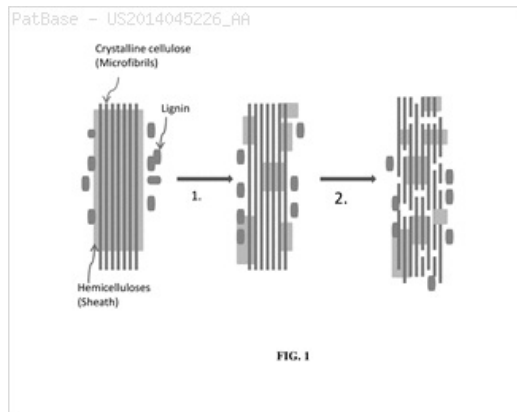
D21C1/06 (Advanced/Invention);

C12R1/685 C12R1/69 (Advanced/Non-invention)

CPC: D21C1/06 C12P19/14 C12P7/14 D21C11/0007 C12P7/10

C12P19/02 C12P2201/00 Y02E50/16

US: 162/14 426/60 435/162 435/99



Family:

Publication number	Publication date	Application number	Application date
CN103757060 A	20140430	CN201310344011	20130808
US2014045226 AA	20140213	US20130937855	20130709

Priority:

US20120680997P 20120808 US20130937855 20130709

Probable Assignee: DAKOTA STAR CAPITAL LLC

Assignee(s): (std): DAKOTA STAR CAPITAL LLC

Inventor(s): (std): BIAN YILIN ; J BRUCE WICKING ; KUO MONLIN ; LIU PING ; PING LIU ; MONLIN KUO ; WICKING J BRUCE ; YILIN BIAN

2) Family number: 47719142 (US2010305241A)

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Title: DERIVATIVES OF NATIVE LIGNIN

Abstract: The present invention provides derivatives of native lignin having a certain aliphatic hydroxyl content. Surprisingly, it has been found that consistent and predictable antioxidant activity may be provided by selecting for derivatives of native lignin having a certain aliphatic hydroxyl content.

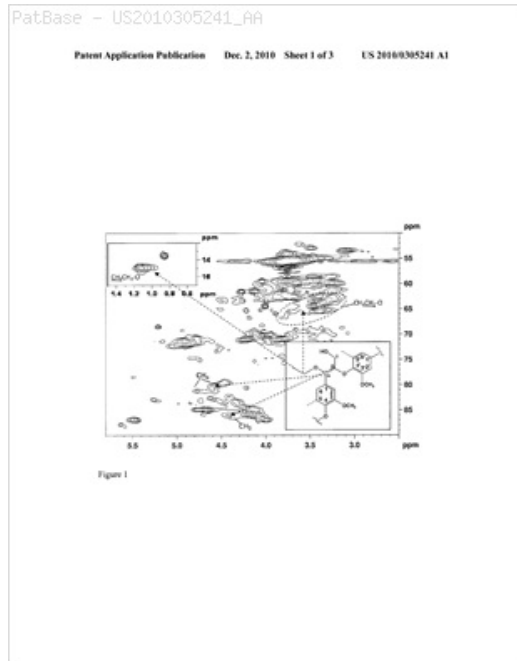
Classifications:

International (IPC 8-9): A23K1/12 A23K1/14 A23K10/30 A23K10/32 A23L1/29 A23L1/30 A23L33/00 A23L33/105 A61K31/765 A61K36/00 A61K36/15 A61K36/48 A61K36/54 A61K36/76 B27D5/00 B27N3/00 B27N3/04 B27N3/08 B29C47/00 B29C70/12 B29C70/34 C07G1/00 C08G18/40 C08G18/63 C08G18/76 C08G8/20 C08H7/00 C08H8/00 C08J3/00 C08J3/20 C08K11/00 C08K5/13 C08L1/10 C08L23/00 C08L23/02 C08L57/00 C08L61/06 C08L61/10 C08L61/12 C08L91/06 C08L97/00 C08L97/02 C09D197/00 C09J161/06 C09J175/04 C09J197/00 C09K15/06 C09K15/34 C10L10/00 D21C1/02 D21C11/00 D21C3/00 D21C3/20 D21H11/00 D21J1/04 (Advanced/Invention); B29K105/12 B29K311/14 B29K75/00 (Advanced/Non-invention)

CPC: D21C3/20 C08K5/13 C09K15/06 C08L23/02 A61K36/15 A61K36/48 A61K36/54 A61K36/76 C08J3/00 C08J2397/00 C08H8/00 C08L1/10 C08L61/06 C08L97/02 C08L57/00 C08L2207/04 D21J1/04 C09J161/06 D21H11/00 Y02P60/877 A23K1/12 A23K10/32 Y02P20/582 D21C11/0007 C08L97/00 C07G1/00 C08L61/12 A23L1/3002 A23L33/105 C08H6/00 C08L97/005 C09J175/04 C08G18/7671 C08G18/4081 B29C70/12 B29C70/34 B29K2075/00 B29K2105/12 B29K2311/14 C09J197/005 C08L91/06 B27N3/002 C08L2201/52

European: A23K1/12 A23L1/30B A61K36/15 A61K36/48 A61K36/54 A61K36/76 C07G1/00 C08H6/00 C08H8/00 C08L61/06 C08L61/12 C08L97/00 C09J161/06 C09J197/00C M08L97/00C

US: 1/1 106/164.01 106/270 144/344 156/62.2 162/14 162/158 162/165 252/182.12 252/182.13 252/182.29 264/319 426/542 514/777 524/13 524/700 524/72 524/72S 524/73 524/735 524/73P 524/74 524/74P 524/76 524/76P 524/76S 525/480 530/500 530/500S 530/507 530/507S



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CN107022089 A	20170808	CN201610862603	20100527
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Priority:

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CA20182798158	20180104				

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Inventor(s): CHADRICK ADAM NATHANIEL JORDAN GRUNERT ; GRUNERT CHADRICK ADAM NATHANIEL JORDAN ; VERA MAXIMENKO GUTMAN ; MIKHAIL YUREVICH BALAKSHIN ; HUMBERT THOMAS DELLICOLLI ; HUMBERT THOMAS DELLICOLLI ; EDWARD KENDALL PYE

Agent(s): GOWLING LAFLEUR HENDERSON LLP; GOWLING WLG CANADA LLP; SAMUELS LUCY ALICE; PERKINS COIE LLP; PATENT-SEA; PERKINS COIE LLP PATENT SEA; PERKINS COIE LLP; VIOLA T; ALEXANDER SEAN ET AL; ALEXANDER SEAN M 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

3) Family number: 48434323 (US2011262984A)

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Title: METHOD FOR PRODUCING ETHANOL AND CO-PRODUCTS FROM CELLULOSIC BIOMASS

Abstract: The present invention generally relates to processes for production of ethanol from cellulosic biomass. The present invention also relates to production of various co-products of preparation of ethanol from cellulosic biomass. The present invention further relates to improvements in one or more aspects of preparation of ethanol from cellulosic biomass including, for example, improved methods for cleaning biomass feedstocks, improved acid impregnation, and improved steam treatment, or "steam explosion."

Classifications:

International (IPC 8-9): C08B1/00 C08B15/00 C12P19/14 C12P7/10 D21C1/00 D21C1/02 D21C1/04 D21C1/10 D21C5/00 F23C13/02 F23D14/64 F23D14/66 F23N1/02 (Advanced/Invention)

CPC: C12P19/02 C12P19/14 C12P21/00 C12P2201/00 C13K1/02 C13K13/002 D21C1/00 D21C1/04 F23C13/02 F23D14/64 F23D14/66 F23N1/027 F23N2021/06 F23N2021/08 F23N2025/20 F23N2037/20 C12P7/10 Y02E50/16 Y02E20/348

European: D21C1/00 D21C1/02 D21C1/04 F23C13/02 F23D14/64 F23D14/66 F23N1/02 F23N21/06 F23N21/08 F23N25/20 F23N37/20 Y02E50/16

US: 1/1 127/34 127/34P 435/165 435/277

D21C5/02 (Core/Invention)
International (IPC 1-7): D21C5/02
CPC: Y02W30/648 D21C5/02
European: D21C5/02
US: 162/11 162/163 162/4

Family:

Publication number	Publication date	Application number	Application date
GB587109 A	19470415	GB19430006313	19430420
US2394273 A	19460205	US19420437207	19420401

Priority:

US19420437207 19420401

Probable Assignee: AMERICAN CYANAMID CO
Assignee(s): (std): AMERICAN CYANAMID CO
Assignee(s): AMERICAN CYANAMID COMPANY
Inventor(s): (std): THOMAS WALTER M

5) Family number: 23967395 (WO0131066A1)

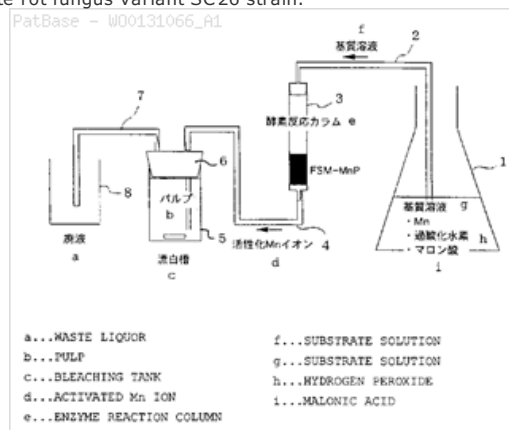
PatBase

Title: REACTION METHOD, REACTION APPARATUS AND ENZYME

Abstract: A reaction method wherein a mediator in an activated state is poured into a reaction system containing a substrate. In this method, it is preferable to activate the mediator under mild conditions with the use of an enzyme as a preliminary step. It is particularly preferable that a highly active mediator, which has been improved in the activity and/or stability, is poured into the above-described reaction system. A method of enzymatically decomposing a substrate comprising immobilizing an oxidizing enzyme peroxidase in a structural unit which has almost the same size as the enzyme size and a structural stability, and decomposing the substrate in the presence of an oxidizing agent at such a concentration as being accepted by the immobilization. A reaction promoter which is to be used in a reaction system of decomposing a substrate with an oxidizing enzyme, has a diketone structure allowing radicalization due to the function of the oxidizing enzyme and is soluble in water. A manganese peroxidase liquor and manganese peroxidase obtained by culturing a white rot fungus variant SC26 strain.

Classifications:

International (IPC 8-9): B01J19/00 C12M1/40 C12N11/00 C12N11/14 C12N9/08 C12Q1/28 C12S3/08 C12S3/12 C12S99/00 D21C11/00 D21C3/00 D21C5/00 D21C9/147 (Advanced/Invention); D21C9/10 (Advanced/Non-invention); B01J19/00 C12M1/40 C12N11/00 C12N9/08 C12Q1/28 C12S3/00 C12S99/00 D21C5/00 D21C9/147 (Core/Invention); D21C9/10 (Core/Non-invention)
International (IPC 1-7): A62D3/00 B01J19/00 C12M1/40 C12N11/00 C12N11/14 C12N9/12 C12Q1/28 C12S13/00 C12S3/08 C12S3/12 D21C11/00 D21C3/00 D21C9/10 D21C9/147
CPC: C12N9/0065 C12N11/14 D21C5/005 D21C9/1063
European: C12M1/40 C12N11/14 C12N9/00P24 D21C5/00B N21C9/10H



Family:

Publication number	Publication date	Application number	Application date
CA2389212 AA	20020425	CA20002389212	20001030
CN1384889 A	20021211	CN20008015117	20001030
EP1251184 A1	20021023	EP20000970199	20001030
JP2001128672 A2	20010515	JP19990313026	19991102
JP2001190269 A2	20010717	JP20000330034	20001030
WO0131066 A1	20010503	WO2000JP07618	20001030

Priority:

JP19990306661 19991028 JP19990313026 19991102 JP20000330034 20001030
WO2000JP07618 20001030

Probable Assignee: TOYOTA CENTRAL RES AND DEV

Assignee(s): (std): KAJINO TSUTOMU ; LI BO ; SASAKI TOSHIYA ; TAKAHASHI HARUO ; SUGIYAMA HIDEHIKO ; TOYOTA CENTRAL RES AND DEV ; TOYODA CHUO KENKYUSHO KK ; ASAMI OSAMU ; TOYOTA CENTRAL R AND D LABS INC

Assignee(s): KABUSHIKI KAISHA TOYOTA CHUO KENKYUSHO ; TOYOTA CHUO KENKYUSHO KK ; TOYOTA CENTRAL RES AND DEV LAB INC ; TOYOTA CHUO KENKYUSHO K K

Inventor(s): (std): ASAMI OSAMU ; HARUO TAKAHASHI ; HIDEHIKO SUGIYAMA ; KAJINO TSUTOMU ; LI BO ; RI BOU ; SASAKI TOSHIYA ; SUGIYAMA HIDEHIKO ; TAKAHASHI HARUO ; TSUTOMU KAJINO

Agent(s): SMART AND BIGGAR

Designated states: AT BE CA CH CN CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE US

Title: Crosslinked cellulose products and method for their preparation

Abstract: The invention is a method of making a wet formed, sheeted, readily reslurriable sheeted crosslinked cellulose and the products made by the method. Crosslinked wood pulp fibers tend to be quite brittle. If crosslinked while in sheeted form, the sheets cannot be readily defibered, either in a wet or dry state, without serious fiber degradation. The sheet products of the present invention can be easily redispersed or repulped in water without significant fiber breakage. The present products are made by including within the sheet, while still in wet form, a debonding or softening agent which is preferably added before the latent crosslinking reactant. Most preferably the debonder is added prior to the headbox of a paper machine and the crosslinking reactant is applied near the end of the forming wire or at the press section. The treated sheet is dried conventionally. Crosslinking may occur entirely during drying or during a period of additional heating, usually at a temperature in excess of 100 DEG C. for a short period of time. Conventional debonding agents and crosslinking reactants are suitable. The softening agent apparently reduces or prevents adhesive bonding between adjacent fibers caused by polymer formation external to the fiber under reaction conditions.

Classifications:

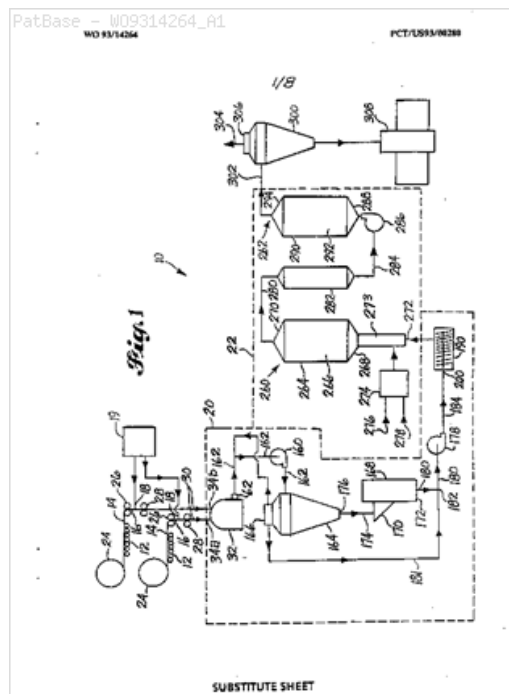
International (ipc 8-9): A61F13/15 A61L15/28 B27N1/02 D04H1/42 D04H1/54 D04H1/58 D04H1/64 D06M11/30 D06M13/137 D06M13/184 D06M13/192 D06M13/262 D06M13/418 D06M13/419 D06M13/432 D06M13/438 D06M13/44 D06M13/52 D21B1/06 D21C9/00 D21H11/16 D21H11/20 D21H15/10 D21H17/05 D21H17/06 D21H17/07 D21H17/09 D21H17/10 D21H17/15 D21H21/06 D21H21/14 D21H21/24 D21H23/04 D21H23/14 D21H23/18 D21H23/20 D21H23/28 D21H25/00 D21H25/02 (Advanced/Invention); A61F13/15 D04H1/42 (Advanced/Non-invention); A61F13/15 A61L15/16 D04H1/42 D04H1/54 D21B1/00 D21H25/00 (Core/Invention); A61F13/15 (Core/Non-invention)

International (ipc 1-7): A61F13/48 A61L15/00 B02C11/08 B27N1/02 B29C59/00 C07D403/04 D03D3/00 D04H1/42 D04H1/54 D04H1/58 D06L1/12 D06M10/00 D06M11/30 D06M13/00 D06M13/52 D21B1/06 D21B1/16 D21C9/00 D21D1/02 D21D1/30 D21D1/32 D21DX D21H11/16 D21H11/20 D21H15/10 D21H17/05 D21H17/06 D21H17/07 D21H17/09 D21H17/15 D21H17/72 D21H21/06 D21H21/14 D21H23/04 D21H23/14 D21H23/20 D21H23/28 D21H25/02

CPC: D21H17/09 D21H17/15 D21H21/14 D21H23/14 Y10S428/913 Y10T442/60 Y10T442/696 D04H1/655 D04H1/587 D21H25/02 A61F13/15707 A61F13/53 A61F2013/530007 A61F2013/530474 A61L15/28 D04H1/54 D06M11/30 D06M13/137 D06M13/1845 D06M13/192 D06M13/262 D06M13/418 D06M13/419 D06M13/432 D06M13/438 D06M13/44 D06M13/52 D21B1/066 D21C9/005 D21H11/20 D21H15/10 D21H17/05 D21H17/06 D21H17/07 D21H17/10 D21H21/06 D21H21/24 D21H23/04 D21H23/18 D21H23/20 D21H23/28 D21H25/005

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US: 162/100 162/146 162/157.6 162/158 162/182 162/201 162/9 241/152.2 241/65 264/119 264/126 428/224 428/280 428/288 428/290 428/913 442/327 442/414 536/56 544/296 544/314 548/520 548/542 8/116.1 8/116.4 8/181 8/184 8/189 8/194 8/195



Family:

Publication number	Publication date	Application number	Application date
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AU199334705 A1	19930803	AU19930034705	19930113
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JP6504326 T2	19940519	JP19910513467T	19910801
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US5252275 A	19931012	US19910665761	19910307
US5324391 A	19940628	US19920974365	19921109
US5324575 A	19940628	US19930067703	19930526

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Priority:

US19870004729	19870120	US19870140922	19871228	US19880284885	19881215
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US19940235723	19940429	US19950509401	19950731		

Probable Assignee: WEYERHAEUSER NR CO

Assignee(s): (std): JEWELL RICHARD A ; WEYERHAEUSER ; WEYERHAEUSER CO ; WYERHAEUSER CO ; WEYERHAEUSER COMPANY ; WYERHAEUSER COMPANY ; WEYERHAEUSER COMPANY

Assignee(s): WEYERHAEUSER CO ; WEYERHAEUSER CO TACOMA ; WEYERHAEUSER CO TACOMA WASH US ; WEYERHAEUSER NR CO ; BOLSTAD CLIFFORD R ; BOWNS MARK W ; CARNEY ALLAN R ; ELSTON COLIN ; WEYERHAEUSER A WASHINGTON CORP ; SULTZE ROLLAND F ; GRAEF PETER A ; HOWARD FRED B ; HUNTER FRANK R ; OLMSTEAD FRED E

Inventor(s): (std): SULTZE ROLLAND F ; ROLLAND F SULTZE ; RICHARD A JEWELL ; PETER A GRAEF ; MARK W BOWNS ; HOWARD FRED B ; FRED E OLMSTEAD ; FRED B HOWARD ; FRANK R HUNTER ; CLIFFORD R BOLSTAD ; ALLAN R CARNEY ; SULTZE ROLLAND ; OLMSTEAD FRED E ; JEWELL RICHARD A ; HUNTER FRANK R ; HOWARD FRED ; GRAEF PETER ; FRED E ; ELSTON COLIN ; CARNEY ALLAN R ; BOWNS MARK W ; BOLSTAD CLIFFORD R ; BOLSTAD CLIFFORD R ; HUNTER FRANK ; GRAEF PETER A

Agent(s): SPRUSON AND FERGUSON; ASPEN PHARMA PTY LTD; PHILLIPS ORMONDE FITZPATRICK; OYEN WIGGS GREEN AND MUTALA LLP; SMART AND BIGGAR

Designated states: AT AU BE BR CA CH DE DK ES FI FR GB GR IE IT JP KR LI LU MC NL NO NZ PT SE

7) Family number: 57700495 (US2016076112A)

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Title: CO-SOLVENT TO PRODUCE REACTIVE INTERMEDIATES FROM BIOMASS

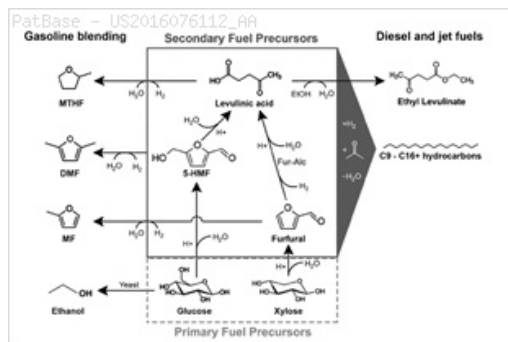
Abstract: The disclosure provides a system for production of reactive intermediates from lignocellulosic biomass. The reactive intermediates can be used as platform chemicals for biological conversions or can be further catalytically upgraded to be used as "drop in" reagents for fuels. The disclosure provides methods and compositions useful for processing biomass to biofuels and intermediates.

Classifications:

International (IPC 8-9): B01J27/02 B01J27/10 B01J37/36 B09B3/00 C02F11/00 C02F11/02 C07C59/225 C07D307/08 C07D307/36 C07D307/50 C07D307/68 C07G1/00 C12P19/02 C12P7/10 C13K1/02 C13K13/00 D21C3/20 (Advanced/Invention)

CPC: Y02E50/16 C12P17/04 D21C3/222 C07G1/00 C07D307/50 C07D307/08 C12P19/02 C13K1/02 C12P7/10 C12P2201/00 D21C3/20

US: 127/44 252/183.11 435/105 435/165 530/507 549/429 549/489



Family:

Publication number	Publication date	Application number	Application date
AU2014256941 AA	20141030	AU20140256941	20140425
AU2014256941 BB	20180517	AU20140256941	20140425
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BR112015026960 A2	20170725	BR20151126960	20140425
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CN105264080 A	20160120	CN201480032402	20140425
EP2989207 A2	20160302	EP20140788138	20140425
EP2989207 A4	20161123	EP20140788138	20140425
EP2989207 B1	20181128	EP20140788138	20140425
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JP2016524525 T2	20160818	JP20160510804T	20140425
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WO14176531 A3	20150108	WO2014US35506	20140425

Priority:

Probable Assignee: THE UNIV OF CALIFORNIA

Assignee(s): (std): THE UNIV OF CALIFORNIA ; UNIV CALIFORNIA

Assignee(s): ZHANG TAIYING ; WYMAN CHARLES E ; UNIV OF CALIFORNIA ; CAI CHARLES M ; KUMAR RAJEEV

Inventor(s): (std): CAI CHARLES M ; CHARLES E WYMAN ; CHARLES M CAI ; KUMAR RAJEEV ; RAJEEV KUMAR ; TAIYING ZHANG ; WYMAN CHARLES E ; ZHANG TAIYING

Agent(s): SPRUSON AND FERGUSON; MILLER THOMSON LLP; JAPPY JOHN WILLIAM GRAHAM; GILL JENNINGS AND EVERY LLP; ARAI EIICHI; FUJITA TAKASHI; TANAKA NATSUO; HIRAKI YUSUKE; BAKER JR JOSEPH R

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 OM PA PE PG PH PL PT QA RO RS RW SA SC SD SE SG SI SK SL SM SN ST SV SY SZ TD TG TH TJ TM TN TR TT UA UG US UZ VC VN ZA ZM ZW

8) Family number: 40798647 (US2007259412A)

Title: PROCESS FOR THE PRODUCTION OF BIOFUEL FROM PLANT MATERIALS

Abstract: An integrated process for the production of ethanol from woody plant material is provided, the process comprising: contacting a continuous flow of the plant material with a counter-current continuous flow of an aqueous ethanol solution at elevated temperature and pressure to provide plant material depleted of lignin; removing ethanol from the lignin-depleted plant material; contacting a continuous flow of the lignin-depleted plant material with water at elevated temperature and pressure to solubilize xylene within the plant material; and hydrolyzing cellulose present in the plant material to form glucose, which in turn is fermented to produce ethanol.

Classifications:

International (pc s-9): A23K1/00 C07C31/08 C07C31/18 C07C51/00
C07D307/34 C07D307/48 C07D307/50 C07D307/68 C07G1/00 C07H1/08
C07H3/02 C08B1/00 C08B15/00 C08G18/28 C08H7/02 C08L97/00
C08L97/02 C12N5/04 C12P19/00 C12P19/02 C12P7/06 C12P7/10
C12P19/02 C13K13/00 D21C1/00 D21C11/00 D21C3/20 D21C3/24
G03B17/56 (Advanced/Invention);
C12P19/00 C12P7/02 C13K1/00 D21C3/00 (Core/Invention)

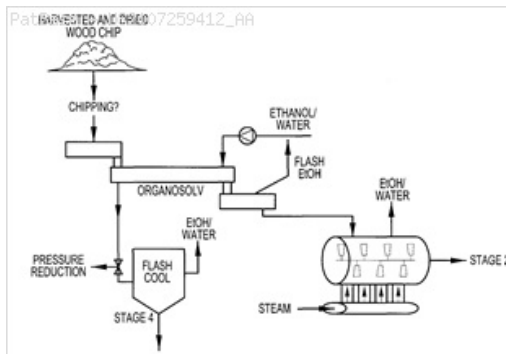
International (IPC 1-7): C07G1/00 D21C3/20

CPC: C07G1/00 G03B17/561 F16M11/32 F16M11/40 F16M13/022

C13K13/00 C13K13/002 Y02E50/16 D21C5/00 D21C3/20 D21C11/0007 Y02E50/17

European: C07G1/00 C13K13/00 C13K13/00B D21C11/00B D21C5/00
N21C11/00B N21C3/20 N21C5/00 Y02E50/17

US: 396/419 396/428 435/105 435/161 435/161P 435/430 521/177
530/500 530/500S 530/502 530/507 530/507S 536/1.11 536/1.110S
536/128 536/128S 536/56 536/56S 549/483 549/498 549/498S 568/840
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Family:

Publication number	Publication date	Application number	Application date
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CA2697469 AA	20090305	CA20082697469	20080901
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EP2193138 A1	20100609	EP20080828108	20080901
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MY148779 A	20130531	MY20080004453	20070508
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NZ584272 A	20120629	NZ20080584272	20080901
NZ594694 A	20121221	NZ20070594694	20070508
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US2010136642 AA	20100603	US20090638862	20091215
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WO09028969 A1	20090305	WO2008NZ00225	20080901
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Priority:

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US20120612453	20120912				

Probable Assignee: VERTICHEM CORP

Assignee(s): (std): BELANGER HELENE ; BEVIRT JOEBEN ; BIOJOULE LTD ; LOUGH TONY JAMES ; CHEN JOHN ; FARID MOHAMMED MEHDI ; ELTON CLARE ; MACFARLANE ALAN ; YAO JIA LONG ; WATSON JAMES D ; PRESTIDGE ROSS ; VERTICHEM CORP ; PRESTIDGE ROSS L ; MCFARLANE ALAN

Assignee(s): BIOJOULE LTDP.O. BOX 89281150AUCKLANDNZ ; DAYMEN US INC ; VERTICHEM CORP1240 - 155 UNIVERSITY AVENUETORONTOO1M5H 3B7CA ; VERTICHEM TORONTO CORP ; GENERAL ELECTRIC CAPITAL AGENT AS CORP ; GENERAL ELECTRIC CAPITAL AGENT CORP AS ; ANTARES CAPITAL LP SUCCESSOR AGENT AS ; AUCKLAND UNISERVICES LTD ; AUCKLAND UNISERVICES LTD70 SYMONDS ST.LEVEL 10UNISERVICES HOUSE1142AUCKLANDNZ ; JOBY PHOTO INC

Inventor(s): (std): BELANGER HELEN ; BELANGER HELENE ; BEVIRT JOEBEN ; CHEN JOHN ; CHEN JOHN JIUNN JYE ; ELTON CLARE ; FARID MOHAMMAD ; FARID MOHAMMED MEHDI ; HELENE BELANGER ; JAMES D WATSON ; LOUGH TONY JAMES ; MACFARLANE ALAN ; PRESIDGE ROSS ; PRESTIDGE ROSS ; PRESTIDGE ROSS L ; ROSS PRESTIDGE ; TONY JAMES LOUGH ; WATSON JAMES ; WATSON JAMES D ; LOUGH TONY ; JOHN CHEN ; JIA LONG YAO ; JAMES LOUGH TONY ; HELEN BELANGER ; MCFARLANE ALAN ; MEHDI FARID MOHAMMED ; FARID MOHAMMED MEDHI ; FARID MOHAMMED ; CLARE ELTON ; ALAN MACFARLANE ; YAO JIA LONG

Inventor(s): CHEN JOHNNZ ; CHEN JOHN J J ; BELANGER HELENENZ ; ELTON CLARENZ ; MOHAMMED MEHDI FARID ; FARID MOHAMMED MEHDINZ ; WATSON JAMES DNZ ; YAO JIA LONGNZ ; LOUGH TONY JAMESNZ ; PRESTIDGE ROSSNZ ; MACFARLANE ALANNZ

Agent(s): PETER MAXWELL AND ASSOCIATES; SMART AND BIGGAR; LEINWEBER AND ZIMMERMANN; CLEGG RICHARD IAN ET AL; CLEGG RICHARD IAN; DOCHERTY ROBERT CHARLES; HENRY GOH S PTE LTD; SPECKMAN LAW GROUP PLLC; JANET; ANN W; JENNIFER L; BROUSE; BALDWIN INTELLECTUAL PROPERTY

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: 13332653 (US5693296A)

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Title: CALCIUM HYDROXIDE PRETREATMENT OF BIOMASS

Abstract: Lignocellulose-containing materials are treated with lime (calcium hydroxide) and water at a relatively high temperature and for a certain period of time under certain conditions. The process variables were: lime loading which ranged from about 2 to about g Ca(OH)2/100 g dry material; water loading which ranged from about 6 to about 19 g water/g dry material; treatment temperature which varied from about 50 DEG C. to about 150 DEG C.; and treatment time which varied from about 1 to about 36 hours. The effects of treatment time and temperature were interdependent. A process for lime recovery is developed. The soluble Ca(OH)2 was washed out of the pretreated material with water and converted to insoluble CaCO3, by reacting with CO2, and was thus separated. The CaCO3 can be heated to produce CaO and CO2. The CaO is hydrated to Ca(OH)2 which can be reused as the lignocellulose treatment agent. Carbon dioxide is reused for lime recovery.

Classifications:

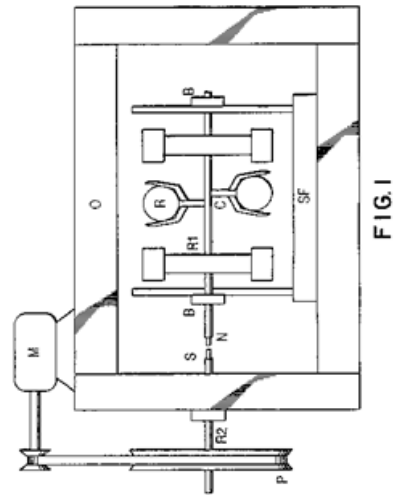
International (IPC 8-9): A23K1/12 A23K10/32 B01D29/00 B09B3/00 C01F11/02 C01F11/18 C08B1/00 C08H5/04 C08H8/00 C12P19/14 C12P7/10 C13K1/02 D21B1/02 D21C1/06 G02B5/30 G02F1/1335 G02F1/139 (Advanced/Invention); B01D29/00 B09B3/00 G02F1/13363 (Advanced/Non-invention); G02B5/30 G02F1/13 (Core/Invention); D21C1/06 (Core/Non-invention)

International (IPC 1-7): A23K1/12 B01D29/00 B09B3/00 C01F11/02 C01F11/06 C01F11/18 C08K3/20 C08L97/02 C10L1/18 C10L5/44 C12P19/00 C12P19/14 C12P7/26 C12P7/40 C12P7/64 C12S3/00 C12S3/04 C13K1/02

CPC: A23K10/32 C01F11/18 C12P7/10 C12P2201/00 C13K1/02 Y02E50/16

European: A23K1/12 C01F11/18 C12P7/10 C13K1/02 M12P201/00 Y02E50/16

US: 127/37 423/165 426/635 426/636

**Family:**

Publication number	Publication date	Application number	Application date
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CA2615904 AA	19940217	CA19932615904	19930806
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JP8503126 T2	19960409	JP19940505623T	19930806
KR100321678 B1	20020620	KR19950700474	19930806
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US5693296 A	19971202	US19940300543	19940906
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Priority:

US19920926739 19920806	US19930096972 19930727	US19930069972 19930727
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US19940300543 19940906		

Probable Assignee: TEXAS A AND M UNIV SYSTEM**Assignee(s):** (std): TEXAS A AND M UNIV SYS ; TEXAS A AND M UNIVERITY SYSTEM**Assignee(s):** TEXAS A AND M UNIV SYSTEM ; TEXAS A AND M UNIV SYSTEM COLLEGE STATION ; TEXAS A AND M UNIVERITY SYSTEMUS ; DAVISON RICHARD R ; HOLTZAPPLE MARK T ; NAGWANI MURLIDHAR ; TEXAS A AND M UNIV**Inventor(s):** (std): DAVID RICHARD R ; DAVIDSON RICHARD R ; HOLTZAPPLE MARK T ; DAVISON RICHARD R ; HOLTZAPPLE T ; DAVISON R ; NAGWANI MURLIDHAR ; HOLTZZAPPLE MARK T**Inventor(s):** MURLIDHAR NAGWANI ; RICHARD R DAVIDSON ; MARK T HOLTZAPPLE ; RICHARD R DAVISON ; MARK T HOLTZZAPPLE**Agent(s):** MBM INTELLECTUAL PROPERTY LAW LLP**Designated states:** AT AU BB BE BF BG BJ BR BY CA CF CG CH CI CM CZ DE DK ES FI FR GA GB GN GR HU IE IT JP KP KR KZ LI LK LU MC MG ML MN MR MW NE NL NO NZ PL PT RO RU SD SE SK SN TD TG UA VN

Title: FERMENTATION AND CHEMICAL TREATMENT OF PULP AND PAPER MILL SLUDGE

Abstract: A method of chemically treating partially de-ashed pulp and/or paper mill sludge to obtain products of value comprising taking a sample of primary sludge from a Kraft paper mill process, partially de-ashing the primary sludge by physical means, and further treating the primary sludge to obtain the products of value, including further treating the resulting sludge and using the resulting sludge as a substrate to produce cellulase in an efficient manner using the resulting sludge as the only carbon source and mixtures of inorganic salts as the primary nitrogen source, and including further treating the resulting sludge and using the resulting sludge to produce ethanol.

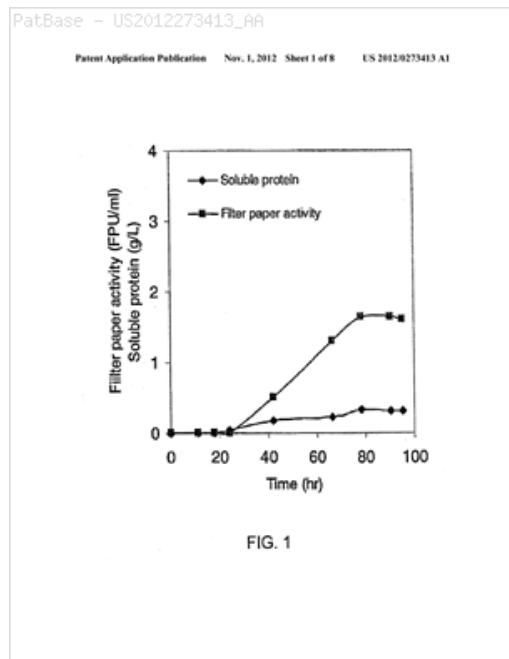
Classifications:

International (IPC 8-9): C02F1/68 C02F3/12 C02F9/04 C02F9/14 C12P19/02 C12P7/10 C12P7/18 D21C11/00 (Advanced/Invention); C02F103/28 D21C3/02 (Advanced/Non-invention)

CPC: D21C11/0007 C02F2103/28 D21C3/02 Y02E50/16

European: D21C11/00B M02F103/28 N21C3/02 Y02E50/16

US: 210/606 210/703 210/749 210/754 435/165 435/256.7

**Family:**

Publication number	Publication date	Application number	Application date
US2012273413 AA	20121101	US20100391549	20100820
US8900457 BB	20141202	US20100391549	20100820
WO11022644 A2	20110224	WO2010US46161	20100820
WO11022644 A3	20110414	WO2010US46161	20100820

Priority:

US20090235877P 20090821 US20090235894P 20090821 WO2010US46161 20100820
US20100391549 20100820

Probable Assignee: AUBURN UNIV

Assignee(s): (std): KANG LI ; LEE YOON Y ; UNIV AUBURN ; WANG WEI

Assignee(s): AUBURN UNIV ; AUBURN UNIVERSITY

Inventor(s): (std): KANG LI ; LEE YOON Y ; WANG WEI

Agent(s): BARNES AND THORNBURG LLP; COLTON LAURENCE P

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: DELIGNIFICATION OF BIOMASS CONTAINING LIGNIN AND PRODUCTION OF AMINO LIGNIN ALDEHYDE RESINS AND CARBOHYDRATES

Abstract: Delignification of biomass consisting of lignin containing plant is done by utilizing an amino compound in and aqueous solution at ambient temperature up to 150 degree C. to produce and aqueous solution of amino salt of lignin and an amino-lignin-cellulose which is not soluble in water. The aqueous solution of amino salt of lignin is then filtered off of the amino-lignin-cellulose. The aqueous solution of amino salt of lignin or the amino salt of lignin with the amino-lignin-cellulose may be reacted with an aldehyde to produce an amino-lignin-aldehyde resin or an amino-lignin-cellulose aldehyde resin which may be of the thermoplastic or thermosetting type. The thermoplastic resins are fire resistant, hard, strong, not water soluble and may be used to make exterior fiberboard, OAS boards, plywood, molded products, etc. These urea salts of lignin may also be utilized as long acting fertilizer, to produce plastics and other products. The amino-lignin-cellulose may be hydrolyzed by any suitable means such as acid hydrolysis into carbohydrates which can be fermented in alcohol.

Classifications:

International (IPC 8-9): B32B23/04 B32B37/12 C07G1/00 C08H6/00 C08H7/00 C08L1/00 C08L97/00 C08L97/02 C09D197/02 C09J197/02 C13D1/14 D21C3/20 (Advanced/Invention)

CPC: C08H6/00 C08H8/00 C08G18/6484 C08G18/6492 C08G18/6517 C08G18/7664 C08G2101/0025 C08G14/08 C07G1/00 C08G14/06 C08L97/02 C08K5/17 C09J189/00 C09J197/005 C08L97/005 Y10T428/31975 B32B2307/54 B32B21/14 B32B21/042 B32B21/02 B32B7/12 C09J189/06 C09J189/04 C09J189/005 C08B37/0057 C08K3/013 C08L61/20 C08L89/00

European: C07G1/00

US: 106/123.12 106/126.2 106/137.1 106/137.6 106/162.5 127/44 127/44S 156/328 156/336 162/72 428/533 524/35 524/35P 524/72 524/72S 524/9 527/400 527/400S 530/501 530/501S 530/505 530/505S

Family:

Publication number	Publication date	Application number	Application date
US2011094678 AA	20110428	US20090589399	20091023
US2011098384 AA	20110428	US20100658429	20100212
US2013202905 AA	20130808	US20120385150	20120206
US8268121 BB	20120918	US20090589399	20091023
US8409403 BB	20130402	US20100658429	20100212
US8986437 BB	20150324	US20120385150	20120206

Priority:

US20090589399 20091023 US20100658429 20100212 US20120385150 20120206

Probable Assignee:

BLOUNT DAVID H

Assignee(s): (std):

BLOUNT DAVID H

Inventor(s): (std):

BLOUNT DAVID H

12) Family number: 30468872 (WO04031474A1)

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Title: METHOD FOR REDUCING DEPOSITS IN INDUSTRIAL SYSTEMS CONTAINING WATER BY ADDITION OF HYDROPHOBIC ORGANIC SOLVENT AND TENSIDE

Abstract: The invention concerns a method for reducing deposits in industrial systems containing water by addition of at least one hydrophobic organic solvent in combination with at least one tenside to the aqueous system either proportional to the volume of water or proportional to the level of any solids transported in the water, wherein the at least one tenside constitutes 0,1 percent w/w to 10 percent w/w of the overall amount of organic solvent and tenside to be added to the system.

Classifications:

International (IPC 8-9): C02F1/50 C02F5/10 C02F5/12

D21H21/02 (Advanced/Invention);

C02F1/50 C02F5/10 D21H21/00 (Core/Invention)

International (IPC 1-7): C02F1/50 D21C5/02 D21H21/02

CPC: C02F5/125 C02F2103/023 C02F2103/28 C02F5/10 C02F5/12

C02F2305/04 D21H21/02

European: C02F5/10 C02F5/12 C02F5/12B D21H21/02 M02F103/02B

M02F103/28 M02F305/04

PatBase - EP1556547_B1

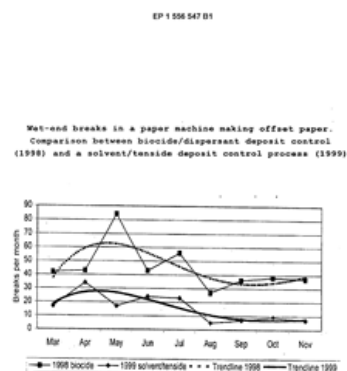


Fig. 1

21

Family:

Publication number	Publication date	Application number	Application date
AT467721 E	20100515	AT20030755567T	20031006
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AU2002368355 AA	20040603	AU20020368355	20021112
AU2003273412 AA	20040423	AU20030273412	20031006
DE03755567 T1	20051110	DE20030755567T	20031006
DE60332549 D1	20100624	DE20036032549	20031006
EP1556547 A1	20050727	EP20030755567	20031006
EP1556547 B1	20100512	EP20030755567	20031006
WO04031474 A1	20040415	WO2002EP11216	20021007
WO04031481 A1	20040415	WO2003EP11029	20031006
WO04044324 A1	20040527	WO2002EP12662	20021112

Priority:

WO2002EP11216 20021007 WO2002EP12662 20021112 EP20030755567 20031006
WO2003EP11029 20031006

Probable Assignee:

Assignee(s): (std): KERN GERHARD ; POHLEN ALFRED ; SPEDDING JEFFREY

Inventor(s): (std): KERN GERHARD ; POHLEN ALFRED ; SPEDDING JEFFREY

Inventor(s): ALFRED POHLEN ; GERHARD KERN ; JEFFREY SPEDDING
Agent(s): SCHWARZENSTEINER MARIE LUISE
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

13) Family number: 20593979 (US2001004869A) © PatBase

Title: SUPPLEMENTATION OF ESSENTIALLY AMORPHOUS CELLULOSE NANOFIBRILS WITH CARBOXYCELLULOSE WHICH HAS A HIGH DEGREE OF SUBSTITUTION

Abstract: The present invention relates to compositions comprising essentially amorphous cellulose nanofibrils, at least one additive chosen from carboxycellulose with a degree of substitution of more than 0.95, a natural polysaccharide, a polyol, and optionally at least one co-additive, the content of additive and of optional co-additive being less than or equal to 30 percent by weight relative to the weight of nanofibrils and of additive and of optional co-additive. Similarly, a subject of the invention is a process for preparing such compositions, which consists in adding the additive and the optional co-additive to a suspension of essentially amorphous nanofibrils, and then in drying the suspension thus supplemented. The compositions obtained are readily redispersable and conserve their initial Theological properties.

Classifications:

International (IPC 8-9): A23L1/03 A23L1/0534 A23L1/054 A23L29/00 A23L29/262 A23L29/269 A61K8/02 A61K8/04 A61K8/42 A61K8/72 A61K8/73 A61Q19/00 C04B18/24 C04B24/38 C04B40/00 C08L1/00 C08L1/02 C09K8/10 C09K8/20 C11D1/68 C11D3/22 C11D3/382 (Advanced/Invention); A23L1/03 A61K8/04 A61K8/72 C11D1/68 (Advanced/Non-invention); A23L1/05 A23L1/052 A61K8/02 A61K8/72 A61Q19/00 C04B18/04 C04B40/00 C08L1/00 C09K8/02 C11D3/22 (Core/Invention)
International (IPC 1-7): A23L1/00 A23L1/03 A23L1/0534 A61K7/00 C04B16/02 C04B24/00 C04B24/38 C08B15/00 C08D101/02 C08D19/02 C08L1/00 C08L1/02 C08L1/28 C08L29/04 C08L5/00 C09D101/00 C09D101/02 C09K7/00 C09K7/02 C11D1/68 C11D3/00 C11D3/22 C11D3/382 D21C9/00 D21H11/18
CPC: Y02W30/97 A61K8/02 C04B18/24 C04B40/0039 C04B2103/44 C08L1/00 C08L1/02 C11D3/222 A23L29/262 A23L29/27 C08L2205/02 B82Y5/00 A61K8/027 A61K8/731 A61K2800/413 A61Q19/00 C09K8/10 C09K8/206
European: A23L1/0534 A23L1/054B A61K8/02 A61K8/02N4 A61K8/73C A61Q19/00 B82Y5/00 C04B18/24 C04B40/00D4 C08L1/00 C08L1/02 C09K8/10 C09K8/20C C11D3/22E K61K201/103 K61K201/105 K61K800/413 M04B103/44
US: 106/162.1 106/162.100P 106/162.71 106/162.710P 106/162.8 106/162.800S 106/731 106/805 162/1 162/10 162/10S 426/658 507/104 507/112 514/781

PatBase - JP3247391_B2 表 I

剪断勾配 (秒 ⁻¹)	粘度 (Pa·s)	粘度 (Pa·s)
	对照例	混合物 1
1.27	3.0	2.0×10 ⁻¹
2.01	1.3	9.6×10 ⁻²
5.05	4.3×10 ⁻¹	4.2×10 ⁻²
12.7	1.6×10 ⁻¹	2.3×10 ⁻²
20.1	9.9×10 ⁻²	1.8×10 ⁻²
50.5	3.2×10 ⁻²	8.8×10 ⁻³
80.0	1.6×10 ⁻²	6.4×10 ⁻³

Family:

Publication number	Publication date	Application number	Application date
AT199924 E	20010415	AT19970933722T	19970711
AT227321 E	20021115	AT19970933723T	19970711
AT284922 E	20050115	AT19970202426T	19970711
AU199736973 A1	19980209	AU19970036973	19970711
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AU199736978 A1	19980209	AU19970036978	19970711
AU723409 B2	20000824	AU19970036973	19970711
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AU728651 B2	20010118	AU19970036978	19970711
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BRPI9710328 A	19990817	BR1997PI10328	19970711
BRPI9710338 A	19990817	BR1997PI10338	19970711
CA2261089 AA	19990112	CA19972261089	19970711
CA2261092 AA	19990113	CA19972261092	19970711
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CN1227589 A	19990901	CN19971097244	19970711
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DE69716917 T2	20030717	DE19976016917T	19970711
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ES2157078 T3	20010801	ES19970933722T	19970711
ES2234511 T3	20050701	ES20000202426T	19970711
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FR2751981 A1	19980206	FR19960009944	19960802
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GR3035962 T3	20010831	GR20010400813T	20010531
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WO9802486 A1	19980122	WO1997FR01290	19970711
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Priority:

FR19960009061	19960715	FR19960009062	19960715	FR19960009944	19960802
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WO1997FR01290	19970711	WO1997FR01291	19970711	WO1997FR01297	19970711
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Probable Assignee: DUPONT NUTRITION BIOSCIENCES APS

Assignee(s): (std): BENCHIMOL JOEL ; CANTIANI ROBERT ; LANGLOIS BRUNO ; RHONE POULENC CHIMIE ; GUERIN GILLES ; SENECHAL ALAIN ; RHODIA CHIMIE ; RHODIA CHEMICAL CO LTD ; RHODIA CHIMIE SA ; VINCENT ISABELLE

Assignee(s): RHODIA FOOD UK LTD ; RHOD P ; RHODIA CHIMIE COURBEVOIE ; DANISCO A S ; DANISCO FRANCE SAS ; DUPONT NUTRITION BIOSCIENCES APS

Inventor(s): (std): BENCHIMOL JO L ; BENCHIMOL JOEL ; BENCHIMOL JOUL ; BRUNO LANGLOIS ; CANTIANI ROBERT ; G GUERIN ; GILLES GUERIN ; GUERIN GILLES ; ISABELLE VINCENT ; JOEL BENCHIMOL ; R CANTIANI ; ROBERT CANTIANI ; SENECHAL ALAIN ; VINCENT ISABELLE ; LANGLUS B ; LANGLOIS BRUNO ; GUERIN G ; CANTIANI R ; ALAIN SENECHAL ; B LANGLUS ; BENCHIMOL JO EUML L

Inventor(s): BENCHIMOL JO ; BENCHIMOL JO AND EUML L ; BENCHIMOL JOEL

Agent(s): SHELSTON IP; SHELSTON IP PTY LTD; ROBIC

Designated states: AL AM AT AU AZ BA BB BE BF BG BJ BR BY CA CF CG CH CI CM CN CU CZ DE DK EE ES FI FR GA GB GE GH GN GR HU IE IL IS IT JP KE KG KP KR KZ LC LI LK LR LS LT LU LV MC MD MG MK ML MN MR MW MX NE NL NO NZ PL PT RO RU SD SE SG SI SK SN SZ TD TG TJ TM TR TT UA UG US UZ VN ZW