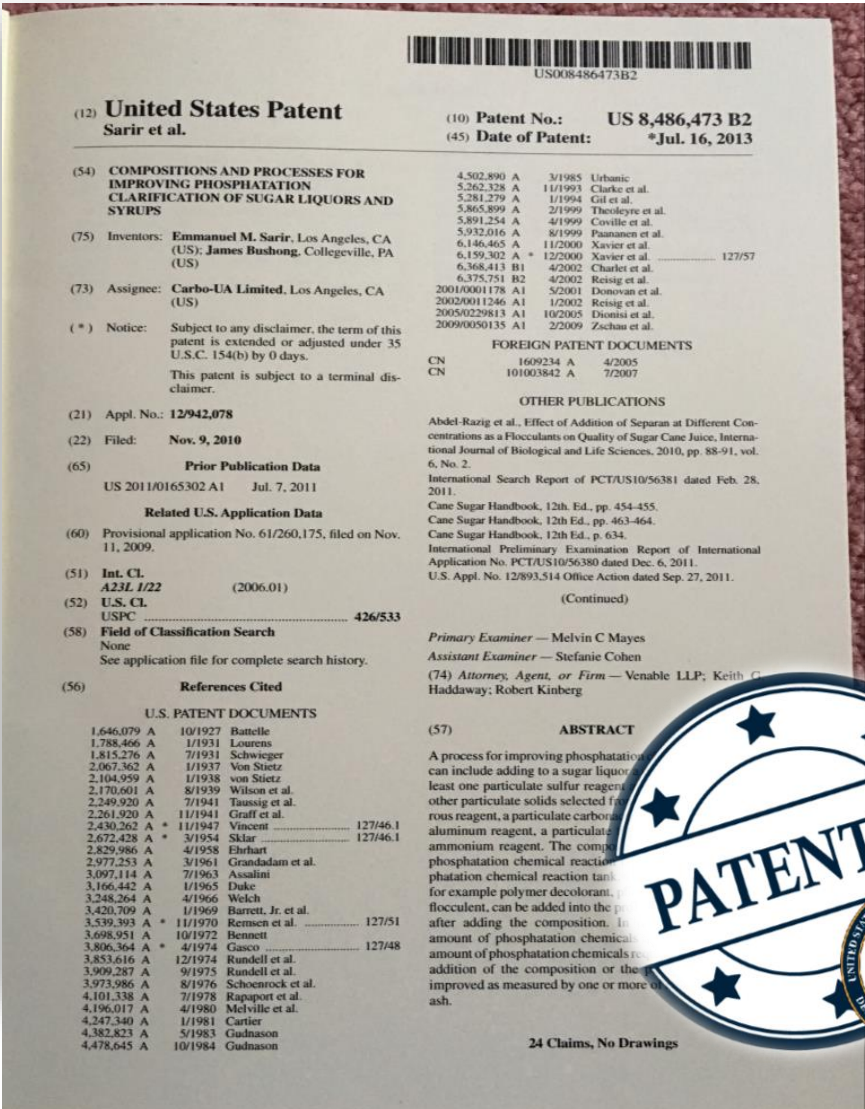


US PATENT:



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Has received an application for a patent for a new and useful invention. The title and description of the invention are enclosed. The requirements of law have been complied with, and it has been determined that a patent on the invention shall be granted under the law.

Therefore, this

United States Patent

Grants to the person(s) having title to this patent the right to exclude others from making, using, offering for sale, or selling the invention throughout the United States of America or importing the invention into the United States of America, and if the invention is a process, of the right to exclude others from using, offering for sale or selling throughout the United States of America, or importing into the United States of America, products made by that process, for the term set forth in 35 U.S.C. 154(a)(2) or (c)(1), subject to the payment of maintenance fees as provided by 35 U.S.C. 41(b). See the Maintenance Fee Notice on the inside of the cover.

Lena Street Lee

Acting Director of the United States Patent and Trademark Office



(12) **United States Patent**
Sarir et al.
(10) **Patent No.:** US 8,486,473 B2
(45) **Date of Patent:** *Jul. 16, 2013

(54) **COMPOSITIONS AND PROCESSES FOR IMPROVING PHOSPHATATION CLARIFICATION OF SUGAR LIQUORS AND SYRUPS**
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6,375,751 B2 4/2002 Reisig et al.
(75) **Inventors:** Emmanuel M. Sarir, Los Angeles, CA (US); James Bushong, Collegeville, PA (US)
(73) **Assignee:** Carbo-UA Limited, Los Angeles, CA (US)
(*) **Notice:** Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.
This patent is subject to a terminal disclaimer.

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U.S. Appl. No. 12/893,514 Office Action dated Sep. 27, 2011.

(21) Appl. No.: 12/942,078
(22) Filed: Nov. 9, 2010

(65) **Prior Publication Data**
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(60) Provisional application No. 61/260,175, filed on Nov. 11, 2009.

(51) **Int. Cl.** A23L 1/22 (2006.01)
(52) **U.S. Cl.** USPC 426/533
(58) **Field of Classification Search**
None
See application file for complete search history.

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Primary Examiner — Melvin C Mayes
Assistant Examiner — Stefanie Cohen
(74) **Attorney, Agent, or Firm** — Venable LLP; Keith C. Haddaway; Robert Kinberg

(57) **ABSTRACT**
A process for improving phosphatation can include adding to a sugar liquor at least one particulate sulfur reagent and other particulate solids selected from a group consisting of a carbonaceous reagent, a particulate aluminum reagent, a particulate ammonium reagent. The composition of the phosphatation chemical reaction mixture, for example polymer decolorant, flocculant, can be added into the liquor after adding the composition. The amount of phosphatation chemical reagent addition of phosphatation chemicals reagent of the composition or the amount improved as measured by one or more methods.

24 Claims, No Drawings



US Patent: Carbonatation Clarification 2013



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(12) United States Patent Sarir et al.

(54) **COMPOSITIONS AND PROCESSES FOR IMPROVING CARBONATATION CLARIFICATION OF SUGAR LIQUORS AND SYRUPS**

(75) Inventors: **Emmanuel M. Sarir**, Los Angeles, CA (US); **James Bushong**, Collegeville, PA (US)

(73) Assignee: **Carbo-UA Limited**, Beverly Hills, CA (US)

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

This patent is subject to a terminal disclaimer.

(21) Appl. No.: **12942,082**

(22) Filed: **Nov. 9, 2010**

(65) **Prior Publication Data**

US 2011/0165303 A1 Jul. 7, 2011

Related U.S. Application Data

(60) Provisional application No. 61/260,166, filed on Nov. 11, 2009.

(51) **Int. Cl.**
A23L 1/22 (2006.01)

(52) **U.S. Cl.**
USPC **426/533**

(58) **Field of Classification Search**
None
See application file for complete search history.

(56) **References Cited**

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(10) **Patent No.:** **US 8,486,474 B2**
(45) **Date of Patent:** ***Jul. 16, 2013**

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(Continued)

Primary Examiner — Melvin C Mayes
Assistant Examiner — Stefanie Cohen
(74) **Attorney, Agent, or Firm** — Venable LLP; Keith G. Haddaway; Robert Kinberg

(57) ABSTRACT

This invention relates to compositions and processes for improving the carbonatation clarification of sugar liquors and syrups. The improved processes involve adding compositions to a sugar liquor directly in the carbonated liquor holding tank (after the final carbonation saturator), upstream of the carbonated liquor holding tank but downstream of the final stage Carbonation saturator, before filtration of the carbonated liquor, or at any stage in the sugar purification process. The compositions provided in this invention are mixed into the sugar liquors or syrups, and allowed sufficient time to react to impart an improvement in the clarified liquor obtained therefrom. Compositions can include combinations of one or more of a particulate sulfur reagent, a phosphorous reagent, particulate aluminum reagent, a phosphoric reagent, particulate carbonaceous reagent, particulate iron reagent, a polymer decolorant, and particulate amine reagent.

24 Claims, No Drawings



US Patent: Phosphotation Clarification 2013



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nance fees as provided by 35 U.S.C. 41(b).
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(12) **United States Patent**
Sarir et al.

(10) Patent No.: **US 8,486,473 B2**
(45) Date of Patent: ***Jul. 16, 2013**

(54) **COMPOSITIONS AND PROCESSES FOR
IMPROVING PHOSPHOTATION
CLARIFICATION OF SUGAR LIQUORS AND
SYRUPS**

(75) Inventors: **Emmanuel M. Sarir**, Los Angeles, CA
(US); **James Bushong**, Collegeville, PA
(US)

(73) Assignee: **Carbo-UA Limited**, Los Angeles, CA
(US)

(*) Notice: Subject to any disclaimer, the term of this
patent is extended or adjusted under 35
U.S.C. 154(b) by 0 days.
This patent is subject to a terminal dis-
claimer.

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(Continued)

Primary Examiner — Melvin C. Mayes

Assistant Examiner — Stefanie Cohen

(74) Attorney, Agent, or Firm — Venable LLP; Keith G.
Haddaway; Robert Kinberg

(21) Appl. No.: **12/942,078**

(22) Filed: **Nov. 9, 2010**

(65) Prior Publication Data

US 2011/0165402 A1 Jul. 7, 2011

Related U.S. Application Data

(60) Provisional application No. 61/260,175, filed on Nov.
11, 2009.

(51) **Int. Cl.**
A23L 1/22 (2006.01)

(52) **U.S. Cl.**
USPC 426/533

(58) **Field of Classification Search**
None
See application file for complete search history.

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(57) ABSTRACT

A process for improving phosphotation clarification of sugars
can include adding to a sugar liquor a composition having at
least one particulate sulfur reagent and at least one of
other particulate solids selected from, a particulate phos-
phorus reagent, a particulate carbonaceous reagent, a
aluminum reagent, a particulate filter aid, and an
ammonium reagent. The composition can be used in a
phosphotation chemical reaction tank or phos-
photation chemical reaction tank. Phosphotation
for example polymer decolorant, phosphotation
floculent, can be added into the process after
after adding the composition. In using the amount
amount of phosphotation chemicals added to the
addition of the composition or the purity of the
improved as measured by one or more of color,
ash.

24 Claims, No Drawings



US Patent 2015



The United States of America

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Michelle K. Lee

Director of the United States Patent and Trademark Office



US009175358B2

(12) **United States Patent**
Sarir et al.

(10) Patent No.: **US 9,175,358 B2**
(45) Date of Patent: ***Nov. 3, 2015**

(54) **COMPOSITIONS AND PROCESSES FOR SUGAR TREATMENT**

(75) Inventors: **Emmanuel M. Sarir**, Los Angeles, CA (US); **James Bushong**, Collegeville, PA (US)

(73) Assignee: **Carbo-UA Limited**, Beverly Hills, CA (US)

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 158 days.

This patent is subject to a terminal disclaimer.

(21) Appl. No.: **12/893,514**

(22) Filed: **Sep. 29, 2010**

(65) **Prior Publication Data**
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Related U.S. Application Data
(60) Provisional application No. 61/260,170, filed on Nov. 11, 2009.

(51) **Int. Cl.**
C13B 10/14 (2011.01)
C13B 20/12 (2011.01)

(52) **U.S. Cl.**
CPC **C13B 20/123** (2013.01)

(58) **Field of Classification Search**
None
See application file for complete search history.

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(Continued)

Primary Examiner — Melvin C Mayes
Assistant Examiner — Stefanie Cohen
(74) **Attorney, Agent, or Firm** — Venable LLP; Robert Kinberg; Therese M. Finan

(57) ABSTRACT

A composition and process for treating sugar solutions that includes one or more sources of ammonium that obtain a pH in water solution above pH 7.0, such as ammonium bicarbonate (NH₄HCO₃), ammonium phosphate dibasic (NH₄)₂HPO₄, and ammonium sulfate (NH₄)₂SO₄. The composition can also include a particulate sulfur reagent, an amorphous silica, a particulate aluminum reagent, a particulate phosphorus reagent, a particulate filler aid selected from diatomaceous earth and perlite, a particulate activated carbon, a particulate bleaching earth, a polymer decolorant, or combinations thereof. The individual materials can be premixed before addition to the sugar solution, added individually to the sugar solution, or added as a combination of one or more singular ingredients and one or more pre-mixed ingredients. The invention can stabilize the pH of the sugar solution, reduce the calcium, magnesium or related ash constituents of the sugar solution, achieve color reduction of the sugar solution, or some combination of these effects.

9 Claims, No Drawings



US Patent: Carbonatation Clarification 2015



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(12) **United States Patent**
Sarir et al.

(54) **COMPOSITIONS AND PROCESS FOR IMPROVING CARBONATATION CLARIFICATION OF SUGAR LIQUORS AND SYRUPS**

(71) Applicant: **Carbo-UA Limited**, Los Angeles, CA (US)

(72) Inventors: **Emmanuel M. Sarir**, Los Angeles, CA (US); **James Bushong, Jr.**, Collegeville, PA (US)

(73) Assignee: **Carbo-UA Limited**, Beverly Hills, CA (US)

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

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(21) Appl. No.: **13940,979**

(22) Filed: **Jul. 12, 2013**

(65) **Prior Publication Data**
US 2014/0150776 A1 Jun. 5, 2014

Related U.S. Application Data

(63) Continuation of application No. 12/942,082, filed on Nov. 9, 2010, now Pat. No. 8,486,474.

(60) Provisional application No. 61/260,166, filed on Nov. 11, 2009.

(52) **Int. Cl.**
C13B 20/00 (2011.01)
C13B 20/12 (2011.01)
C13B 20/06 (2011.01)
C13B 20/08 (2011.01)

(52) **U.S. Cl.**
CPC *..... C13B 20/123* (2013.01); *C13B 20/06* (2013.01); *C13B 20/08* (2013.01)

(58) **Field of Classification Search**
None
See application file for complete search history.

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(10) Patent No.: **US 9,163,292 B2**
(45) Date of Patent: ***Oct. 20, 2015**

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(Continued)

Primary Examiner — Melvin C Mayes
Assistant Examiner — Stefanie Cohen
(74) Attorney, Agent, or Firm — Venable LLP; Robert Kinberg; Therese M. Finan

(57) ABSTRACT

This invention relates to compositions and processes for improving the carbonatation clarification of sugar liquors and syrups. The improved processes involve adding compositions to a sugar liquor directly in the carbonated liquor holding tank (after the final carbonatation saturator), upstream of the carbonated liquor holding tank but downstream of the final Carbonatation saturator, before filtration of the carbonated liquor, or at any stage in the sugar purification process. Compositions provided in this invention are mixed into the sugar liquors or syrups, and allowed sufficient time to react to impart an improvement in the clarified liquor obtained therefrom. Compositions can include combinations of one or more of a particulate sulfur reagent, particulate phosphorous reagent, particulate aluminum reagent, particulate reagent, particulate carbonaceous reagent, particulate aid, a polymer decolorant, and particulate ammonium reagent.

20 Claims, No Drawings



US Patent: Phosphatation Clarification 2015



The Director of the United States Patent and Trademark Office

Has received an application for a patent for a new and useful invention. The title and description of the invention are enclosed. The requirements of law have been complied with, and it has been determined that a patent on the invention shall be granted under the law.

Therefore, this

United States Patent

Grants to the person(s) having title to this patent the right to exclude others from making, using, offering for sale, or selling the invention throughout the United States of America or importing the invention into the United States of America, and if the invention is a process, of the right to exclude others from using, offering for sale or selling throughout the United States of America, or importing into the United States of America, products made by that process, for the term set forth in 35 U.S.C. 154(a)(2) or (c)(1), subject to the payment of maintenance fees as provided by 35 U.S.C. 41(b). See the Maintenance Fee Notice on the inside of the cover.

Michelle K. Lee

Director of the United States Patent and Trademark Office



US009163293B2

(12) United States Patent Sarir et al.

(54) COMPOSITIONS AND PROCESSES FOR IMPROVING PHOSPHATATION CLARIFICATION OF SUGAR LIQUORS AND SYRUPS

- (71) Applicant: **Carbo-UA Limited**, Los Angeles, CA (US)
- (72) Inventors: **Emmanuel M. Sarir**, Los Angeles, CA (US); **James Bushong, Jr.**, Collegeville, PA (US)
- (73) Assignee: **Carbo-UA Limited**, Beverly Hills, CA (US)

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

This patent is subject to a terminal disclaimer.

(21) Appl. No.: **13/940,970**

(22) Filed: **Jul. 12, 2013**

(65) Prior Publication Data

US 2014/0150777 A1 Jun. 5, 2014

Related U.S. Application Data

(63) Continuation of application No. 12/942,078, filed on Nov. 9, 2010, now Pat. No. 8,486,473.

(60) Provisional application No. 61/260,175, filed on Nov. 11, 2009.

(51) Int. Cl. **C13B 20/16** (2011.01); **C13B 20/08** (2011.01); **C13B 20/12** (2011.01)

(52) U.S. Cl. CPC **C13B 20/16** (2013.01); **C13B 20/08** (2013.01); **C13B 20/123** (2013.01)

(58) Field of Classification Search

None
See application file for complete search history.

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(10) Patent No.: **US 9,163,293 B2**
(45) Date of Patent: ***Oct. 20, 2015**

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Office Action issued in U.S. Appl. No. 12/942,078 dated Jun. 8, 2012.

Office Action issued in U.S. Appl. No. 12/893,514 dated Jun. 28, 2013.

(Continued)

Primary Examiner — Melvin C Mayes

Assistant Examiner — Stefanie Cohen

(74) Attorney, Agent, or Firm — Venable LLP; Robert Kinberg; Therese M. Finan

(57) ABSTRACT

A process for improving phosphatation clarification of a sugar liquor can include adding to a sugar liquor a composition of at least one particulate sulfur reagent and at least one other particulate solids selected from, a particulate sulfur reagent, a particulate carbonaceous reagent, a particulate aluminum reagent, a particulate filler aid, and an ammonium reagent. The composition can be added to a phosphatation chemical reaction tank or phosphatation chemical reaction tank. Phosphatation for example polymer decolorant, phosphoric acid flocculant, can be added into the process at least after adding the composition. In using the amount of phosphatation chemicals added is the amount of phosphatation chemicals required in the addition of the composition or the purity of the improved as measured by one or more of color, turbidity, ash.

28 Claims, No Drawings



Kingdom of Saudi Arabia Patents 2014 & 2018

مدينة الملك عبدالعزيز
للعلوم والتقنية KACST

المملكة العربية السعودية
مدينة الملك عبدالعزيز للعلوم والتقنية

إن رئيس مدينة الملك عبدالعزيز للعلوم والتقنية، وبموجب أحكام نظام براءات الإختراع والتصميمات التخطيطية للدارات المتكاملة والأصناف النباتية والتمادج الصناعية الصادر بالمرسوم الملكي رقم م/ ٢٧ وتاريخ ٢٩/٥/١٤٢٥هـ، واستناداً لأحكام اللائحة التنفيذية له الصادرة بالقرار الإداري رقم ١٠/م/١١٨٨٢٨ وتاريخ ١٤/١١/١٤٢٥هـ، يقرر منح:

كاربو يو ايه ليمتد
CARBO-UA LIMITED

براءة اختراع رقم ٢٥٣٦

بتاريخ ٠٨/١٠/١٤٢٥ هـ الموافق ٠٤/٠٨/٢٠١٤ م
عن الاختراع المسمى / تركيبات وعمليات لتحسين تقيية الكبريتة من محاليل وعصائر السكر
Compositions and processes for improving carbonation clarification of sugar solutions and syrups

ولمالك البراءة الحق في الانتفاع بكامل الحقوق التي يمنحها النظام في المملكة العربية السعودية.

رئيس مدينة الملك عبدالعزيز للعلوم والتقنية
د. محمد بن إبراهيم السويل

مدينة الملك عبدالعزيز
للعلوم والتقنية KACST

المملكة العربية السعودية
مدينة الملك عبدالعزيز للعلوم والتقنية

إن رئيس مدينة الملك عبدالعزيز للعلوم والتقنية، وبموجب أحكام نظام براءات الإختراع والتصميمات التخطيطية للدارات المتكاملة والأصناف النباتية والتمادج الصناعية الصادر بالمرسوم الملكي رقم م/ ٢٧ وتاريخ ٢٩/٥/١٤٢٥هـ، واستناداً لأحكام اللائحة التنفيذية له الصادرة بالقرار الإداري رقم ١٠/م/١١٨٨٢٨ وتاريخ ١٤/١١/١٤٢٥هـ، يقرر منح:

كاربو يو ايه ليمتد
CARBO-UA LIMITED

براءة اختراع رقم ٢٥٢٣

بتاريخ ٠٨/١٠/١٤٢٥ هـ الموافق ٠٤/٠٨/٢٠١٤ م
عن الاختراع المسمى / تركيبات وعمليات لتحسين تقيية الليبيدات السكرية والأشربة عن طريق الفسفة
Compositions and processes for improving phosphatation clarification of sugar liquors and syrups

ولمالك البراءة الحق في الانتفاع بكامل الحقوق التي يمنحها النظام في المملكة العربية السعودية.

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مدينة الملك عبدالعزيز
للعلوم والتقنية KACST

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مدينة الملك عبدالعزيز للعلوم والتقنية

إن رئيس مدينة الملك عبدالعزيز للعلوم والتقنية، وبموجب أحكام نظام براءات الإختراع والتصميمات التخطيطية للدارات المتكاملة والأصناف النباتية والتمادج الصناعية الصادر بالمرسوم الملكي رقم م/ ٢٧ وتاريخ ٢٩/٥/١٤٢٥هـ، واستناداً لأحكام اللائحة التنفيذية له الصادرة بالقرار الإداري رقم ١٠/م/١١٨٨٢٨ وتاريخ ١٤/١١/١٤٢٥هـ، يقرر منح:

كاربو يو ايه ليمتد
CARBO-UA LIMITED

براءة اختراع رقم ٢٥٣٦

بتاريخ ٠٨/١٠/١٤٢٥ هـ الموافق ٠٤/٠٨/٢٠١٤ م
عن الاختراع المسمى / تركيبات وعمليات لتحسين تقيية الكبريتة من محاليل وعصائر السكر
Compositions and processes for improving carbonation clarification of sugar solutions and syrups

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رئيس مدينة الملك عبدالعزيز للعلوم والتقنية
د. محمد بن إبراهيم السويل

مدينة الملك عبدالعزيز
للعلوم والتقنية KACST

المملكة العربية السعودية
مدينة الملك عبدالعزيز للعلوم والتقنية

إن المشرف العام على مكتب البراءات السعودي، وبموجب أحكام نظام براءات الإختراع والتصميمات التخطيطية للدارات المتكاملة والأصناف النباتية والتمادج الصناعية الصادر بالمرسوم الملكي رقم م/ ٢٧ وتاريخ ٢٩/٥/١٤٢٥هـ، واستناداً لأحكام اللائحة التنفيذية له الصادرة بالقرار الإداري رقم ١١٦٠٠٢٦٠١٢٢٩ رقم ١١٦٠٠٢٦٠١٢٢٩ وتاريخ ١٤٣٦/١٢/١٤٣٦هـ، يقرر منح:

كاربو يو ايه ليمتد
CARBO-UA LIMITED

براءة اختراع رقم ٥٩٧٩

بتاريخ ١٦/١٠/١٤٢٩ هـ الموافق ١٣/٠٦/٢٠١١ م
عن الاختراع المسمى/ تركيبات وعمليات لتحسين تقيية المحاليل السكرية والأشربة عن طريق الفسفة
Compositions and processes for improving phosphatation clarification of sugar liquors and syrups

ولمالك البراءة الحق في الانتفاع بكامل الحقوق التي يمنحها النظام في المملكة العربية السعودية.

المشرف العام على مكتب البراءات السعودي
د. ناصر القطيماتي

European Patent 2016

 <p>Patentamt European Patent Office Office européen des brevets</p>		
URKUNDE	CERTIFICATE	CERTIFICAT
Es wird hiermit bescheinigt, dass für die in der Patentschrift beschriebene Erfindung ein europäisches Patent für die in der Patentschrift bezeichneten Vertragsstaaten erteilt worden ist.	It is hereby certified that a European patent has been granted in respect of the invention described in the patent specification for the Contracting States designated in the specification.	Il est certifié qu'un brevet européen a été délivré pour l'invention décrite dans le fascicule de brevet, pour les Etats contractants désignés dans le fascicule de brevet.
Europäisches Patent Nr.	European patent No.	Brevet européen n°
2499267		
Patentinhaber	Proprietor of the patent	Titulaire du brevet
Carbo - UA Limited P.O. Box 5126 Beverly Hills, California 90209-5126/US		
<small>IP/150008 2016 EDI</small>	München, den Munich, fait à Munich, le	 Benoît Battistelli Präsident des Europäischen Patentamts President of the European Patent Office Président de l'Office européen des brevets
	20.04.16	

Nigerian Patent

INVENTION APPLICATION NOS.
S2010/056380 dated: 11/11/2010
260,175 dated: 11/11/2009
942,078 dated: 09/11/2010



CERT. No. 001103

FEDERAL REPUBLIC OF NIGERIA
Patents and Designs Act,
(CAP 344 Laws of the Federation of Nigeria 1990)
NG/C/2012/250

PATENT NO: _____ RP: _____
Date of Patent: 10-05-2012
Date of Sealing: 14-09-2012

President of the Federal Republic of Nigeria and Commander-in-Chief of the Armed Forces
R. GOODLUCK EBELE JONATHAN

WHEREAS a request for the grant of a patent has been made by: **CARBO-UA LIMITED**
P.O. BOX 5126, BEVERLY HILLS, CALIFORNIA 90209-5126 UNITED STATES OF AMERICA, C/O JACKSON, ETTI & EDU,
3-5 SINARI DARANIJO STREET, OFF AJOSE ADEOGUN STREET, VICTORIA ISLAND, LAGOS.

the sole use and advantage of an Invention for:
COMPOSITIONS AND PROCESSES FOR IMPROVING PHOSPHATATION CLARIFICATION OF SUGAR LIQUORS AND SYRUPS.

AND WHEREAS the Federal Government being willing to encourage all invention which may be for public good, is please to accede to the request:

NOW YE, THEREFORE, that I do by this instrument give and grant unto the person(s) above named any successor(s), executor(s), administrator(s) and assign(s) (each and any of whom are hereinafter referred to as the patentee) by special licence, full power, sole privilege and authority, that the patentee or any agent or licensee of the patentee may subject to the conditions and provisions prescribed by any statute or order for the time being force at all times hereafter during the term of the said invention herein mentioned make, use, exercise, and vend the said invention throughout the Federal Republic of Nigeria, and that the patentee shall have and enjoy the whole profit and advantage from time to time arising by reason of the said invention during the term of twenty years from the date first above mentioned of this instrument: AND to the end that the patentee may have and enjoy the sole use and benefit of the said invention, I do by this instrument strictly command all citizens of the Federal Republic of Nigeria that they do not at any time during the continuance of the said term directly or indirectly make use of or put in practise the said invention, nor in anywise imitate the same, without the written consent, licence or agreement of the patentee, on pain of incurring such penalties as may be justly inflicted on such offenders, and of being answerable to the patentee according to law for damages thereby occasioned:

AND I HAVE DECREED ALWAYS that this patent shall be revocable on any of the grounds from time to time by the law prescribed as grounds for revoking patents by me, and the same may be revoked and made void accordingly:

AND I HAVE DECREED ALSO that nothing herein contained shall prevent the granting of licences in such manner and on such considerations as they may by law granted.

MADE this 10th day of October
2013




Registrar of Patents & Designs

Mexican Patent



TÍTULO DE PATENTE No. 362769

Titular(es): CARBO-UA LIMITED
Domicilio: 9635 Cresta Drive, Los Angeles, California, 90035-4003, E.U.A.
Denominación: COMPOSICIONES Y PROCESOS PARA CLARIFICACIÓN DE JUGOS Y JARABES DE AZÚCAR.
Clasificación: CIP: C13B20/00; C13B20/12
 CPC: C13B20/005; C13B20/12; C13B20/123
Inventor(es): EMMANUEL M. SARIR; JAMES BUSHONG

SOLICITUD

Número: MX/a/2014/007432
Fecha de Presentación Internacional: 22 de Diciembre de 2010

PRIORIDAD

País:	Fecha:	Número:
US	23 de diciembre de 2009	61/289,704
US	16 de diciembre de 2010	12/970,387

Vigencia: Veinte años
Fecha de Vencimiento: 22 de diciembre de 2030
Fecha de Expedición: 8 de febrero de 2019

La patente de referencia se otorga con fundamento en los artículos 1°, 2° fracción V, 6° fracción III, y 59 de la Ley de la Propiedad Industrial.
 De conformidad con el artículo 23 de la Ley de la Propiedad Industrial, la presente patente tiene una vigencia de veinte años improrrogables, contada a partir de la fecha de presentación de la solicitud internacional y estará sujeta al pago de la tarifa para mantener vigentes los derechos.

Quien suscribe el presente título lo hace con fundamento en lo dispuesto por los artículos 6° fracciones III y 7° bis 2 de la Ley de la Propiedad Industrial (Diario Oficial de la Federación (D.O.F.) 27/06/1991, reformado el 02/06/1994, 25/10/1996, 26/12/1997, 17/05/1999, 26/01/2004, 16/06/2005, 25/01/2006, 06/05/2009, 06/01/2010, 18/05/2010, 28/09/2010, 27/01/2012, 09/04/2012, 01/05/2015 y 13/03/2018); artículos 1°, 3° fracción V inciso a), 4° y 12° fracciones I y II del Reglamento del Instituto Mexicano de la Propiedad Industrial (D.O.F. 14/12/1999, reformado el 01/07/2002, 15/07/2004, 28/07/2004 y 7/05/2007); artículos 1°, 3°, 4°, 5° fracción V inciso a), 15 fracciones I y III y 30 del Estatuto Orgánico del Instituto Mexicano de la Propiedad Industrial (D.O.F. 27/12/1999, reformado el 10/10/2002, 29/07/2004, 04/08/2004 y 13/09/2007); 1°, 3° y 5° Inscio a) del Acuerdo que delega facultades en los Directores Generales Adjuntos, Coordinador, Directores Divisionales, Titulares de las Oficinas Regionales, Subdirectores Divisionales, Coordinadores Departamentales y otros Subáreas del Instituto Mexicano de la Propiedad Industrial. (D.O.F. 15/12/1999, reformado el 04/02/2000, 29/07/2004, 04/08/2004 y 13/09/2007).

El presente oficio se signa con firma electrónica avanzada (FIEL), con fundamento en los artículos: 7 BIS 2 de la Ley de la Propiedad Industrial; 3o de su Reglamento, y 1 fracción III, 2 fracción V, 26 BIS y 26 TER del Acuerdo por el que se establecen los lineamientos para el uso del Portal de Pagos y Servicios Electrónicos (PASE) del Instituto Mexicano de la Propiedad Industrial, en los trámites que se indican.

LA DIRECTORA DIVISIONAL DE PATENTES NAHANNY CANAL REYES



Cadena Original:
 NAHANNY CANAL REYES/0000100000403252793/Servicio de Administración
 Tributaria/1698/MX/2014/007432/Título de patente PCT/1027/FICZ/pag1
 1WwWgVWNCNzaxZzVg0kklpSu-

Sello Digital:
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MX/2016/23299



TÍTULO DE PATENTE No. 359450

Titular(es): CARBO-UA LIMITED
Domicilio: 9635 Cresta Drive, Los Angeles, California, 90035-4003, E.U.A.
Denominación: COMPOSICIONES Y PROCESOS PARA EL TRATAMIENTO DE AZÚCAR.
Clasificación: CIP: C13B20/12; C13B10/14
 CPC: C13B20/123; C13B10/14; C13B20/12
Inventor(es): EMMANUEL M. SARIR; JAMES BUSHONG

SOLICITUD

Número: MX/a/2014/007734
Fecha de Presentación Internacional: 5 de Octubre de 2010

Divisional de la Patente Número: 322076

PRIORIDAD

País:	Fecha:	Número:
US	11 de noviembre de 2009	61/260,170
US	29 de septiembre de 2010	12/893,514

Vigencia: Veinte años
Fecha de Vencimiento: 5 de octubre de 2030
Fecha de Expedición: 27 de septiembre de 2018

La patente de referencia se otorga con fundamento en los artículos 1°, 2° fracción V, 6° fracción III, y 59 de la Ley de la Propiedad Industrial.

De conformidad con el artículo 23 de la Ley de la Propiedad Industrial, la presente patente tiene una vigencia de veinte años improrrogables, contada a partir de la fecha de presentación de la solicitud internacional y estará sujeta al pago de la tarifa para mantener vigentes los derechos.

Quien suscribe el presente título lo hace con fundamento en lo dispuesto por los artículos 6° fracciones III y 7° bis 2 de la Ley de la Propiedad Industrial (Diario Oficial de la Federación (D.O.F.) 27/06/1991, reformado el 02/06/1994, 25/10/1996, 26/12/1997, 17/05/1999, 26/01/2004, 16/06/2005, 25/01/2006, 06/05/2009, 06/01/2010, 18/05/2010, 28/09/2010, 27/01/2012, 09/04/2012, 01/05/2015 y 13/03/2018); artículos 1°, 3° fracción V inciso a), 4° y 12° fracciones I y II del Reglamento del Instituto Mexicano de la Propiedad Industrial (D.O.F. 14/12/1999, reformado el 01/07/2002, 15/07/2004, 28/07/2004 y 7/05/2007); artículos 1°, 3°, 4°, 5° fracción V inciso a), 15 fracciones I y III y 30 del Estatuto Orgánico del Instituto Mexicano de la Propiedad Industrial (D.O.F. 27/12/1999, reformado el 10/10/2002, 29/07/2004, 04/08/2004 y 13/09/2007); 1°, 3° y 5° Inscio a) del Acuerdo que delega facultades en los Directores Generales Adjuntos, Coordinador, Directores Divisionales, Titulares de las Oficinas Regionales, Subdirectores Divisionales, Coordinadores Departamentales y otros Subáreas del Instituto Mexicano de la Propiedad Industrial. (D.O.F. 15/12/1999, reformado el 04/02/2000, 29/07/2004, 04/08/2004 y 13/09/2007).

El presente oficio se signa con firma electrónica avanzada (FIEL), con fundamento en los artículos: 7 BIS 2 de la Ley de la Propiedad Industrial; 3o de su Reglamento, y 1 fracción III, 2 fracción V, 26 BIS y 26 TER del Acuerdo por el que se establecen los lineamientos para el uso del Portal de Pagos y Servicios Electrónicos (PASE) del Instituto Mexicano de la Propiedad Industrial, en los trámites que se indican.

LA DIRECTORA DIVISIONAL DE PATENTES NAHANNY CANAL REYES



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