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PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	13235108

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Total Attachments: 12
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PATENT ASSIGNMENT AGREEMENT

THIS PATENT ASSIGNMENT AGREEMENT (the "Agreement"), is made and entered into this 02nd day of February, 2015 (the "Effective Date"), by and between

Mr. Alfonso Jose Gonzalez Marin, a Spanish citizen holding a valid Spanish passport no. BC225695 and residing at Avda, Libertad, 6 Bloque 2 8^0 D 30009 Murcia, Spain; AND **Mr. Carmelo Gonzalez Marin**, a Spanish citizen holding a valid Spanish passport no. AAH582052 and residing at Avda, Libertad, 6 Bloque 2 8^0 D 30009 Murcia, Spain, hereinafter together referred to as "Assignor" of the first part; AND

SYNTHITE INDUSTRIES LIMITED, a company incorporated under the Companies Act, 1956 of India, having its registered office at Synthite Corporate House, VIII 682/A, Kadayiruppu, Kolenchery, Ernakulam, Kerala – 682311, India hereinafter referred to as "Assignee" which term shall include its representatives, associates, affiliates and permitted assigns of the other part.

Assignor and Assignee are also referred to in this Agreement each as a "Party" and collectively as the "Parties."

WHEREAS, Assignor is the owner of all rights, title and interest in and to the inventions (the "Inventions") as described and claimed in the United States and Peru patent applications as listed on Schedule A and the patent registered in Spain as detailed in Schedule B hereto (collectively the "Patents");

WHEREAS, Assignor and Assignee have agreed by a Patent Purchase Agreement (the "Purchase Agreement") dated 08th day of April, 2014, the terms of which are incorporated herein by reference, that Assignor shall sell, transfer, assign and set over unto Assignee and Assignee shall accept, all rights, title and interest in and to the Patents as specified in this Agreement;

NOW, THEREFORE, in consideration of the mutual covenants and agreements of the Parties and pursuant to the Purchase Agreement, and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, it is hereby agreed as follows:

ASSIGNMENT

1. Assignor hereby sells, transfers, assigns and sets over to Assignee all rights, title and interest (for all countries) in and to the Patents, and all the rights and privileges under any letters patent that may be granted under any continuations, divisions, reissues, reexaminations, renewals and extensions therefore and thereon and all continuations, divisions, reissues, reexaminations, renewals and extensions thereof; and all applications for industrial property protection, including without limitation, all applications for patents, utility models, copyright, and designs which may hereafter be filed for said Inventions and Patents in any country or countries, together with the right to file such applications and the right to claim

for the same the priority rights derived from the Patents under the patent laws of the United States, the International Convention for the Protection of Industrial Property, or any other international agreement or the domestic laws of the country in which any such application is filed, as may be applicable; and all applications for industrial property protection, including, without limitation, all applications for patents, utility models, copyrights and designs which may hereafter be filed for said Inventions or Patents in any country or countries, together with the right to file such applications; and all forms of industrial property protection, including, without limitation, patents, utility models, inventors' certificates, copyrights and designs which may be granted for said Patent in any country or countries and all extensions, renewals and reissues thereof.

2. Assignor hereby authorizes and requests the Commissioner of Patents and Trademarks of the United States and any official of any country or countries other than United States, whose duty is to issue patents or other evidence or forms of industrial property on applications as aforesaid, to issue the same to Assignee, it successors, assigns and legal representatives, or to such nominees as it may designate.

3. Assignor agrees that, whenever reasonably requested by Assignee and at Assignee's expense, Assignor will execute all papers, take all rightful oaths, and do all acts which may be reasonably necessary for securing and maintaining patents for the Inventions in any country and for vesting title thereto in Assignee, its successors, assigns and legal representatives or nominees.

4. Assignor authorizes and empowers Assignee, its successors, assigns and legal representatives or nominees, to invoke and claim for any application for patent or other form of protection for the Inventions, the benefit of the right of priority provided by the International Convention for the Protection of Industrial Property, as amended, or by any convention which may henceforth be substituted for it, or any other international agreement or the domestic laws of the country in which any such application is filed, as may be applicable, and to invoke and claim such right of priority without further written or oral authorization from Assignor.

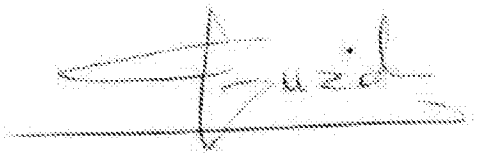
5. Assignor hereby consents that a copy of this Agreement shall be deemed a full legal and formal equivalent of any assignment, consent to file or like document that may be required in any country for any purpose and more particularly in proof of the right of Assignee or nominee to claim the aforesaid benefit of the right of priority provided by the International Convention for the Protection of Industrial Property, as amended, or by any convention which may henceforth be substituted for it.

6. All of the rights, title and interest in and to the Patents sold, transferred, assigned and set over to Assignee hereunder include all income, royalties, damages and payments now or hereafter due or payable with respect thereto, and all causes of action (whether in law or

equity) and the right to sue, counterclaim, and recover for the past, present and future infringement of the rights assigned or to be assigned hereunder.

Assignor

By: 



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Title : **Director**

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(19) **United States**

(12) **Patent Application Publication**

GONZALEZ MARÍN et al.

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(43) **Pub. Date: Sep. 20, 2012**

(54) **METHOD FOR OBTAINING NATURAL EXTRACTS, OLEORESINS, CONDIMENTS, COLORANTS, FLAVORING SUBSTANCES AND AROMAS FROM AROMATIC PLANT SUBSTANCES, ALFALFA, FLOWERS WITH PIGMENTS, AND VEGETABLES**

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C12P 1/00 (2006.01)

(52) **U.S. Cl.** **435/41**

(57) **ABSTRACT**

A method for obtaining natural extracts, oleoresins, colorants flavors and aromas from aromatic plant substances, alfalfa, flowers with pigments, and vegetables, which includes washing the plant substances and vegetables, rinsing with water, milling and sifting the resulting product yielding a pulp phase and a cellulose phase. The pulp phase is transferred to fermentation tanks and a first centrifugation of the fermented pulp phase is then performed yielding two phases: phase (A) containing water, mineral salts and other water-soluble substances, with natural extracts, oleoresins, colorants, aromas and flavors and phase (B) in the form of a paste in which the moisture has been reduced to 50%, performing a second centrifugation of the mentioned phase (A), which causes the separation of natural extracts, oleoresins, colorants, aromas and flavors from the water and other water-soluble substances.

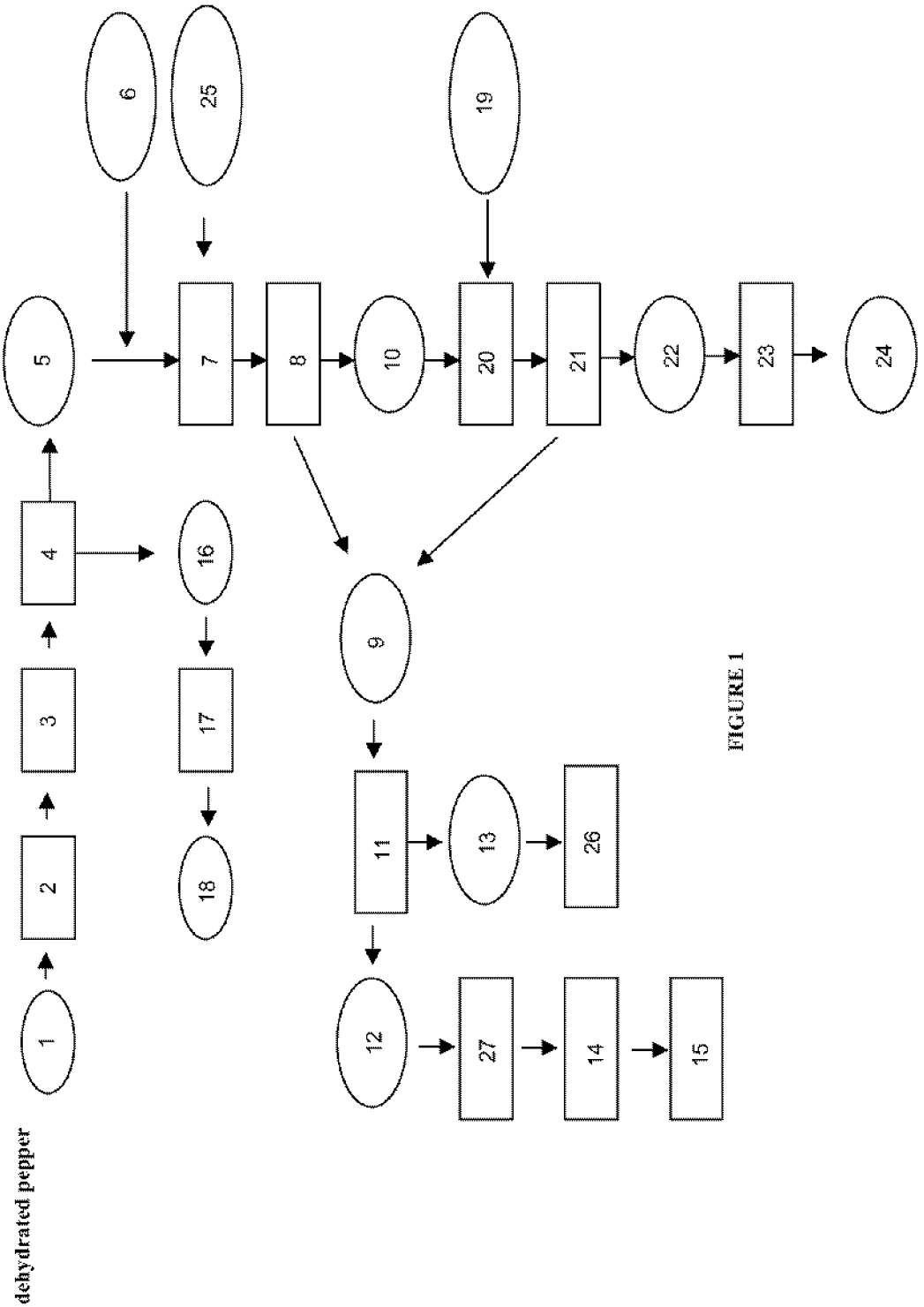
dehydrated pepper
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FIGURE 1

METHOD FOR OBTAINING NATURAL EXTRACTS, OLEORESINS, CONDIMENTS, COLORANTS, FLAVORING SUBSTANCES AND AROMAS FROM AROMATIC PLANT SUBSTANCES, ALFALFA, FLOWERS WITH PIGMENTS, AND VEGETABLES

FIELD OF THE INVENTION

[0001] The present invention relates to a method for obtaining natural extracts, oleoresins, colorants, aromas and flavors starting from spices, aromatic herbs, alfalfa, flowers with pigments, carrots, green and red peppers, tomatoes, spinach to and other vegetables containing a natural aromatic active ingredient, colorant or flavoring susceptible of use in human or animal food, in perfumes and in cosmetics, as a raw material.

[0002] The invention also provides a method for obtaining paprika with a high concentration of natural pigments starting from pepper freshly picked from the is field by manual or mechanical means, preventing the loss of color and providing the concentration of the natural pigments of fresh pepper to obtain a dehydrated paste with a high concentration of pigments, ideal for obtaining paprika oleoresins by customary methods.

[0003] The invention is proposed to prevent the use of organic additives and solvents in methods for obtaining natural extracts, oleoresins, colorants, aromas and flavors, whereby eliminating possible health risks from the residues of organic additives and/or solvents which always remain when an extraction with solvents of this nature is performed.

[0004] The quality of the products obtained is also improved because with this invention, the entire process is performed at temperatures below 60° C., whereby the thermolabile components (which decompose due to heat) of these extracts, oleoresins, colorants, aromas and flavors are not altered by the manufacturing process.

BACKGROUND OF THE INVENTION

[0005] A well known method for obtaining natural extracts, oleoresins, colorants, aromas and flavors starting from spices, aromatic herbs, alfalfa, flowers with pigments, carrots, green and red peppers, tomatoes, spinach and other vegetables, is based on extraction by means of using organic solvents (hexane, petroleum ether, dichloromethane and other organochlorine solvents, methyl, ethyl, isopropyl alcohols, etc.). High temperatures and other actions are generated in some phases of this extraction process which induce oxidation and the partial or complete destruction of basic components.

[0006] In addition, it is virtually impossible to completely remove the residual amounts of the solvents used in obtaining the extracts, oleoresins, colorants, aromas and flavors.

[0007] Furthermore, it is generally required that the product to be extracted be dehydrated, whereby since dehydration of the starting product, spices, aromatic herbs, alfalfa, flowers with pigments, carrots, green and red peppers, tomatoes, spinach and other vegetables used must be performed by means of heat and/or air, part of their flavoring, aromatizing or colorant components also oxidize and they are destroyed, with the subsequent reduction of quality.

[0008] Patent ES 162248 relates to method for preparing powder or fine-grain conservable products with a high vitamins C content, and for preparing paprika rich in said vitamins, starting from ripe fruits, and comprising the separation of the skin, veins and seeds, preparation of a juice or gruel in a neutral gas atmosphere and reduction to powder by grinding in a heated chamber, mixing said powder with the material resulting from milling the skins, veins and seeds.

[0009] Patent ES 476456 discloses a method for directly obtaining sterilized paprika powder or flakes by means of a continuous process by concentration, starting from pepper as a raw material.

[0010] Patent ES 482035 describes a method for obtaining paprika from fresh fruit without dehydration by heat, yielding a product suitable for marketing as paprika or as a raw material for oleoresin extraction.

[0011] Patent ES 8400228 relates to a method for increasing the value of the inner content of the crude paprika product, which comprises harvesting ripe fruit, separating the stems, grinding the product, centrifuging and/or pressing and drying the product with hot air.

[0012] Patent ES 2080685 relates to a method for the non-destructive separation of the chloroplast pigments and the glycerin fraction in vegetable oils and oleoresins which comprises subjecting oleoresin samples to contact with N,N-dialkylamides and performing various decanting steps, separating the hypophases and clustering the epiphases containing pigments for filtering and washing through a sodium sulfate anhydride bed.

[0013] However, the methods described in said patents do not solve the oxidation and color loss problems and they do not explain how to directly obtain paprika oleoresin.

[0014] Nor do said methods of the state of the art allow concentrating the pigments in the paprika obtained.

DESCRIPTION OF THE INVENTION

[0015] The proposed method has been conceived to solve the drawbacks described above, and allows obtaining natural extracts, oleoresins, colorants, aromas and flavors starting from spices, aromatic herbs, alfalfa, flowers with pigments, carrots, green and red peppers, tomatoes, spinach and other vegetables without using organic solvents or having to previously dehydrate the products to be processed.

[0016] Starting from the mentioned raw materials, the method of the invention generally comprises the following operating phases:

[0017] Washing the fresh agricultural products with sodium hypochlorite diluted in water to obtain a considerable reduction of the content in dirt residues, pesticide residues, fungicide residues, herbicide residues, fertilizer residues, insects, rodent hairs, bacteria, fungi and other unwanted substances.

[0018] Rinsing with water.

[0019] Gentle milling in a hammer or blade mill to facilitate and increase the performance of the following process.

[0020] Sifting the product, whereby separating a first pulp phase with a high water content containing the natural extracts, oleoresins, colorants, aromas and flavors, from a second cellulose phase containing the woody materials, skin, fibers, seed, peduncles etc.

[0021] The pulp phase is transferred to fermentation tanks where, by natural fermenting and enzymatic action or an action induced by added enzymes and/or microorganisms, the walls of the microcells which contain the natural extracts, oleoresins, colorants, aromas and flavors, carried in fatty acids, glycerins, phospholipids, resins and other natural fatty substances in the pulp

phase, are broken down, leaving such substances free in the pulp phase. In some cases, and to fluidize and better carry the natural extracts, oleoresins, colorants, aromas and flavors, a small amount of a vegetable oil suitable for human consumption is added.

[0022] After fermenting the pulp phase, which has a moisture content between approximately 85% and 95%, a first centrifugation process is started, where two phases are obtained: phase A containing water, mineral salts, proteins, carbohydrates and other water-soluble substances, with the natural extracts, oleoresins, colorants, aromas and flavors, carried in fatty acids, glycerins, phospholipids, resins and other natural fatty substances, and phase B, a paste in which the moisture has been reduced to 50%.

[0023] Phase (A) then enters a second centrifugation process, where the natural extracts, oleoresins, colorants, aromas and flavors, carried in fatty acids, glycerins, phospholipids, resins and other natural fatty substances, are separated from the water, mineral salts, proteins, carbohydrates and other water-soluble substances. The fractions of natural extracts, oleoresins, colorants, aromas and flavors, carried in fatty acids, glycerins, phospholipids, resins and other natural fatty substances, i.e., the liposoluble phase, are subjected to a pasteurization process to remove microorganisms, whereby the product is ready for standardization and use by means of packaging. In turn, the fractions of water, mineral salts, proteins, carbohydrates and other water-soluble substances can be concentrated by evaporating the water or they are discarded, whichever is appropriate.

[0024] Phase B is diluted in water to a moisture content between 85% and 95% and the two preceding steps (first and second centrifugation) are repeated until phase B is virtually free of the natural extracts, oleoresins, colorants, aromas and flavors, leaving a paste, or byproduct 2, with a moisture content less than 50%, which is air dried or dried by an artificial dryer, reducing its moisture content to approximately 12%.

[0025] The cellulose phase, or byproduct 1, resulting from the initial sifting, is subjected to an air drying process or is dried by an artificial dryer, reducing its moisture content to approximately 12%.

[0026] In one embodiment, the spices, aromatic herbs, alfalfa, flowers with pigments, carrots, green and red peppers, tomatoes, spinach and other vegetables are used in dehydrated form, being rehydrated with water to a proportion of 5 to 8 parts of water for 1 part of the dehydrated product, thus obtaining a pulp phase equivalent to that obtained when sifting the product, the rest of the process continuing as described above.

[0027] In the particular case for obtaining paprika, the following operating phases are obtained:

[0028] Washing the fresh pepper with sodium hypochlorite diluted in water to obtain a considerable reduction of the content of calcium residues, pesticide or fertilizer residues, insects, rodent hairs and mycopathogens.

[0029] Scalding of the previously washed product to facilitate separating skin from the pulp of the pepper and to inactivate lipoxygenase, an enzyme which catalyzes the oxidative decomposition of the pigments. This scalding process will be performed at an approximate temperature of 60° C. for a period of approximately 5 minutes.

[0030] In a third phase the product is ground in a hammer mill to increase its contact surface and to facilitate the transport of the raw material and increase the performance of the following process.

[0031] After grinding, the product is sifted, separating the pulp of the pepper, which is where all the fat and pigments are concentrated, from the parts of the pepper containing no pigments, with the particularity that this sifting phase on one hand removes the skin, peduncles and seeds containing no pigments (forming a byproduct), milling the pulp to obtain a paste with approximately 85% water, and obtaining a first concentration of pigments.

[0032] The byproduct obtained based on the mixture of skin, seeds and peduncles is subjected to an artificial drying process, reducing its moisture content to approximately 12%.

[0033] After the sifting phase, the pulp separated from the remaining components or pepper paste is subjected to fermentation in tanks, where a natural decantation of water, proteins, sugars and dissolved salts subsequently takes place, the decanted water in the lower part of the deposits or tanks being removed by means of gravity through a suitable valve, with the particularity that in the decantation and subsequent removal of the dissolved salts, free of pigments, pigments are again concentrated in the product or paprika paste that remains in the tanks having an approximate water content of 85% and a concentrated color.

[0034] After the fermentation phase to ferment the pulp, the resulting paste is subjected to centrifugation to obtain two phases, a liquid phase made up of water with dissolved salts and paprika oleoresin, and another phase made up of a paprika paste in which the moisture content has been reduced to 50%; the liquid phase is subjected to another centrifugation in which the water with the dissolved salts is removed and the paprika oleoresin is recovered.

[0035] After the fermentation and subsequent centrifugation, the resulting paprika paste is transferred to an artificial drier, where the moisture content is reduced to 10%, obtaining dehydrated paprika in flakes in which the color has been concentrated up to 400% with respect to the raw material used, such that after the described process, the resulting paprika will have up to 16% fat and a high concentration of pigments.

[0036] A liquid phase corresponding to water, proteins, sugars, dissolved salts and paprika oleoresins is obtained in the centrifugation phase, said liquid compound being subjected to a second centrifugation process, the water, proteins, sugars and the dissolved salts being removed and paprika oleoresin being separately obtained.

[0037] Milled dry pepper or product could be used in one embodiment variant, subsequently hydrating it again until reaching a 5/1 ratio of fresh/dry product, thus obtaining the paste provided in the phase of the sifting process, the process continuing in the same way as described above.

BRIEF DESCRIPTION OF THE DRAWING

[0038] The invention will be described below with the aid of a schematic drawing constituting a flow chart of the method, illustrated in the attached FIG. **1**.

DETAILED DESCRIPTION OF SEVERAL EMBODIMENTS

[0039] Spices, aromatic herbs, alfalfa, flowers with pigments, carrots, green and red peppers, tomatoes, spinach and other vegetables containing a natural aromatic active ingredient, colorant or flavoring are used as raw starting material **1** in the method for obtaining natural extracts, oleoresins, colorants flavors and aromas of the invention, and it comprises the following steps:

[0040] a) washing **2** the fresh plant substances **1** for example with sodium hypochlorite diluted in water;

[0041] b) rinsing with water;

[0042] c) gentle milling **3** in a hammer or blade mill;

[0043] d) sifting **4** the product resulting from the milling, yielding:

[0044] d1) a pulp phase **5** with a high water content, containing natural extracts, oleoresins, colorants, aromas and flavors;

[0045] d2) a cellulose phase **16** containing woody materials, skin, fibers, seed, peduncles etc.;

[0046] e) transferring the pulp phase **5** to fermentation tanks **7** where a natural fermenting and enzymatic action or an action induced by ferments **6**, such as added enzymes and/or microorganisms, takes place; a small amount of vegetable oil **25** suitable for human consumption can optionally be added in said fermentation process.

[0047] f) first centrifugation **8** of the fermented pulp phase **5** yielding two phases:

[0048] f1) phase (A), in **9**, containing water, mineral salts, proteins, carbohydrates and other water-soluble substances, with natural extracts, oleoresins, colorants, aromas and flavors, carried in fatty acids, glycerins, phospholipids, resins and other natural fatty substances; and

[0049] f2) phase (B), in **10**, in the form of a paste in which the moisture has been reduced to 50%.

[0050] g) second centrifugation **11** of the mentioned phase (A) which causes the separation of natural extracts, oleoresins, colorants, aromas and flavors, carried in a liposoluble phase **12** containing fatty acids, glycerins, phospholipids, resins and other natural fatty substances, from a water-soluble phase **13** containing water, mineral salts, proteins, carbohydrates and other water-soluble substances.

[0051] The mentioned liposoluble phase **12** is subjected to pasteurization **27** and to standardization **14** and packaging **15** processes.

[0052] The water-soluble phase **13** is subjected to drying **26** (concentration by evaporating the water), is discarded or eventually fed into a hydration phase **20**, which will be explained below.

[0053] The cellulose phase **16** or byproduct 1 is dried in **17** by means of an air drying process or by an artificial dryer, reducing its moisture content to approximately 12%, yielding a byproduct 1 or dry cellulose phase **18**.

[0054] In turn, phase B, **10** is diluted in water (step **20** with supply of water **19**) to a moisture content between 85% and 95% and steps f) and g) are repeated (see the arrow leading to step **9**) with a first centrifugation **21** until phase B is virtually free of natural extracts, oleoresins, colorants, aromas and flavors, yielding a paste **22**, or byproduct 2, with a moisture content less than 50%, which is air dried **23** or dried by an artificial dryer, reducing its moisture content to approximately 12% and yielding a byproduct 2 dry, in **24**.

[0055] As indicated, it is possible to implement the described method using is spices, aromatic herbs, alfalfa, flowers with pigments, carrots, green and red peppers, tomatoes, spinach and other vegetables in dehydrated form as a starting product, being rehydrated with water to a proportion of 5 to 8 parts of water for 1 part of the dehydrated product, obtaining a pulp phase equivalent to that obtained when sifting the product (step d1)) to which the aforementioned steps d) to g) are applied.

What is claimed is:

1. A method for obtaining natural extracts, oleoresins, condiments, colorants, flavoring substances and aromas from aromatic plant substances, alfalfa, flowers with pigments, and vegetables, comprising the following steps:

a) washing the plant substances, vegetables or fresh agricultural products;

b) rinsing with water;

c) gentle milling in a hammer or blade mill;

d) sifting the product resulting from the milling, which yields:

d1) a pulp phase with a high water content, containing natural extracts, oleoresins, colorants, aromas and flavors,

d2) a cellulose phase containing woody materials, skin, fibers, seed, peduncles etc.

e) transferring said pulp phase to fermentation tanks where a natural fermenting and enzymatic action or an action induced by added enzymes and/or microorganisms takes place,

f) first centrifugation of fermented pulp phase yielding two phases:

f1) a liquid phase (A) containing water, mineral salts, proteins, carbohydrates and other water-soluble substances, with natural extracts, oleoresins, colorants, aromas and flavors carried in fatty acids, glycerins, phospholipids, resins and other natural fatty substances; and

f2) a phase (B) in the form of a paste in which the moisture has been reduced to 50%.

g) second centrifugation of the mentioned phase (A) which causes the separation of natural extracts, oleoresins, colorants, aromas and flavors, carried in fatty acids, glycerins, phospholipids, resins and other natural fatty substances, from the water, mineral salts, proteins, carbohydrates and other water-soluble substances.

2. The method according to claim **1**, wherein the cellulose phase of step d2) or byproduct 1, is dried by means of an air drying process or by an artificial dryer, reducing its moisture content to approximately 12%;

3. The method according to claim **1**, wherein a small amount of a vegetable oil suitable for human consumption is added in said fermentation step e).

4. The method according to claim **1**, wherein said phase B is diluted in water to a moisture content between 85% and 95% and steps f) and g) are repeated until phase B is virtually free of the natural extracts, oleoresins, colorants, aromas and flavors, yielding a paste, or byproduct 2, with a moisture content less than 50%, which is air dried or dried by an artificial dryer, reducing its moisture content to approximately 12%.

5. The method according to claim **1**, wherein liposoluble fractions of natural extracts, oleoresins, colorants, aromas

and flavors, carried in fatty acids, glycerins, phospholipids, resins and other natural fatty substances of phase (A), are subjected to a pasteurization process providing a product ready for standardization and use.

6. The method according to claim **1**, wherein water-soluble fractions of phase (A) containing water, mineral salts, proteins, carbohydrates and other water-soluble substances are concentrated by evaporating the water or they are discarded.

7. The method according to claim **1**, wherein said washing of step a) is performed with sodium hypochlorite diluted in water.

8. The method according to claim **1**, wherein spices, aromatic herbs, alfalfa, flowers with pigments, carrots, green and red peppers, tomatoes, spinach and other vegetables in dehydrated form are used as the starting product, being rehydrated with water up to a proportion of 5 to 8 parts of water for 1 part of the dehydrated product, obtaining a pulp phase equivalent to that obtained when sifting the product (step d1)), to which steps c) to g) of claim **1** are applied.

9. The method according to claim **1**, wherein pepper freshly picked from the field is used as a starting product and washed fresh pepper is scalded prior to the milling step to separate the skin from the pulp at an approximate temperature of 60° C. for a period of approximately 5 minutes, and in that after the fermentation and natural decantation step a paprika paste is obtained in said phase (B), which is dried to obtain paprika with a high concentration of pigments.

10. The method according to claim **9**, wherein water, proteins, sugars, dissolved salts and oleoresin of the paprika obtained in the phase of the first centrifugation of the pulp are subjected to said second centrifugation in which the separation of said oleoresin takes place.

11. The method according to claim **1**, wherein dehydrated pepper from which the seeds are separated is used as a starting product, being ground and then milled, then being hydrated with water to obtain a pepper paste which is used as pepper pulp for being subjected to steps e) to g).

* * * * *

SCHEDULE A - Peru

SOLICITUD DE REGISTRO DE PATENTE

INDECOPI Lima Norte

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INSTITUTO NACIONAL DE DEFENSA DE LA COMPETENCIA Y DE LA PROTECCION DE LA PROPIEDAD INTELECTUAL

(21) 2011 SEP 26 PM 4 01

RECIBIDO
UNIDAD DE TRAMITE
(22) DOCUMENTARIO

INSTITUTO NACIONAL DE DEFENSA DE LA COMPETENCIA Y DE LA PROTECCION DE LA PROPIEDAD INTELECTUAL

DIRECCION DE INVENCIONES Y NUEVAS TECNOLOGIAS

A la Dirección de Invenciones y Nuevas Tecnologías se solicita el registro de la concesión, conforme a las siguientes especificaciones, de:

(12) **Patente de Invención** ☒ **Modelo de Utilidad** ☐

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Nº Agente **Poder Nº** **Anexo a:**
Teléfono (s) 5220360 **Telefacsimil (es) (51-1) 521-0685**

(54) Título de la invención
"PROCEDIMIENTO DE OBTENCIÓN DE EXTRACTOS, OLEORRESINAS, CONDIMENTOS, COLORANTES SUSTANCIAS SABORIZANTES Y AROMAS NATURALES A PARTIR DE SUSTANCIAS VEGETALES AROMÁTICAS, ALFALFA, FLORES CON PIGMENTOS, Y HORTALIZAS".
(51) Clasificación internacional sugerida (CIP[3])

(30) Reivindica prioridad **Si** ☒ **No** ☐

(31) Número (s)	(32) Fecha (s)	(33) País (es)
201031585	28/10/2010	ESPAÑA
201130867	26/05/2011	ESPAÑA

RECAUDOS ANEXOS:
- ☒ Descripción: __8__ hojas (__2__ ejemplares)
- ☒ Reivindicaciones: __3__ hojas (__2__ ejemplares)
- ☒ Resumen (__2__ ejemplares)
- ☒ Dibujos o Planos: - numerados de Nº __1__ a Nº ____ (__2__ ejemplares)
  - se sugiere dibujo Nº ____ para la publicación
- ☐ Poder o documento de personería
- ☐ Documento(s) de prioridad
- ☐ Certificado de exhibición
- ☐ Comprobante de pago de tasa
- ☐ Informe(s) de búsqueda o de patentabilidad extranjero(s)
- ☐ Reducciones del plano o dibujo principal
- ☐ Documento de cesión
- ☐ Otros, especificar: _____

Fecha: __22__ de _septiembre__ de __2010.

ESTUDIO DELION S.R.L.
RAYSSA MERCEDES CASTRO DELION
GERENTE

Nombre del firmante

F-DIN-01/1A

MINISTERIO DE INDUSTRIA, ENERGÍA Y TURISMO

Oficina Española de Patentes y Marcas

Nº SOLICITUD 201031585
Nº PUBLICACIÓN ES2381344
TITULAR/ES
Carmelo GONZÁLEZ MARÍN
Alfonso José GONZÁLEZ MARÍN

FECHA EXPEDICIÓN 28/03/2014

CERTIFICADO-TÍTULO DE PATENTE DE INVENCIÓN

Cumplidos los requisitos previstos en la vigente Ley 11/1986, de 20 de Marzo, de Patentes, se expide el presente CERTIFICADO-TÍTULO, acreditativo de la concesión de la Patente de Invención. Ha sido tramitada y concedida con realización del Informe sobre el Estado de la Técnica y **con examen previo** de los requisitos sustantivos de patentabilidad.

Se otorga al titular un derecho de exclusiva en todo el territorio nacional, bajo las condiciones y con las limitaciones previstas en la Ley de Patentes. La duración de la patente será de **veinte años** contados a partir del 28/10/2010.

La patente se concede sin perjuicio de tercero y sin garantía del Estado en cuanto a la validez y a la utilidad del objeto sobre el que recae.

Para mantener en vigor la patente concedida, deberán abonarse las tasas anuales establecidas, que se pagarán por años adelantados. Asimismo, deberá explotarse el objeto de la invención, bien por su titular o por medio de persona autorizada de acuerdo con el sistema de licencias previsto legalmente, dentro del plazo de cuatro años a partir de la fecha de solicitud de la patente, o de tres años desde la publicación de la concesión en el Boletín Oficial de la Propiedad Industrial.

OFICINA ESPAÑOLA DE PATENTES Y MARCAS

Fdo.: Ana María Redondo Mínguez
El Director del Departamento de Patentes e Información Tecnológica P.D. El Jefe de Servicio de Actuaciones Administrativas

MINISTERIO DE INDUSTRIA, ENERGÍA Y TURISMO

Oficina Española de Patentes y Marcas

Nº SOLICITUD 201130867
Nº PUBLICACIÓN ES2393704
TITULAR/ES
Carmelo GONZÁLEZ MARÍN
Alfonso José GONZÁLEZ MARÍN

FECHA EXPEDICIÓN 04/03/2014

CERTIFICADO-TÍTULO
DE
PATENTE DE INVENCIÓN

Cumplidos los requisitos previstos en la vigente Ley 11/1986, de 20 de Marzo, de Patentes, se expide el presente CERTIFICADO-TÍTULO, acreditativo de la concesión de la Patente de Invención. Ha sido tramitada y concedida con realización del Informe sobre el Estado de la Técnica y **sin examen previo** de los requisitos sustantivos de patentabilidad.

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La patente se concede sin perjuicio de tercero y sin garantía del Estado en cuanto a la validez y a la utilidad del objeto sobre el que recae.

Para mantener en vigor la patente concedida, deberán abonarse las tasas anuales establecidas, que se pagarán por años adelantados. Asimismo, deberá explotarse el objeto de la invención, bien por su titular o por medio de persona autorizada de acuerdo con el sistema de licencias previsto legalmente, dentro del plazo de cuatro años a partir de la fecha de solicitud de la patente, o de tres años desde la publicación de la concesión en el Boletín Oficial de la Propiedad Industrial.

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