

Search query (2): [SP]: 1-14. (canceled) 15. process for removing caffeine from green coffee in which a batch of green coffee is introduced in at least one extractor (1) containing softened water maintained at a conventional working temperature comprised between 60 degrees centigrade and 90 degrees centigrade and the coffee beans in the hot water are left for the time period necessary in that they swell so that caffeine is transferred to the hot water and a solution forms that comprises aromatic softened hot water and part of the transferred caffeine and aromatic water-soluble substances contained in the coffee, where steps are implemented to absorb the caffeine contained in the above aromatic solution as decaffeinated by active carbons placed in at least a suitable container provided at its entry of a filter (9, 9a) suitable to retain undesired solid elements, wherein the process comprises the phases of: pre-drying in the extractor (1) the aromatic solution decaffeinated by the active carbons concentrating said solution in a concentration apparatus (5) and transferring it again into the extractor (1) held in a vacuum degree (11) ranging from 0.65 to 0.99 bar that helps the reincorporation of aromatic substances in the pre-dried coffee drying, cooling and discharging the decaffeinated coffee. 16. process according to claim 15, wherein the aromatic solution is kept agitated in the extractor (1) by a stirrer means (a1) suitable to impart to the mass "aromatic solution-coffee" a mixing movement, the grains of coffee being retained by a porous septum at the exit of the extractor, while the solution and the coffee films are allowed to pass through said porous septum. 17. process according to claim 15, wherein the aromatic solution is first moved in a first container of activated carbons (c1) and, then, one or more times, again in the extractor (1) in which further amounts of caffeine are transferred from the coffee to the solution. 18. process according to claim 15, wherein the aromatic solution is first transferred from the extractor (1) to a first container of activated carbons (c1) partially saturated with caffeine and, then, from said first container (c1) in at least a second between several containers (c2-cn) of fresh active carbons that absorb caffeine and again the solution is transferred one or more times in the extractor (1) in which further amounts of caffeine are transferred from the coffee to the solution, such procedure causing substantially the total saturation of each column of active carbons (c1-cn). 19. process according to claim 18, wherein the containers of active carbons (c2-cn) are used in series in the case in which the control on line of the caffeine shows values higher than those expected. 20. process according to claim 18, wherein the containers of active carbons (c2-cn) are used in parallel in case the control on line of the caffeine shows values higher than those expected. 21. process according to claim 18, wherein the entry of the solution into the containers of active carbons (c1-cn) arranged in parallel or in series takes place both from the bottom to the top and from the top to the bottom. 22. process according to claim 18, wherein the residue of the solution still present in the containers of active carbons (c1-cn) is totally removed by a suitable pump (10). 23. process according to claim 15, wherein condensed water during the concentration step (5) is recovered and reused as water for swelling the batch of coffee in the coffee to be treated subsequently. 24. process according to claim 15, wherein the swelling of the coffee in the extractor (1) is performed by recirculating the water in a loop (1-9-11-1) through the extractor (1), a filter (9) and a pump (11) and putting the water back into the head of the extractor. 25. process according to claim 15, wherein the state of vacuum in the extractor (1) is generated by a peristaltic pump (11) when it provides for the recirculation (1-9-11-1) of the aromas to be reincorporated by withdrawing the aromatic solution from the bottom of the extractor (1) and putting it on his head in the same extractor. 26. plant for implementing the process according to claim 15, which comprises: an extractor (1) adapted to contain a mixture of coffee and softened hot water maintained at a desired temperature, provided with means (a1) for imparting to the mixture a mixing movement, a first column of active carbon (c1) partially saturated with caffeine suitable to extract caffeine from the solution, at least one of a second between several containers (c2-cn) of fresh active carbons suitable to extract caffeine from the solution, a battery (2) fed with a fluid at a controlled temperature, hot to heat air for the extractor (1) in the phases in which the decaffeinated coffee is pre-dried or dried and, alternatively, at room temperature or cooled to bring air at ambient temperature or lower in the phase in which the decaffeinated coffee is definitively cooled, a fan (3) associated with the extractor (1) to inhale the air in the phases of pre-drying and drying of the solution and of cooling the coffee, means (4) suitable to maintain at the desired temperature the solution circulating in the columns of activated carbons (c1-cn), a first container (5) provided with a stirrer (a2) for receiving the aromatic solution at the end of the phase of extraction of caffeine and to concentrate the solution before sending it in the extractor (1), a second container (6) that collects the water extracted from the solution in the concentration step, a first vacuum pump (7) to be activated in the phase of concentration of the solution, a condenser (8) suitable to condense the water vapor coming from the first container (5), which is equipped with an input (cool) for the cooling water and an outlet (hot) for the heated water, a first filter (9) suitable to retain solids that are present in the solution directed to the columns of activated carbons (c1-cn), a second filter (9a) suitable to retain solid elements that are present in the solution directed to the columns of active carbons (c1-cn), which second filter is made operative when the first filter (9) is in maintenance, a second pump (10) suitable to circulate the solution present in the columns of active carbon (c1-cn), to send in the extractor (1) the aromatic solution which was concentrated in the first container (5) and to completely empty the solution still present in the columns of active carbons (c1-cn), a third pump (11) suitable to recover the concentrated solution from the bottom of the extractor (1) to send it to the top of the extractor during reincorporation and achieve a vacuum of between 0.65 and 0.99 bar that improves the reincorporation of aromas into the decaffeinated coffee. a conduit da for introducing ambient air into the heating and cooling battery (2), a conduit dv for introducing superheated steam into the heating and cooling battery (2), a conduit sc for discharging the condensed fluid from the heating and cooling battery (2), a conduit dm for sending in the extractor (1) hot or cold air coming from the battery (2), an opening dcf for downloading the decaffeinated coffee from the extractor (1), ducts (d) and valves (v) suitable to implement the process. 27. plant according to claim 26, wherein the third pump (11) is a peristaltic pump. 28. plant according to claim 27, wherein the peristaltic pump (11) is associated with transparent ducts (d) at least to the downstream.

Results: 7

Search history

Search PN=(WO2015/059722) (Results 1)

1:

Search [SP]: 1-14. (canceled) 15. process for removing caffeine from green coffee in which a batch of green coffee is introduced in at least one extractor (1) containing softened water maintained at a conventional working temperature comprised between 60 degrees centigrade and 90 degrees centigrade and the coffee beans in the hot water are left for the time period necessary in that they swell so that caffeine is transferred to the hot water and a solution forms that comprises aromatic softened hot water and part of the transferred caffeine and aromatic water-soluble substances contained in the coffee, where steps are implemented to absorb the caffeine contained in the above aromatic solution as decaffeinated by active carbons placed in at least a suitable container provided at its entry of a filter (9, 9a) suitable to retain undesired solid elements, wherein the process comprises the phases of: pre-drying in the extractor (1) the aromatic solution decaffeinated by the active carbons concentrating said solution in a concentration apparatus (5) and transferring it again into the extractor (1) held in a vacuum degree (11) ranging from 0.65 to 0.99 bar that helps the reincorporation of aromatic substances in the pre-dried coffee drying, cooling and discharging the decaffeinated coffee. 16. process according to claim 15, wherein the aromatic solution is kept agitated in the extractor (1) by a stirrer means (a1) suitable to impart to the mass "aromatic solution-coffee" a mixing movement, the grains of coffee being retained by a porous septum at the exit of the extractor, while the solution and the coffee films are allowed to pass through said porous septum. 17. process according to claim 15, wherein the aromatic solution is first moved in a first container of activated carbons (c1) and, then, one or more times, again in the extractor (1) in which further amounts of caffeine are transferred from the coffee to the solution. 18. process according to claim 15, wherein the aromatic solution is first transferred from the extractor (1) to a first container of activated carbons (c1) partially saturated with caffeine and, then, from said first container (c1) in at least a second between several containers (c2-cn) of fresh active carbons that absorb caffeine and again the solution is transferred one or more times in the extractor (1) in which further amounts of caffeine are transferred from the coffee to the solution, such procedure causing substantially the total saturation of each column of active carbons (c1-cn). 19. process according to claim 18, wherein the containers of active carbons (c2-cn) are used in series in the case in which the control on line of the caffeine shows values higher than those expected. 20. process according to claim 18, wherein the containers of active carbons (c2-cn) are used in parallel in case the control on line of the caffeine shows values higher than those expected. 21. process according to claim 18, wherein the entry of the solution into the containers of active carbons (c1-cn) arranged in parallel or in series takes place both from the bottom to the top and from the top to the bottom. 22. process according to claim 18, wherein the residue of the solution still present in the containers of active carbons (c1-cn) is totally removed by a suitable pump (10). 23. process according to claim 15, wherein condensed water during the concentration step (5) is recovered and reused as water for swelling the batch of coffee in the coffee to be treated subsequently. 24. process according to claim 15, wherein the swelling of the coffee in the extractor (1) is performed by recirculating the water in a loop (1-9-11-1) through the extractor (1), a filter (9) and a pump (11) and putting the water back into the head of the extractor. 25. process according to claim 15, wherein the state of vacuum in the extractor (1) is generated by a peristaltic pump (11) when it provides for the recirculation (1-9-11-1) of the aromas to be reincorporated by withdrawing the aromatic solution from the bottom of the extractor (1) and putting it on his head in the same extractor. 26. plant for implementing the process according to claim 15, which comprises: an extractor (1) adapted to contain a mixture of coffee and softened hot water maintained at a desired temperature, provided with means (a1) for imparting to the mixture a mixing movement, a first column of active carbon (c1) partially saturated with caffeine suitable to extract caffeine from the solution, at least one of a second between several containers (c2-cn) of fresh active carbons suitable to extract caffeine from the solution, a battery (2) fed with a fluid at a controlled temperature, hot to heat air for the extractor (1) in the phases in which the decaffeinated coffee is pre-dried or dried and, alternatively, at room temperature or cooled to bring air at ambient temperature or lower in the phase in which the decaffeinated coffee is definitively cooled, a fan (3) associated with the extractor (1) to inhale the air in the phases of pre-drying and drying of the solution and of cooling the coffee, means (4) suitable to maintain at the desired temperature the solution circulating in the columns of activated carbons (c1-cn), a first container (5) provided with a stirrer (a2) for receiving the aromatic solution at the end of the phase of extraction of caffeine and to concentrate the solution before sending it in the extractor (1), a second container (6) that collects the water extracted from the solution in the concentration step, a first vacuum pump (7) to be activated in the phase of concentration of the solution, a condenser (8) suitable to condense the water vapor coming

from the first container (5), which is equipped with an input (cool) for the cooling water and an outlet (hot) for the heated water, a first filter (9) suitable to retain solids that are present in the solution directed to the columns of activated carbons (c1-cn), a second filter (9a) suitable to retain solid elements that are present in the solution directed to the columns of active carbons (c1-cn), which second filter is made operative when the first filter (9) is in maintenance, a second pump (10) suitable to circulate the solution present in the columns of active carbon (c1-cn), to send in the extractor (1) the aromatic solution which was concentrated in the first container (5) and to completely empty the solution still present in the columns of active carbons (c1-cn), a third pump (11) suitable to recover the concentrated solution from the bottom of the extractor (1) to send it to the top of the extractor during reincorporation and achieve a vacuum of between 0.65 and 0.99 bar that improves the reincorporation of aromas into the decaffeinated coffee. a conduit da for introducing ambient air into the heating and cooling battery (2), a conduit dv for introducing superheated steam into the heating and cooling battery (2), a conduit sc for discharging the condensed fluid from the heating and cooling battery (2), a conduit dm for sending in the extractor (1) hot or cold air coming from the battery (2), an opening dcf for downloading the decaffeinated coffee from the extractor (1), ducts (d) and valves (v) suitable to implement the process. 27. plant according to claim 26, wherein the third pump (11) is a peristaltic pump. 28. plant according to claim 27, wherein the peristaltic pump (11) is associated with transparent ducts (d) at least to the downstream. (Results 7)

1) Family number: 1189159 (US4031251A)

Title: Decaffeination of vegetable material

Abstract: Source: US4031251A A process is disclosed wherein the decaffeination of aqueous extracts of vegetable material with non-ionic, hydrophobic resin may be performed in a continuous manner. In accordance therewith, extract is contacted with resin to effect decaffeination, exhausted resin containing adherent caffeine and non-caffeine water solubles is bleached with water to remove the caffeine, the caffeine-free resin is then washed with a solution comprising water and an organic solvent to elute non-caffeine water solubles and then the resin is rinsed with water to permit its reuse in the further decaffeination of vegetable material extracts.

Classifications:

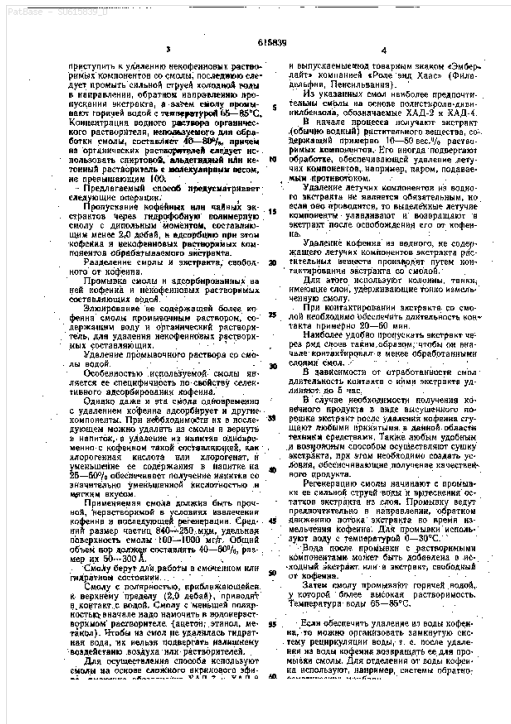
International (IPC 8-9): A23F3/34 A23F3/38 A23F5/00 A23F5/18 A23F5/20 A23F5/22 C07D473/12 (Advanced/Invention)

International (IPC 1-7): A23C3/02 A23F1/10 A23F3/00 A23F3/02 A23F3/36 A23F3/38 A23F5/20 A23F5/22 B01D

CPC: A23F3/385 A23F5/185 A23F5/223

European: A23F3/38B A23F5/18B A23F5/22B

US: 210/638 210/654 426/387 426/422 426/427



Family:

Publication number	Publication date	Application number	Application date
AU197587883 A1	19770630	AU19750087883	19751224
CA1069376 A1	19800108	CA19750242512	19751222
CH597768 A	19780414	CH19760000042	19760106
DE2600492 A1	19760715	DE19762600492	19760108
DE2600492 C2	19841018	DE19762600492	19760108
ES444103 A1	19770516	ES19760444103	19760107
FR2297004 A1	19760806	FR19760000281	19760107
FR2297004 B1	19790720	FR19760000281	19760107
GB1523639 A	19780906	GB19750052572	19751223
IL48714 A0	19760229	IL19750048714	19751223
IL48714 A1	19780731	IL19750048714	19751223
JP1283120 C3	19850927	JP19760001360	19760107
JP51091368 A2	19760810	JP19760001360	19760107
JP60005249 B4	19850209	JP19760001360	19760107
MX4442 U	19820507	MX19760006635U	19760108
SU615839 D	19780715	SU19762310601	19760107
US4031251 A	19770621	US19750539535	19750108
ZA7507953 A	19761229	ZA19750007953	19751222

Priority:

US19750539535 19750108

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PRODUCTS LTD ; NESTLE SOCIETE DES PRODUITS SA ; SOSETE DE PRODYUI NESTLE S A FIRMA ; SOCIETE D ASSISTANCE TECHNIQUE POUR PRODUITS NESTLE S A ; RUSHMORE DEAN F ; TIEN SZU LIU RICHARD ; D ASSISTANCE TECHNIQUE POUR PRODUITS NESTL SOC ; DE PURODEYUI NETSUSURU SA SOC ; DES PRODUITS NESTLE S A SOC ; DES PRODUITS NESTLE SA SOC ; DES PRODUITS NESTLE SOC SA ; MARGOLIS GEOFFREY ; NESTLE S A

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Agent(s): DR YITZHAK HESS AND PARTNERS

2) Family number: 1393241 (CA1015208A)

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Title: AROMA ENHANCED DECAFFEINATED SOLUBLE COFFEE

Classifications:

International (IPC 8-9): A23F5/50 (Advanced/Invention);

A23F5/46 (Core/Invention)

CPC: A23F5/505

European: A23F5/50H

PatBase - CA1015208_A1

SUBSTITUTE

REMPLACEMENT

SECTION is not Present

Cette Section est Absente

Family:

Publication number	Publication date	Application number	Application date
CA1015208 A1	19770809	CA19740189624	19740107

Priority:

CA19740189624 19740107

Probable Assignee: GEN FOODS CORP

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Inventor(s): (std): EARLE ERNEST L JR ; PFLUGER RICHARD A ; PITCHON ESRA

Inventor(s): EARLE ERNEST L

3) Family number: 1232897 (US4160042A)

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Title: Process for treating an aqueous extract of a vegetable material

Abstract: Source: US4160042A An aqueous extract of a vegetable material is treated with a view to reducing its caffeine and/or chlorogenic acid content. The treatment is with a solid ligneous adsorbent of vegetable origin in divided form at a temperature of from 0 DEG to 100 degrees C. so as to absorb the caffeine and the chlorogenic acid. Preferably adsorption takes place at a temperature of at most 30 degrees C. and the overall process includes the following subsequent steps:

Classifications:

International (IPC 8-9): A23F3/20 A23F3/38 A23F5/18 A23F5/22 A23L2/38 B01D15/00 (Advanced/Invention);

A23F3/00 A23F5/00 A23L2/38 B01D15/00 (Core/Invention)

International (IPC 1-7): A23F1/00 A23F1/04 A23F1/10 A23F3/00 A23F3/02 A23F3/36 A23F3/38 A23F5/18 A23F5/20 A23F5/22 A23L2/38 B01D15/00

CPC: A23F3/385 A23F5/185 A23F5/223

European: A23F3/38B A23F5/18B A23F5/22B

US: 426/385 426/387 426/394 426/420 426/422 426/427 426/594 426/77 544/274

Family:

Publication number	Publication date	Application number	Application date
AR216949 A1	19800215	AR19780272669	19780621
AT360823 B	19810210	AT19780004311	19780613
AT431178 A	19800615	AT19780004311	19780613
BE867514 A1	19781127	BE19780188059	19780526
CA1114670 A1	19811222	CA19780306848	19780705
CH623205 A	19810529	CH19770009410	19770729
DE2826466 A1	19790215	DE19782826466	19780616
DE2826466 C2	19840405	DE19782826466	19780616
ES472135 A1	19790316	ES19780472135	19780728
FR2398463 A1	19790223	FR19770030540	19771011
FR2398463 B1	19810522	FR19770030540	19771011
GB1603683 A	19811125	GB19780021926	19780524
IL54740 A0	19780731	IL19780054740	19780517
IL54740 A1	19810331	IL19780054740	19780517
IT1105243 A	19851028	IT19780050133	19780630
IT7850133 A0	19780630	IT19780050133	19780630
JP1272685 C3	19850711	JP19780066287	19780601
JP54026364 A2	19790227	JP19780066287	19780601
JP59046576 B4	19841113	JP19780066287	19780601
MX5259 U	19830524	MX19780007268U	19780719
NL179700 B	19860602	NL19780007483	19780711
NL179700 C	19861103	NL19780007483	19780711
NL7807483 A	19790131	NL19780007483	19780711
PT68207 A	19780701	PT19780068207	19780622
US4160042 A	19790703	US19770842987	19771017
US4204004 A	19800520	US19790022798	19790322

Priority:

CA19780306848 19780705 CH19770009410 19770729 US19790022798 19790322
US19770842987 19771017

Probable Assignee: NESTLE SA SOC ASS TECH PROD

Assignee(s): (std): FARR DAVID R ; HORMAN IAN ; NESTLE SA ; NESTLE SOC ASS TECH PROD SA ; NESTLE SA SOC ASS TECH PROD

Assignee(s): SOCIETE DES PRODUITS NESTLE S A ; SOCIETE DES PRODUITS NESTLE S A 1800 VEVEY CH ; NESTLE SOC DES PRODUITS SA ; SOC DES PRODUITS NESTLE S A ; NESTLE SOCIETE DES PRODUITS SA ; SOC DES PRODUITS NESTLE SA ; SOCIETE DES PRODUITS NESTLE S A TE VEVEY ZWITSERLAND ; SOCIETE D ASSISTANCE TECHNIQUE POUR PRODUITS NESTLE S A ; NESTLE SA PRODUITS ; ASSISTANCE TECHNIQUE PRODUITS NESTLE ; D ASSISTANCE TECHNIQUE POUR PRODUITS NESTL SOC ; DE PURODEYUI NETSUSURU SA SOC ; DE PURODEYUI NETSUSURU SOC SA ; DES PRODUITS NESTLE S A SOC ; DES PRODUITS NESTLE SA SOC ; DES PRODUITS NESTLE SOC SA

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Inventor(s): ROBERT FARR DAVID ; ZWITSERLAND ; HORMAN IAN CORSEAUX CH ; I HORMAN ; IAN HORMAN ; IAN HORMAN TE CORSEAUX ; FARR DAVID ROBERT BRENT CH ; D R FARR ; DAVID ROBERT FARR ; DAVID ROBERT FARR ET IAN HORMAN ; DAVID ROBERT FARR TE BRENT

Agent(s): ROBIC ROBIC AND ASSOCIES ASSOCIATES; REINHOLD COHN AND PARTNERS

4) Family number: 1251959 (GB1596587A)

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Title: PROCESSOR FOR PREPARING DECAFFEINATED COFFEE

Abstract: Source: GB1596587A To produce a decaffeinated instant coffee with an improved flavour and aroma, an aqueous extract of ground roast coffee is decaffeinated by treatment with an organic solvent for caffeine which is not miscible with water and removal of the decaffeinated aqueous coffee extract from the caffeine-containing organic solvent which is not miscible with water; flavour and aroma of the coffee extract are improved by readmixing certain flavourings, by displacing the caffeine from the organic solvent by means of a treatment with water, introducing the resulting organic solvent, which contains flavourings, into the coffee extract, and freeing the coffee extract from solvent. The extract which has been freed from solvent can now be dried to give instant coffee powder.

Classifications:

International (IPC 8-9): A23F5/16 A23F5/20 A23F5/22
A23F5/50 (Advanced/Invention);

A23F5/00 A23F5/46 (Core/Invention)

International (IPC 1-7): A23F1/00 A23F1/04 A23F1/10 A23F5/22
A23F5/46

CPC: A23F5/226 A23F5/50

European: A23F5/22E A23F5/50

**SUBSTITUTE
REPLACEMENT**

**SECTION is not Present
Cette Section est Absente**

Family:

Publication number	Publication date	Application number	Application date
AT220678 A	19810515	AT19780002206	19780329
AT365045 B	19811210	AT19780002206	19780329
AU197834608 A1	19791004	AU19780034608	19780330
AU514860 B2	19810305	AU19780034608	19780330
BE865488 A1	19781002	BE19780186399	19780330
CA1104411 A1	19810707	CA19780300116	19780330
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DE2813147 A1	19781012	DE19782813147	19780325
DK145678 A	19781001	DK19780001456	19780331
ES468369 A1	19781216	ES19780468369	19780330
FI63326 B	19830228	FI19780000964	19780330
FI63326 C	19830610	FI19780000964	19780330
FI780964 A	19781001	FI19780000964	19780330
FR2385336 A1	19781027	FR19780009270	19780330
GB1596587 A	19810826	GB19780012458	19780330
GR63558 B	19791117	GR19780155813	19780328
IE46702 B	19830824	IE19780000639	19780331
IE780639 L	19780930	IE19780000639	19780331
IT7848639 A0	19780329	IT19780048639	19780329
JP54002380 A2	19790109	JP19780038014	19780331
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NL7803436 A	19781003	NL19780003436	19780331
NO147364 B	19821220	NO19780001111	19780330
NO147364 C	19830330	NO19780001111	19780330
NO781111 A	19781003	NO19780001111	19780330
SE7803587 A	19781001	SE19780003587D	19780330

Priority:

CA19780300116 19780330 US19770783246 19770331

Probable Assignee: PROCTER AND GAMBLE**Assignee(s):** (std): PROCTER GAMBLE CO ; PROCTER AND GAMBLE

Assignee(s): PROCTER AND GAMBLE CO ; PROCTER AND GAMBLE CO THE ; PROCTER AND GAMBLE COMPANY THE ; BOLT GREGORY L ; GRUBBS DENNIS R ; PROCTER AND GABLE CO ; PROCTER AND GAMBLE CY ; THE PROCTER AND GAMBLE CO ; THE PROCTER AND GAMBLE COMPANY ; THE PROCTER AND GAMBLE CY ; THE PROCTER AND GAMBLE CO ; THE PROCTER AND GAMBLE COMPANY TE CINCINNATI OHIO ; THE PROCTER AND GAMBLE COMPANY TE CINCINNATI OHIO VER ST V AM

Inventor(s): (std): BOLT G ; BOLT G L ; BOLT GREGORY L ; BOLT GREGORY LYNN ; DENISU ROBAATO GURABUSU ; GRUBBS D ; GRUBBS D R ; GRUBBS DENNIS R ; GRUBBS DENNIS ROBERT ; GUREGORII RIN BORUTO

Inventor(s): ROBERT GRUBBS DENNIS ; LYNN BOLT GREGORY ; DENNIS ROBERT GRUBBS ; G L BOLT ; GREGORY LYNN BOLT ; D R GRUBBS ; BOLT G L AND GRUBBS DR

Agent(s): WM; GOWLING LAFLEUR HENDERSON LLP

5) Family number: 30906170 (US4495210A)

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Title: Caffeine adsorption

Abstract: Source: US4495210A In the decaffeination of green coffee beans with an aqueous medium, caffeine is removed from the aqueous medium which also contain non-caffeine green coffee solids, contact with substantially neutral active carbon. Thereafter the medium may be recycled to extract further amounts of caffeine from the same or another batch of green coffee beans. Other features of the invention are described in the specification.

Classifications:

International (IPC 8-9): A23F5/16 A23F5/20 A23F5/22 B01J20/20 C07D473/12 (Advanced/Invention); B01J20/20 (Advanced/Non-invention); A23F5/00 B01J20/20 C07D473/00 (Core/Invention)

International (IPC 1-7): A23F1/10 A23F5/16 A23F5/20 A23F5/22 A23F5/26 A23P B01D B01J20/20 C07D473/12

CPC: A23F5/208 A23F5/223 C07D473/12

European: A23F5/20H A23F5/22B C07D473/12

US: 426/422 426/427

PatBase — SU1056875_A3

1056875

1

После повторного обжаривания твердого остатка кофе высушивают так, чтобы содержание влаги после обжаривания составляло 5-12 вес.%. Количество твердого остатка кофе, содержащегося в экстракте, может быть меньше, чем количество экстрагированного при декарфеинизации. Переработанный активированный уголь следует регенерировать, обычно путем нагрева или экстрагирования растворителем.

2

В п. 1 и 2, активированный уголь получают путем прожигания коммерческого парового активированного угля 22-й сортовой кислотой и прожиганием прожиганием диметилсульфидом (DMF) в 5,0 до тех пор, пока pH промывной воды не станет равной 6,0. Затем уголь сортируют и подвергают воздействию 1500 °C, пропускают через молоток, содержащий 150 °C, нейтрально-активного активированного угля, до выделения в экстрактор. Затем час последовательно подвергают вторичной.

3

После декарфеинизации не содержащее кофеина твердое остаток сортируют с декарфеинизованным кофеином. В п. 1 и 2, 3, зерно кофеиновое бобы декарфеинизуют кофеином экстрактом, нейтрально-активным активированным углем. Используют 6 последовательных экстрактов, каждый из которых содержит 60 от веса кофе. Экстрагирование включает декарфеинизованной водой, температура которой не выше, чем в наиболее отдаленной.

4

экстрактор, также содержащий 230 ч, нейтрально-активного активированного угля. Чаша 5 ч, суммарного процесса экстрагирования останавливают, и экстракт, содержащий pH = 6,2, удаляют из кофейных зерен, сушат до влажности 10% и смешивают с экстрактом, который предварительно концентрировали до 25% твердого остатка. Смешанный продукт в течение 5 ч при 65°C. После этого кофе с 50% влажности сушат до содержания влаги 5,5%.

5

Кофе декарфеинизируют до 97%, он имеет хороший вид, похожий на исходный, но декарфеинизованный кофе, но он имеет более темный по цвету. Полученный от обжаривания зерен напиток кофе, но не имеет ароматизатора, имеет вкус кофе, который не имеет ароматизатора и цвета. При добавлении в чашку кофе на этот кофе принимают напиток, который имеет вкус кофе без каких-либо ароматизаторов.

6

В п. 1 и 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100.

Вариант	DMF	Углерод	DMF	Углерод	DMF	Углерод	DMF	Углерод
№	г/г	г/г	г/г	г/г	г/г	г/г	г/г	г/г
1	7.5	3.5	23	80	5	6.2	97	
2	7.5	3.5	23	85	7	6.2	97	
3	7.5	3.5	23	80	5	6.0	97	
4	7.4	4.0	25	85	8	5.5	97	

Изобретено в декарфеинизованной воде-топ 20°C.

После декарфеинизации не содержащее кофеина твердое остаток сортируют с декарфеинизованным кофеином. В п. 1 и 2, 3, зерно кофеиновое бобы декарфеинизуют кофеином экстрактом, нейтрально-активным активированным углем. Используют 6 последовательных экстрактов, каждый из которых содержит 60 от веса кофе. Экстрагирование включает декарфеинизованной водой, температура которой не выше, чем в наиболее отдаленной.

экстрактор, также содержащий 230 ч, нейтрально-активного активированного угля. Чаша 5 ч, суммарного процесса экстрагирования останавливают, и экстракт, содержащий pH = 6,2, удаляют из кофейных зерен, сушат до влажности 10% и смешивают с экстрактом, который предварительно концентрировали до 25% твердого остатка. Смешанный продукт в течение 5 ч при 65°C. После этого кофе с 50% влажности сушат до содержания влаги 5,5%.

Кофе декарфеинизируют до 97%, он имеет хороший вид, похожий на исходный, но декарфеинизованный кофе, но он имеет более темный по цвету. Полученный от обжаривания зерен напиток кофе, но не имеет ароматизатора, имеет вкус кофе, который не имеет ароматизатора и цвета. При добавлении в чашку кофе на этот кофе принимают напиток, который имеет вкус кофе без каких-либо ароматизаторов.

В п. 1 и 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100.

Family:

Publication number	Publication date	Application number	Application date
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AU542970 B2	19850328	AU19810070173	19810506
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DD158736 A5	19830202	DD19810229599	19810429
DE3119277 A1	19820415	DE19813119277	19810514
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EP0040712 A1	19811202	EP19810103266	19810430
EP0040712 B1	19840418	EP19810103266	19810430
EP0040712 B2	19890419	EP19810103266	19810430
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IT8148226 A0	19810408	IT19810048226	19810408
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KE3527 A	19850607	KE19850003527	19850520
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ZA8102953 A	19820526	ZA19810002953	19810504

Priority:

CA19810373702 19810324 US19800153904 19800528 US19810264062 19810515

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TECHNIQUE POUR PRODUITS NESTLE SA SO ; D'ASSISTANCE TECHNIQUE POUR PRODUITS NESTLE SA SOC ; DES PRODUITS NESTLE SA SOC ; SOCIETE D ASSISTANCE TECHNIQUE POUR PRODUITS NESTLE S A ; SOCIETE D ASSISTANCE TECHNIQUE POUR PRODUITS NESTLE SA ; GREEN DAVID ; DES PRODUITS NESTLE SOC SA ; DES PRODUCTS NESTLE SA SOC ; SOCIETE DES PRODUITS NESTIE S A ; BLANC MAURICE

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Designated states: BE CH FR IT LI LU NL SE

6) Family number: 2924551 (US4938977A)

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Title: Process for the production of decaffeinated tea

Abstract: Source: US4938977A By the extraction with CO₂ at 60 to 150 bar and 20 DEG to 70 degrees C., an aroma enriched fraction is taken from the moistened black tea, said fraction being added again to already decaffeinated and dried tea. Decaffeination starts after the aroma fraction has been obtained by pumping carbon dioxide at a pressure of between 150 to 500 bar and a temperature of between 10 DEG to 100 DEG C. through a bulk moistened tea. The solvent charged with caffeine is passed over an adsorber or purified by reduction of density.

Classifications:

International (IPC 8-9): A23F3/36 A23F3/42 (Advanced/Invention); A23F3/00 A23F3/40 (Core/Invention)

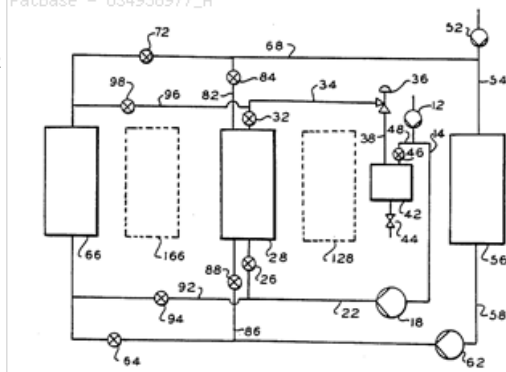
International (IPC 1-7): A23F3/36 A23F3/42 B01D11/02 C07D473/12 C11B9/00

CPC: A23F3/366 A23F3/423

European: A23F3/36E A23F3/42E

US: 426/386 426/427 426/597

PatBase - US4938977_A



Family:

Publication number	Publication date	Application number	Application date
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DE3640333 A1	19880609	DE19863640333	19861126
DE3640333 C2	19940811	DE19863640333	19861126
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EP0269104 A2	19880601	EP19870117478	19871126
EP0269104 A3	19890405	EP19870117478	19871126
EP0269104 B1	19911030	EP19870117478	19871126
US4938977 A	19900703	US19890350228	19890511

Priority:

CA19870552667 19871124 DE19863640333 19861126 US19870121946 19871118
DE19883817736 19880525

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Agent(s): BORDEN LADNER GERVAIS LLP

Designated states: AT BE CH DE ES FR GB GR IT LI LU NL SE

7) Family number: 59103761 (US2016262416A)

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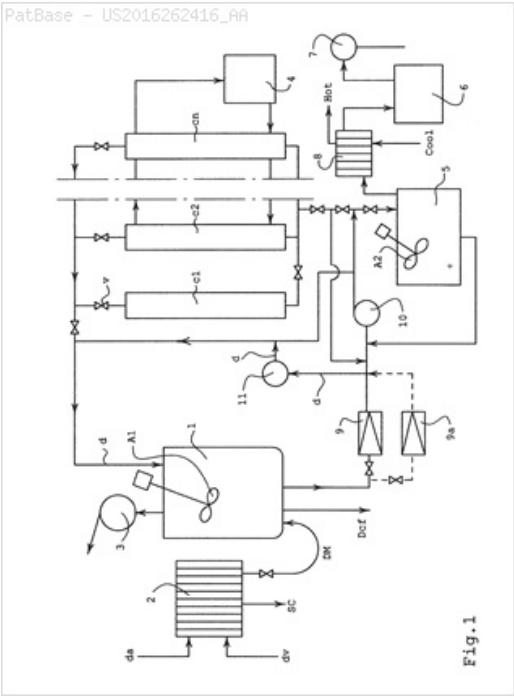
Title: PROCESS FOR REMOVING CAFFEINE FROM GREEN COFFEE AND PLANT FOR IMPLEMENTING THE PROCESS

Abstract: Source: US2016262416A The phases included in the process of pre-drying in an extractor (1) the aromatic solution decaffeinated by the active carbons; concentrating the solution in a concentration apparatus (5) and transferring it again into the extractor (1) held in such a vacuum degree (11) that helps the reincorporation of aromatic substances in the pre-dried coffee; drying, cooling and discharge the decaffeinated coffee.

Classifications:

International (IPC 8-9): A23F5/02 A23F5/16 A23F5/20

A23F5/24 (Advanced/Invention)
CPC: A23F5/16 A23F5/24 A23V2250/2108 A23V2300/10
A23V2300/14 A23V2300/24 A23V2300/38 A23V2300/50 A23F5/208
US: 426/427



Family:

Publication number	Publication date	Application number	Application date
AU2013403581 AA	20150430	AU20130403581	20131021
CA2927138 AA	20160412	CA20132927138	20131021
CN105658074 A	20160608	CN201380080361	20131021
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MX2016005135 A1	20160718	MX20160005135	20131021
US2016262416 AA	20160915	US20130030676	20131021
WO15059722 A1	20150430	WO2013IT00295	20131021

Priority:

WO2013IT00295 20131021

Probable Assignee: DEMUS S P A

Assignee(s): (std): DEMUS S P A

Assignee(s): DEMUS SPA ; DESOBGO NGUEPI YVES CLYFORD ; FABIAN MASSIMILIANO ; MARCHESAN ENNIO ; TRAUNINI STEFANO ; DEMUS LAB SRL

Inventor(s): (std): FABIAN MASSIMILIANO ; MARCHESAN ENNIO ; NGUEPI YVES CLYFORD DESOBGO ; DESOBGO NGUEPI YVES CLYFORD ; TRAUNINI STEFANO

Inventor(s): STEFANO TRAUNINI ; YVES CLYFORD DESOBGO NGUEPI ; ENNIO MARCHESAN ; MASSIMILIANO FABIAN

Agent(s): FB RICE; FB RICE PTY LTD; RIDOUT AND MAYBEE LLP; JOSE ANDRES RINCON USCATEGUI; FERRAILO RUGGERO

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