

Search query (2): [SP]: priority[0001] the present application claims the priority of german patent application de 10 2015 210 890.2 with filing date 15 jun. 2015.technical field of application[0002] the present invention relates to plant-based dried products made from fruit and/or vegetables, more particularly fruit and vegetable snacks, having a firm and crispy texture and to methods for producing said dried products.state of the art[0003] snack products are widespread in the area of processed foods. examples of popular snacks are potato chips or cornmeal extrudates, which in many cases are admixed with salt, flavorings or, in the case of extruded snacks, with peanut butter for example. fruit and vegetable snacks include especially dried fruit and vegetable pieces such as apple or pineapple slices or even entire dried fruits such as, for example, raisins, figs, dates, prunes or other dried fruit and vegetables.[0004] the aforementioned products vary quite considerably with respect to their color and texture. whereas chips or peanut flips are characterized by a crispy texture, the texture of most dried fruit and vegetable snacks is more soft or gummy, meaning that many of the dried products are not consumed by the consumers as typical crispy snacks. especially in the case of dried fruit such as apples or raisins, the color and the flavor of the fruits moreover change quite considerably during the drying process as a result of oxidation, reducing the enjoyment of the products.[0005] to increase crispiness, some dried products such as banana or pineapple pieces are provided with sugar and/or deep-fried in order to achieve a firmer and crispy texture. however, at the same time, the value added to said products in terms of acoustics and firmer bite is offset by the addition of sugar or oil, meaning that the natural composition of the fruits is no longer present in the end product. a similar situation applies to the use of antioxidants. for example, addition of sulfite or ascorbic acid during the drying of fruits and vegetables can minimize browning and preserve the color of the products, but such additives are undesired for many consumers.[0006] a distinct improvement in color and crispiness can be achieved through the use of vacuum methods. examples thereof are the freeze-drying (e.g., cn102342318), the microwave vacuum drying (e.g., cn101849573) or the puffing (ep2408322 b1) of fruits and vegetables. in said methods, the water content of the dried products is reduced in a vacuum to values below 10 percent by mass and a crispy texture is thus obtained. owing to the extensive exclusion of oxygen during the drying, the color and flavor preservation of the end products are also distinctly superior to those of conventional dried products.[0007] a further approach for producing fruit-based snacks having a crispy texture is described in wo201411813. said approach is based on mixing a fruit material with a binding material, with the mixture subsequently being subjected to cooking and dehydrogenation steps until a desired proportion of water and also in the mixture and a desired bubble structure is achieved. however, the use of the binding material reduces the proportion of fruit in the snack product, and this can also have a disadvantageous effect on the flavor of the fruit snack.[0008] however, the aforementioned products also exhibit disadvantages which are due to the raw material in the majority of cases. for instance, most fruits and vegetables vary quite considerably with respect to sweetness, acidity, flavor, color and oxidation stability. this is especially the case among different species and varieties, but also for the same varieties depending on the location, climate or harvest year. consequently, the quality parameters sweetness, acidity and color of the end products vary quite considerably in the absence of addition of antioxidants, sugar or acid. from experience, considerable differences can be registered even among individual fruits of the same harvest or within one fruit (e.g., red and green areas of the very same strawberries), which differences are perceived by the consumers as natural variation, but usually also as disadvantageous. therefore, according to the prior art, a uniform color, sweetness or acidity of the end products cannot be achieved without the use of granulated sugar or other food additives.[0009] it is an object of the present invention to provide dried products made from fruit and/or vegetables, more particularly as fruit and/or vegetable snacks, which have a crispy texture and, even without the addition of granulated sugar or food additives, turn out distinctly more consistent in the description of the quality parameters sweetness, acidity, flavor consistency and color than the known dried products from the prior art.description of the invention[0010] the object is achieved by the dried products and the methods for the production thereof according to the independent claims. advantageous embodiments of the dried product and of the production method are subject matter of the dependent claims or can be gathered from the following description and the exemplary embodiment. furthermore, uses of the herein-described dried products are claimed.[0011] a herein-proposed dried product made from fruit and/or vegetables can be formed from dried fruit- and/or vegetable-containing pieces having a water content of below 7 percent by mass and is distinguished by the fact that the dried fruit- and/or vegetable-containing pieces contain constituents of more than one fruit or vegetable variety or of at least one fruit variety and at least one vegetable variety or of different fruits or plants of the same fruit or vegetable variety.[0012] the terms fruit and vegetables are used here in the customary form. fruit is an umbrella term for the fruits or parts thereof (e.g., seeds) which are edible in a raw state for humans and usually water-containing and which originate from trees, shrubs and perennial plants. typical species groups of fruit are pomes, drupes, berries, nuts, classic tropical/subtropical fruits and also further exotic fruits. vegetables is an umbrella term for edible plant parts of plants which grow in the wild or are cultivated. they are usually leaves, fruits, tubers, stems or roots of annual or biennial herbaceous plants. dry seeds such as peas or lentils and grains are not counted as vegetables. the term variety also covers strains, since strains represent varieties of various properties with regard to appearance, content and properties concerning ripening, storage and use.[0013] constituents of a fruit or vegetable variety, or fruit or vegetable constituents, can comprise, for example, the juice or flesh or else the entire fruit or vegetable.[0014] in a further aspect, there is proposed herein a method for producing crispy dried products made from fruit (fig. 1), which method uses highly comminuted constituents of at least one fruit variety as starting material. application of the method according to the invention allows processing at low temperatures with extensive exclusion of oxygen, meaning that dried products can form which are distinguished by a high proportion of fruit, a high preservation of oxidation- and temperature-sensitive, but valuable, fruit constituents, a homogeneous color distribution, a crispy texture and an intense flavor.[0015] depending on the embodiment, the present invention can exhibit a multitude of advantages and technical effects. comminution and homogenization of fruit constituents allows the use of fruit, the external appearance of which would no longer be sufficiently appealing for the retail industry. as a result, there is, firstly, no need for specific selection of the starting materials secondly, costs can be reduced. at the same time, comminution and homogenization also lead to homogenization of properties with respect to taste and color in the herein-described dried product. furthermore, comminution allows more variable or more homogeneous shaping, while the process conditions, for example in the predrying or in the microwave drying (puffing), have a more uniform effect on the homogenized mass composed of fruit constituents. thus, it is possible overall to minimize losses and to utilize available foodstuffs more efficiently.[0016] the method according to the invention allows the use of a broad spectrum of starting materials to which the method conditions can be individually adapted, though gentle temperatures and oxidation with conditions minimizing atmospheric oxygen are always possible such that not only valuable protein and lipid constituents, but also vitamins and other secondary plant metabolites are preserved to a great extent. besides these nutritional physiology advantages, the dried products according to the invention are also additionally appealing with respect to color and pleasantly crispy, while they are distinctly more favorable than, for example, freeze-dried entire fruits or large fruit pieces.[0017] furthermore, the production of dried products according to the invention does not require the addition of binders. in the herein-described method, the sugar endogenous to the fruit can suffice in order to maintain a sufficiently cohesive mass during the various drying steps and to ultimately obtain a dried product of crispy consistency. in the case of dried products according to the invention, it is possible to use either a fruit strain or fruit variety as starting material or a mixture of multiple fruit strains or fruit varieties. in the case of embodiments also containing vegetables, a fruit variety must always be added to a mixture in order to ensure a sufficient sugar content in the mixture, meaning that a cohesive mass forms which can be further processed without addition

Results: 11

1) Family number: 34540123 (CN100398006C)

© PatBase

Title: PROCESSING METHOD OF PUFFED VEGETABLE FRUIT CRISP SLICE

Abstract: A process for preparing the puffed fruit-vegetable crisp includes such steps as choosing raw fruit and vegetable, washing, slicing, protecting color, drying at 50-70 deg.C for 1-3 hr, vacuum puffing for 30 min by microwave, and vacuum packing.

Classifications:

International (IPC 8-9): A23L1/212 A23L3/01 A23P1/14

A23P30/32 (Advanced/Invention);

A23L1/212 A23L3/005 A23P1/14 (Core/Invention)

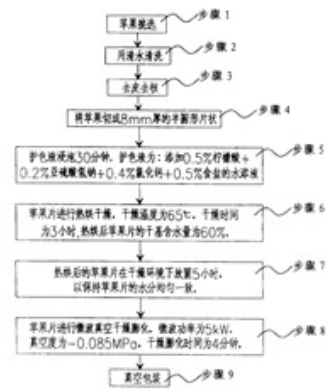


图 1

Family:

Publication number	Publication date	Application number	Application date
CN100398006 C	20080702	CN200510086705	20051024
CN1954691 A	20070502	CN200510086705	20051024

Priority:

CN200510086705 20051024

Probable Assignee: CN ACAD AGRICULTURAL MECH SCI**Assignee(s):** (std): CN ACAD AGRICULTURAL MECH SCI ; CN AGRI MECH SCI RESEARCH INST**Assignee(s):** CHINA MECHANIZATION OF AGRICULTURAL SCIENTIFIC RES ; CHINA MECHANIZATION OF AGRICULTURAL SCIENTIFIC RESEARCH INST ; CHINESE ACADEMY OF AGRICULTURAL MECHANIZATION SCIENCES**Inventor(s):** (std): YOUNBIN ZHAO ; SHUJUN LI ; QINGHUA HAN ; JIWEI MA ; DONGLIN ZHAO ; LI SHUJUN MA**Inventor(s):** SHUJUN MA LI ; HAN QINGHUA ; ZHAO YOUNBIN ; ZHAO DONGLIN ; MA JIWEI ; LI SHUJUN**2) Family number: 47897180 (US2012090193A)**

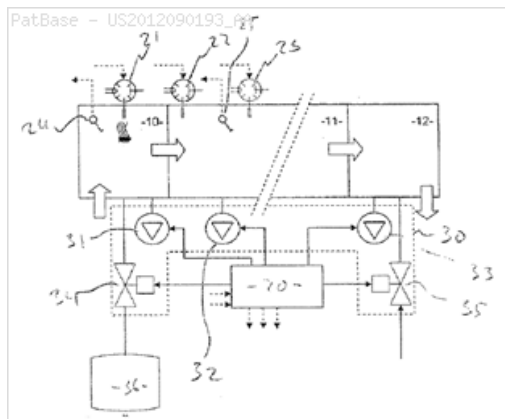
© PatBase

Title: MVD METHOD AND DEVICE FOR DRYING AND BUFFERING ORGANIC MOIST PRODUCTS

Abstract: A method of drying and buffering organic moist products, particularly food items. Introducing the product into a first chamber, bringing the first chamber to a first reduced ambient pressure, feeding microwave energy from a microwave source so as to increase the temperature and buffer the moist product, and increasing the reduced ambient pressure to a less reduced second ambient pressure multiple times and subsequently reducing the ambient pressure to the first reduced ambient pressure. Wherein the increase of the ambient pressure is carried out faster than the reduction thereof, followed by a final drying of the product in a second chamber while feeding infrared radiation at a third (reduced) ambient pressure. Subsequently, the product is cooled and discharged into the atmosphere. Thus, increased product quality, in particular a more consistent and more stable product is obtained.

Classifications:**International (IPC 8-9):** A23L3/01 A23L3/015 A23L3/3418 A23L3/54 F26B19/00 F26B3/30 F26B3/347 F26B5/04 F26B7/00 H05B6/64 H05B6/78 H05B6/80 (Advanced/Invention);

F26B3/34 F26B3/347 (Advanced/Non-invention)

CPC: F26B3/34 F26B3/347 H05B6/80 A23L3/01 A23L3/0155 A23L3/54 F26B5/048**European:** A23L3/01 A23L3/015F A23L3/54 F26B5/04G H05B6/80**US:** 1/1 34/418 34/418P 34/60 34/60S**Family:**

Publication number	Publication date	Application number	Application date
BRPI1009742 A2	20150825	BR2010PI09742	20100618
BRPI1009742 B1	20180814	BR2010PI09742	20100618
CR20120023 A	20130123	CR20120000023	20120116
DE502010001172 D1	20121018	DE201050001172T	20100618
EP2408322 A1	20120125	EP20100726438	20100618

EP2408322 B1	20120822	EP20100726438	20100618
ES2393663 T3	20121227	ES20100726438T	20100618
US2012090193 AA	20120419	US20100378777	20100618
US9155133 BB	20151006	US20100378777	20100618
WO10145835 A1	20101223	WO2010EP03685	20100618

Priority:

DE200910025472 20090618 EP20100726438 20100618 WO2010EP03685 20100618

Probable Assignee: WECO BERATUNGS U BETEILIGUNGS GMBH

Assignee(s): (std): PAEX FOOD AG ; PAX FOOD AG ; WECO BERATUNGS U BETEILIGUNGS GMBH ; WECO BERATUNGS UND BETEILIGUNGS GMBH ; WEFERS MICHAEL

Inventor(s): (std): MICHAEL WEFERS ; WEFERS MICHAEL

Agent(s): MEISSNER BOLTE AND PARTNER GBR; BOHNENBERGER JOHANNES; CARPINTERO MARIO; BROOKS KUSHMAN PC; BOHNENBERGER JOHANNES ET AL

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

3) Family number: 42760183 (US2009004356A)

© PatBase

Title: NUTRITIOUS FABRICATED SNACK PRODUCTS

Abstract: A snack chip comprising from about 40 percent to about 60 percent of nut based material; from about 40 percent to about 60 percent of starch material made from materials selected from the group consisting of tapioca, rice, and mixtures thereof; from about 0.1 percent to about 5.0 percent water; and from about 0 percent to about 20 percent of optional ingredients. At least about 40 percent of the starch material can be pre-gelatinized. The snack chip can be made by combining the nut based material and dry ingredients with water to form a dough, which is then sheeted, cut into individual pieces, and braked to form the snack chip. Alternatively, the cut pieces can be dried to form a half-product and then cooked to form the snack chip.

Classifications:

International (IPC 8-9): A21D10/00 A21D13/00 A21D2/36 A23G3/00

A23G3/34 A23L1/164 A23L1/214 A23L1/36 (Advanced/Invention);

A21D10/00 A21D13/00 A23L1/164 A23L1/214

A23L1/36 (Core/Invention)

CPC: A23L7/13 A21D2/364

European: A21D2/36C A23L1/164E

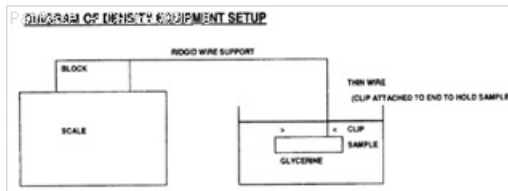
US: 426/550 426/550P 426/557 426/557S

JP F-Term: 4B014 4B014/GG03 4B014/GG06 4B014/GK01

4B014/GL11 4B014/GP01 4B014/GP16 4B014/GP23 4B014/GB11

4B014/GK12 4B014/GQ10

JP F-Index: A23G3/00



Family:

Publication number	Publication date	Application number	Application date
AU2008269372 AA	20081231	AU20080269372	20080626
AU2008269372 BB	20110303	AU20080269372	20080626
CA2690088 AA	20091207	CA20082690088	20080626
CA2690088 C	20130219	CA20082690088	20080626
CN101686718 A	20100331	CN200880021574	20080626
CN101686718 B	20130320	CN200880021574	20080626
DE602008016530 D1	20120816	DE200860016530T	20080626
EP2157871 A2	20100303	EP20080776540	20080626
EP2157871 B1	20120620	EP20080776540	20080626
ES2389390 T3	20121025	ES20080776540T	20080626
JP2010530749 T2	20100916	JP20100512835T	20080626
JP2012191959 A2	20121011	JP20120159014	20120717
MX2009013916 A1	20100409	MX20090013916	20080626
US2009004356 AA	20090101	US20080156076	20080529
WO09001321 A2	20081231	WO2008IB52584	20080626
WO09001321 A3	20090514	WO2008IB52584	20080626

Priority:

US20070937151P 20070626 US20080156076 20080529 EP20080776540 20080626
JP20100512835 20080626 WO2008IB52584 20080626 JP20100512835T 20080626

Probable Assignee: KELLOGG NORTH AMERICA CO

Assignee(s): (std): BUNKE PAUL RALPH ; EKANAYAKE ATHULA ; LIN PETER YEN CHIH ; SCHNUR SHARON LEE ; PROCTER AND GAMBLE

Assignee(s): THE PROCTER AND GAMBLE COMPANY ; PRINGLES SARL ; PROCTER AND GAMBLE CO ; KELLOGG EUROPE TRADING LTD ; KELLOGG NORTH AMERICA CO

Inventor(s): (std): ATHULA EKANAYAKE ; BUNKE PAUL ; BUNKE PAUL RALPH ; EKANAYAKE ATHULA ; LEE SCHNUR SHARON ; LIN PETER ; LIN PETER YEN CHIH ; RALPH BUNKE PAUL ; SCHNUR SHARON ; SCHNUR SHARON LEE ; YEN CHIH LIN PETER

Inventor(s): SCHNUR SHARON LEE CINCINNATI ; LIN PETER YEN CHIH CINCINNATI ; EKANAYAKE ATHULA CINCINNATI ; BUNKE PAUL RALPH CINCINNATI ; SHARON LEE SCHNUR ; PAUL RALPH BUNKE ; PETER YEN CHIH LIN

Agent(s): WATERMARK PATENT AND TRADE MARKS ATTORNEYS; WATERMARK INTELLECTUAL PROPERTY PTY LTD; GOWLING LAFLEUR HENDERSON LLP; KELLENBERGER JAKOB; TANI AND ABE PC; THE PROCTER AND GAMBLE COMPANY, GLOBAL LEGAL DEPARTMENT - IP; PROCTER AND GAMBLE CO GLOBAL LEGAL DEPARTMENT IP; THE PROCTER AND GAMBLE COMPANY

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BR BW BY BZ CA CF CG CH CI CM CN CO CR CU CY CZ DE DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IS IT JP KE KG KM KN KP KR KZ LA LC LI LK LR LS LT LU LV LY MA MC MD ME MG MK ML MN MR MT

4) Family number: 7799274 (JP60091954A)

© PatBase

Title: PREPARATION OF BANANA CHIP

Abstract: PURPOSE:To produce a banana chip having desired shape, easily, without causing the degradation and discoloration of the raw material, by stirring and kneading the pulp of banana, forming in the form of a chip, frying in an oil, and drying by heating with microwave radiation. CONSTITUTION:The pulp of peeled banana is optionally added with vitamin C and its stabilizer, stirred and kneaded to obtain pasty banana, preferably frozen, sliced in the form of chip, fried in an oil, and heated and dried with microwave radiation to obtain the objective banana chip.

Classifications:

International (IPC 8-9): A23L1/212 A23L19/00 (Advanced/Invention);
A23L1/212 (Core/Invention)

International (IPC 1-7): A23L1/212

JP F-Term: 4B016 4B016/LC02 4B016/LC03 4B016/LC06 4B016/LE01 4B016/LG01 4B016/LP01 4B016/LP03 4B016/LP07 4B016/LP08

JP F-Index: A23L1/212/A A23L19/00/A

Family:

Publication number	Publication date	Application number	Application date
JP60091954 A2	19850523	JP19830197372	19831021

Priority:

JP19830197372 19831021

Probable Assignee: BIBUN CORP

Assignee(s): (std): BIBUN CORP

Assignee(s): BIBUN KK

Inventor(s): (std): KURIHARA YOSHINORI

5) Family number: 47907381 (CN101919520A)

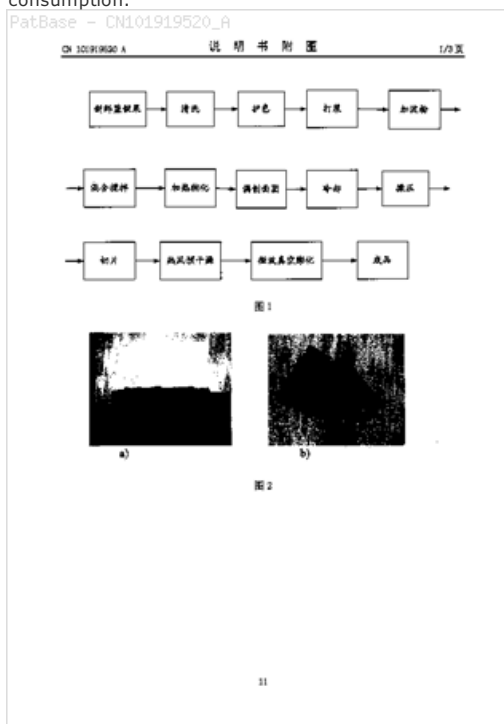
© PatBase

Title: TECHNOLOGY OF MICROWAVE VACUUM EXTRUSION OF LONICERA EDULIS CHIP

Abstract: The invention relates to a processing method of Lonicera edulis, in particular to a processing method which adopts microwave vacuum technology for the extrusion of Lonicera edulis chip, belonging to the field of food processing. The technical process is as follows: cleaning fresh Lonicera edulis, cleaning, protecting color, pulping, adding starch, mixing, stirring, heating, pasting, preparing dough, cooling, kneading, slicking, predrying by hot wind, vacuum pulping by microwave, and obtaining a finished product. The condition for vacuum pulping by microwave is as follows: after predrying, initial moisture content is 25-45 percent, vacuum degree is 70-90 kPa, unit mass microwave power is 10-30 W/g, and microwave output power is 2-5 kW. The Lonicera edulis which is puffed by microwave in vacuum has high comprehensive quality, is favourable for storing nutrition constituents and greatly saves energy consumption.

Classifications:

International (IPC 8-9): A23L1/025 A23L1/212 A23P1/14
A23P30/32 (Advanced/Invention)

**Family:**

Publication number	Publication date	Application number	Application date
CN101919520 A	20101222	CN200910203695	20090617

Priority:

CN200910203695 20090617

Probable Assignee: UNIV NORTHEAST AGRICULTURAL

Assignee(s): (std): NORTHEAST AGRICULTURAL UNIV ; UNIV NORTHEAST AGRICULTURAL
Assignee(s): NORTHEAST AGRICULTURAL UNIVERSITY
Inventor(s): (std): CHENGHAI LIU ; SHUHUA JIA ; XIANZHE ZHENG ; ZHIYING CHEN
Inventor(s): CHEN ZHIYING ; ZHENG XIANZHE ; JIA SHUHUA ; LIU CHENGHAI

6) Family number: 55629465 (US2015166624A)

© PatBase

Title: COMPOSITIONS CONTAINING HC-HA/PTX3 COMPLEXES AND METHODS OF USE THEREOF

Abstract: Provided herein are methods for the production of native and reconstituted hyaluronan (HA) complexes containing pentraxin-3 (PTX3) and heavy chain 1 (HC1) of inter alpha inhibitor (IaI). Compositions containing the complexes and therapeutic methods using the complexes are provided. Combinations and kits for use in practicing the methods also are provided.

Classifications:

International (IPC 8-9): A61K A61K31/727 A61K31/728 A61K31/737 A61K35/15 A61K35/51 A61K35/545 A61K38/17 A61K38/19 A61K38/57 A61K39/395 A61K45/00 A61K47/48 A61K9/06 A61K9/08 A61K9/10 A61K9/12 A61K9/127 A61K9/14 A61K9/20 A61K9/48 A61L27/00 A61L27/34 A61L27/54 A61L29/00 A61L29/08 A61L29/16 A61L31/00 A61L31/08 A61L31/10 A61L31/16 A61P A61P1/02 A61P11/00 A61P17/02 A61P19/00 A61P19/02 A61P19/10 A61P27/02 A61P29/00 A61P3/10 A61P31/04 A61P35/00 A61P37/02 A61P37/06 A61P37/08 A61P43/00 A61P9/00 A61P9/10 C07K C07K1/36 C07K14/47 C07K14/525 C07K14/81 C07K17/00 C07K17/02 C07K19/00 (Advanced/Invention); A61K38/00 C07K14/81 (Advanced/Non-invention); A61K A61P C07K (Subclass/Invention)

CPC: A61K38/17 A61K38/57 A61K38/191 A61L27/34 A61L27/54 A61L29/085 A61L29/16 A61L31/10 A61L31/16 A61L2300/236 A61L2300/252 A61L2300/41 A61L2300/412 A61L2300/426 C07K1/36 C07K19/00 C07K14/47 C07K14/525 A61K47/6957 A61K38/00 C07K14/81 A61K47/69 A61K47/55

US: 424/422 435/375 514/13.3 514/16.7 514/18.6 514/20.9 530/395

JP F-Term: 4C076 4C076/AA06 4C076/AA09 4C076/AA11

4C076/AA19 4C076/AA22 4C076/AA24 4C076/AA29 4C076/AA36

4C076/AA53 4C076/CC50 4C076/FF70 4C081 4C081/AB03

4C081/AB05 4C081/AB11 4C081/AB23 4C081/AC08 4C081/AC09

4C081/BA12 4C081/CD34 4C081/DC03 4C084 4C084/AA02

4C084/AA22 4C084/DC50 4C084/MA13 4C084/MA16 4C084/MA23

4C084/MA24 4C084/MA28 4C084/MA35 4C084/MA37 4C084/NA14

4C084/ZA33 4C084/ZA36 4C084/ZA67 4C084/ZA89 4C084/ZA96

4C084/ZA97 4C084/ZB08 4C084/ZB13 4C084/ZB15 4C084/ZB21

4C084/ZB26 4C084/ZB35 4C084/ZC35 4C084/ZC75 4C085

4C085/AA13 4C085/AA14 4C085/EE01 4C085/EE03 4C086

4C086/AA01 4C086/AA02 4C086/EA25 4C086/EA26 4C086/EA27

4C086/MA01 4C086/MA02 4C086/MA03 4C086/MA04 4C086/MA13

4C086/MA17 4C086/MA23 4C086/MA24 4C086/MA28 4C086/MA35

4C086/MA37 4C086/MA43 4C086/NA14 4C086/ZA33 4C086/ZA36

4C086/ZA67 4C086/ZA96 4C086/ZA97 4C086/ZB07 4C086/ZB08 4C086/ZB11 4C086/ZB13 4C086/ZB15 4C086/ZB21

4C086/ZB26 4C086/ZB35 4C086/ZC35 4C086/ZC75 4C087 4C087/AA01 4C087/AA02 4C087/AA03 4C087/BB59

4C087/BB63 4C087/BB65 4C087/CA17 4C087/CA50 4C087/MA02 4C087/MA13 4C087/MA17 4C087/MA23 4C087/MA24

4C087/MA35 4C087/MA37 4C087/MA43 4C087/NA14 4C087/ZA33 4C087/ZA36 4C087/ZA67 4C087/ZA89 4C087/ZA96

4C087/ZA97 4C087/ZB07 4C087/ZB08 4C087/ZB11 4C087/ZB13 4C087/ZB15 4C087/ZB21 4C087/ZB26 4C087/ZB35

4C087/ZC35 4C087/ZC55 4C087/ZC75 4C201 4H045 4H045/AA10 4H045/AA20 4H045/AA30 4H045/BA10 4H045/BA41

4H045/CA40 4H045/CA46 4H045/EA20 4H045/FA15 4H045/GA10 4H045/GA15 4H045/GA21 4H045/GA26 4H045/BA40

4H045/BA56 4H045/BA60 4H045/FA72 4H045/FA81 4H045/GA01

JP F-Index: A61K31/727 A61K31/728 A61K31/737 A61K35/15 A61K35/51 A61K35/545 A61K37/12 A61K38/17 A61K38/39 A61K39/395/D A61K39/395/N A61K45/00 A61K9/06 A61K9/08 A61K9/10 A61K9/12 A61K9/127 A61K9/14 A61K9/20 A61K9/48 A61L27/00/D A61L27/00/F A61L27/00/U A61L27/34 A61L27/36/300 A61L27/36/310 A61L27/36/311 A61L27/36/320 A61L29/00/Z A61L29/08/100 A61L31/00/Z A61L31/10 A61P1/02 A61P11/00 A61P17/02 A61P19/02 A61P19/10 A61P27/02 A61P29/00 A61P3/10 A61P31/04 A61P35/00 A61P37/02 A61P37/06 A61P37/08 A61P43/00/105 A61P43/00/121 A61P9/00 A61P9/10 C07K19/00/ZNA C07K17/02

Family:

Publication number	Publication date	Application number	Application date
CA2878163 AA	20141230	CA20132878163	20130710
CN104619352 A	20150513	CN201380047367	20130710
EP2872181 A1	20150520	EP20130745221	20130710
HK1210425 A1	20160422	HK20150111254	20151113
IN00869DN2015 A	20160415	IN2015DN00869	20150203
JP2015528001 T2	20150924	JP20150521783T	20130710
JP2017014234 A2	20170119	JP20160147710	20160727
JP6472142 B2	20190220	JP20160147710	20160727
KR20150053753 A	20150518	KR20157003180	20130710
US2015166624 AA	20150618	US20130414047	20130710
US2016376305 AA	20161229	US20160214706	20160720
US10040821 BB	20180807	US20130414047	20130710
WO14011813 A1	20140116	WO2013US49983	20130710

Priority:

US20120670571P 20120711 JP20150521783T 20130710 US20130414047 20130710
WO2013US49983 20130710 US20150414047 20150109 US20160214706 20160720
JP20160147710 20160727

Probable Assignee: TISSUETECH INC

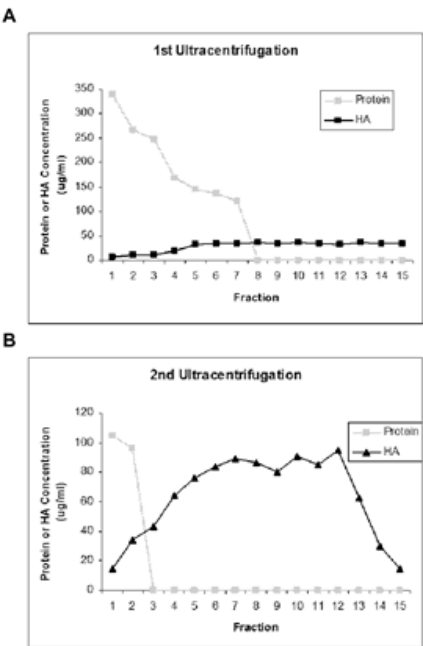
Assignee(s): (std): TISSUETECH INC

Assignee(s): ZHANG SUZHEN ; TSENG SCHEFFER ; ZHU YING TIENG ; HE HUA ; TIGHE SEAN

Inventor(s): (std): HE HUA ; TIGHE SEAN ; TSENG SCHEFFER ; ZHU YING TIENG ; ZHANG SUZHEN

Agent(s): GOWLING LAFLEUR HENDERSON LLP; WILLIAMS RICHARD ANDREW NORMAN; IT AND T INTELLECTUAL

PatBase - US2015166624_A1 FIG. 1



4C086/ZB26 4C086/ZB35 4C086/ZC35 4C086/ZC75 4C087 4C087/AA01 4C087/AA02 4C087/AA03 4C087/BB59 4C087/BB63 4C087/BB65 4C087/CA17 4C087/CA50 4C087/MA02 4C087/MA13 4C087/MA17 4C087/MA23 4C087/MA24 4C087/MA35 4C087/MA37 4C087/MA43 4C087/NA14 4C087/ZA33 4C087/ZA36 4C087/ZA67 4C087/ZA89 4C087/ZA96 4C087/ZA97 4C087/ZB07 4C087/ZB08 4C087/ZB11 4C087/ZB13 4C087/ZB15 4C087/ZB21 4C087/ZB26 4C087/ZB35 4C087/ZC35 4C087/ZC55 4C087/ZC75 4C201 4H045 4H045/AA10 4H045/AA20 4H045/AA30 4H045/BA10 4H045/BA41 4H045/CA40 4H045/CA46 4H045/EA20 4H045/FA15 4H045/GA10 4H045/GA15 4H045/GA21 4H045/GA26 4H045/BA40 4H045/BA56 4H045/BA60 4H045/FA72 4H045/FA81 4H045/GA01

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

7) Family number: 62059502 (US2018160708A)

© PatBase

Title: DRIED PRODUCTS MADE FROM FRUIT AND/OR VEGETABLES AND PRODUCTION METHODS

Abstract: The dried products of the present invention provide snacks (so-called crispy smoothies) having a particularly high proportion of fruit, which, owing to their production at low temperatures with extensive exclusion of oxygen, are distinguished by a high level of preservation of oxidation- and temperature-sensitive, but valuable, fruit constituents and which have an intense flavor and also a homogeneous appearance which is attractive in terms of color.

Classifications:

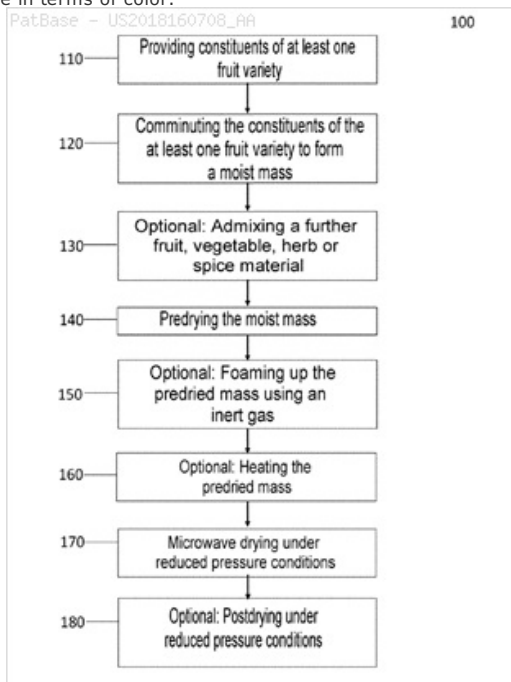
International (IPC 8-9): A23B A23B7/01 A23B7/02 A23B7/024 A23B9/08 A23L11/00 A23L19/00 A23L25/00 A23L27/14 A23L3/44 A23L3/54 A23L33/17 A23L33/21 A23P10/28 A23P30/30 (Advanced/Invention);

A23B (Subclass/Invention)

CPC: A23L33/17 A23V2300/00 A23V2300/41 A23L19/01 A23L3/44 A23L3/54 A23B7/024 A23L19/09 A23B7/01 A23B7/02 A23L11/05 A23L33/21 A23V2002/00 A23V2300/10 A23V2300/31

JP F-Term: 4B016 4B016/LC02 4B016/LE01 4B016/LE03 4B016/LG01 4B016/LG02 4B016/LG05 4B016/LG06 4B016/LG08 4B016/LG09 4B016/LG10 4B016/LG11 4B016/LG14 4B016/LG16 4B016/LK13 4B016/LP01 4B016/LP08 4B016/LP13 4B169 4B169/BA02 4B169/BA04 4B169/BA05 4B169/HA01 4B169/HA02 4B169/HA04 4B169/HA06 4B169/HA07 4B169/HA08 4B169/HA09 4B169/HA11 4B169/HA13 4B169/HA14 4B169/HA17 4B169/HA18 4B169/HA19 4B016/LP03 4B169/BA06 4B169/BA08

JP F-Index: A23B7/01 A23B7/015 A23B7/02 A23L19/00/A



Family:

Publication number	Publication date	Application number	Application date
AU2016278808 AA	20180104	AU20160278808	20160615
AU2016278808 AB	20180104	AU20160278808	20160615
BR112017026504 A2	20180814	BR20171126504	20160615
CA2988666 AA	20171207	CA20162988666	20160615
CL2017003217 A1	20180413	CL20170003217	20171214
CN107920568 A	20180417	CN201680047569	20160615
CO20170013401 A2	20180521	CO20170013401	20171226
DE102015210890 A1	20160407	DE201510210890	20150615
EP3307088 A1	20180418	EP20160729560	20160615
ID201806729 A	20180713	ID2017P0009409	20160615
IL256269 A0	20180228	IL20160256269	20160615
IN201847001211 A	20180126	IN201847001211	20180111
JP2018517422 T2	20180705	JP20170565316T	20160615
JP2019010116 A2	20190124	JP20180174360	20180919
JP6408175 B2	20181017	JP20170565316T	20160615
KR20180018678 A	20180221	KR20187000788	20160615
MX2017016523 A1	20180816	MX20170016523	20160615
US2018160708 AA	20180614	US20160580251	20160615
WO16202830 A1	20161222	WO2016EP63699	20160615

Priority:

DE201410014723 20141002 DE201510210890 20150615 WO2016EP63699 20160615
JP20170565316T 20160615

Probable Assignee: FRAUNHOFER GES

Assignee(s): (std): EISNER PETER ; FISCHL REGINA ; FRAUNHOFER GES FORSCHUNG ; FRAUNHOFER GES ZUR FOERDERUNG DER ANGEWANDTEN FORSCHUNG E V ; FRAUNHOFER GES ZUR FORDERUNG DER ANGEWANDTEN FORSCHUNG E V ; WIMMER DOMINIC ; ZACHERL CHRISTIAN

Assignee(s): FRAUNHOFER GES ZUR FORDERUNG DER ANGEWANDTEN FORSCHUNG EV ; FRAUNHOFER GES ZUR FORDERUNG DER ANGEWANDTEN FORSCHUNGEV ; FRAUNHOFER GES ZUR FORDERUNG DER ANGEWANDTEN FORSCHUNG E V ; FRAUNHOFER GES ZUR FOERDERUNG DER ANGEWANDTEN FORSCHUNG EV ; FRAUNHOFER GES

Inventor(s): (std): CHRISTIAN ZACHERL ; DOMINIC WIMMER ; EISNER PETER ; FISCHL REGINA ; PETER EISNER ; REGINA FISCHL ; WIMMER DOMINIC ; ZACHERL CHRISTIAN ; LIGHTNER REGINA

Agent(s): PIZZEYS PATENT AND TRADE MARK ATTORNEYS PTY LTD; BERESKIN AND PARR LLP SENCRL SRL; ESTUDIO CLARKE MODET AND CO CHILE LIMITADA; ALICIA LLOREDA RICAURTE; CONROY JOHN; ACHMAD FATCHY SH; ABE MASAHIRO; CONROY JOHN F

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

8) Family number: 65463668 (WO18134574A1)

© PatBase

Title: BAKED FOOD PRODUCT WITH ALGAL FLOUR

Abstract: In one aspect, baked food products are provided. The baked food products include from 10 to 50 percent by dry ingredient weight algae flour, from 50 to 90 percent by dry ingredient weight fruit and/or vegetables, wherein the fruit and/or vegetables include seeds in an amount of from 0 to 30 percent by dry weight of the fruit and/or vegetables, and less than 10 percent by dry ingredient weight other food ingredients, The baked food products have a water activity of less than 0.8.

Classifications:

International (IPC 8-9): A21D13/04 A21D13/064 A21D2/26 A21D2/36 A23L17/60 A23L19/00 A23L33/185

A23L33/195 (Advanced/Invention)

CPC: A23L19/09 A21D13/04 A23V2250/202 A23V2300/10 A23L19/00 A23L33/185 A21D13/064 A23L17/60 A21D2/267 A21D2/36 A23L33/195

Family:

Publication number	Publication date	Application number	Application date
GB201700823 A0	20170301	GB20170000823	20170117
GB201711911 A0	20170906	GB20170011911	20170724
GB201711912 A0	20170906	GB20170011912	20170724
GB2558673 A1	20180718	GB20170000823	20170117
GB2558695 A1	20180718	GB20170011911	20170724
GB2558696 A1	20180718	GB20170011912	20170724
WO18134574 A1	20180726	WO2018GB50113	20180116
WO18134575 A1	20180726	WO2018GB50114	20180116

Priority:

GB20170000823 20170117 GB20170011911 20170724 GB20170011912 20170724

Probable Assignee: NUBER FOOD LTD

Assignee(s): (std): NUBER FOOD LTD ; NUBER FOOD LTD

Inventor(s): (std): BAINS GURPAREET SINGH ; GILES RICHARD WHITMAN ; GURPAREET SINGH BAINS ; WHITMAN GILES RICHARD

Agent(s): EIP

Designated states: AE AG AL AM AO AT AU AZ BA BB BE BF BG BH BJ BN BR BW BY BZ CA CF CG CH CI CL CM CN CO CR CU CY CZ DE DJ DK DM DO DZ EC EE EG ES FI FR GA GB GD GE GH GM GN GQ GR GT GW HN HR HU ID IE IL IN IR IS IT JO JP KE KG KH KM KN KP KR KW KZ LA LC 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

9) Family number: 50643910 (CN102342318A)

© PatBase

Title: Vacuum freeze drying process for fruits and vegetables

Abstract: The invention discloses a vacuum freeze drying process for fruits and vegetables. The process comprises the following steps of: selecting high-quality fruits and vegetables and cleaning; soaking in saline water and rinsing with clear water; putting the fruits and vegetables into boiling water or normal-pressure steam for blanching; quickly putting into low-temperature water for cooling, and taking out for draining; feeding pretreated and tray-filled fruits and vegetables into a cooling device for freezing and storing for later use to complete pre-freezing of fruits and vegetables; feeding the frozen fruits and vegetables into a drying cabin, heating in vacuum, and performing a sublimation drying process and a desorption drying process to complete freezing of the fruits and vegetables; and packaging. By adopting the vacuum freeze drying process for fruits and vegetables provided by the invention, the energy consumption of equipment can be lowered, and high-quality frozen products can be produced.

Classifications:

International (IPC 8-9): A23B7/024 (Advanced/Invention)

Family:

Publication number	Publication date	Application number	Application date
CN102342318 A	20120208	CN201110262414	20110907

Priority:

CN201110262414 20110907

Probable Assignee: DALIAN MINGDE ECO AGRICULTURAL PROFESSIONAL COOPERATIVES

Assignee(s): (std): DALIAN MINGDE ECO AGRICULTURAL PROFESSIONAL COOPERATIVES

Inventor(s): (std): LIYU CHE

Inventor(s): CHE LIYU

10) Family number: 47082937 (CN101849573A)

© PatBase

Title: MICROWAVE FREEZE-DRYING AND DEHYDRATING METHOD OF FRUITS AND VEGETABLES

Abstract: The invention relates to a microwave freeze-drying and dehydrating method of fruits and vegetables, belonging to the field of a fruit and vegetable food treatment technology. The method comprises the following steps of: cleaning, blanching, pre-drying, freezing, microwave freeze-drying and taking out. The method is suitable for various forms of freeze-drying products, integrates blanching and cooling working procedures into a whole, does not need the cooling working

procedure after blanching, not only is thorough to blanch and cool, but also has high speed, especially removes partial internal water at the same time of removing water on the surface of materials, and avoids forming crystals on the surface of the materials in the freezing process, thereby being beneficial to increasing the microwave freeze-drying speed and effectively restraining the microwave low-pressure discharge problem in the early freeze-drying process.

Classifications:

International (IPC 8-9): A23B7/00 A23B7/024 (Advanced/Invention)

PatBase - CN101849573_A



Family:

Publication number	Publication date	Application number	Application date
CN101849573 A	20101006	CN201010184053	20100527
CN101849573 B	20121017	CN201010184053	20100527

Priority:

CN201010184053 20100527

Probable Assignee: NANJING RES INST AGRI MECHANIZ

Assignee(s): (std): NANJING RES INST AGRI MECHANIZ ; NANJING RES INST OF AGRICULTURAL MECHANIZATION ; NANJING RESEARCH INST FOR AGRICULTURE MECHANIZATION MINISTRY OF AGRICULTURE

Assignee(s): NANJING RESEARCH INST OF AGRICULTURAL MECHANIZATION MINISTRY OF AGRICULTURE OF PEOPLE S REPUBLIC OF CHINA ; NANJING RESEARCH INSTITUTE OF AGRICULTURAL MECHANIZATION MINISTRY OF AGRICULTURE OF THE PEOPLE S REPUBLIC OF CHINA

Inventor(s): (std): BAOLIANG PENG ; FENG WU ; FENGWEI GU ; HAIYOU WANG ; JIANNAN WANG ; LIANGLONG HU ; SHIFENG CAO ; TING ZHONG ; YOUQING CHEN ; ZHICHAO HU

Inventor(s): ZHONG TING ; WANG HAIYOU ; WANG JIANNAN ; WU FENG ; PENG BAOLIANG ; HU LIANGLONG ; HU ZHICHAO ; GU FENGWEI ; CAO SHIFENG ; CHEN YOUQING

11) Family number: 40832971 (WO07132014A2)

© PatBase

Title: HIGH-FREQUENCY VACUUM DRYING

Abstract: The invention relates to a method for producing a food product that consists of individual bits of the product or whole fruit and that has a crispy or crunchy character. The invention also relates to a device for drying products, especially suitable for use in the method according to the invention, and to a device for injecting high-power high-frequency radiation, especially microwaves, from an injection waveguide via an electromagnetically transparent but pressure-proof injection window into a partially evacuated treatment chamber. The method according to the invention comprises the following steps: predrying the product or the product bits by means of a convection drier and puffing and drying the product or product bits in a vacuum by dielectric energy dissipation in the product or in the product bits caused by electromagnetic high-frequency radiation.

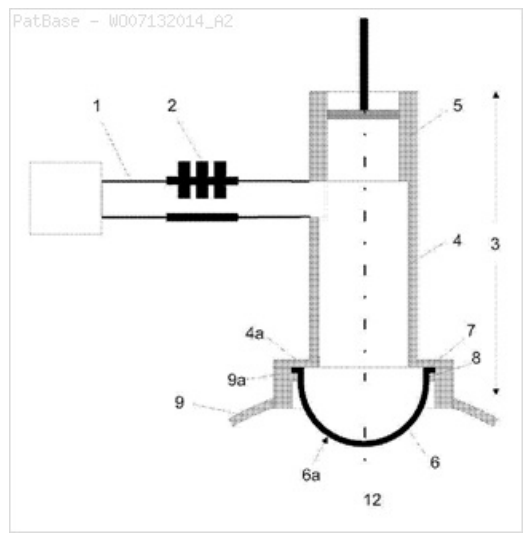
Classifications:

International (IPC 8-9): A23B7/02 A23L1/00 A23L1/025 A23L3/54 A23P1/14 F26B3/02 F26B3/347 H05B6/70 H05B6/72 (Advanced/Invention);

A23B7/02 A23L1/00 A23L1/025 A23L3/40 A23P1/14 F26B3/02 F26B3/32 H05B6/70 H05B6/72 (Core/Invention)

CPC: A23L5/30 A23L19/01 A23L19/03 A23P30/32 F26B5/048 H05B6/6432 H05B6/6473 H05B6/704 H05B6/705 H05B6/74 H05B6/782 H05B2206/046

European: A23L1/00P14B A23L1/025 A23L1/212B A23L1/212C A23P1/14B F26B5/04G H05B6/64J H05B6/64T1 H05B6/70P H05B6/70T H05B6/74 H05B6/78F T05B206/046



Family:

Publication number	Publication date	Application number	Application date
DE102006023198 A1	20071122	DE200610023198	20060517
WO07132014 A2	20071122	WO2007EP54757	20070516
WO07132014 A3	20080828	WO2007EP54757	20070516

Priority:

DE200610023198 20060517

Probable Assignee: BECKER TECHNOLOGIES GMBH

Assignee(s): (std): AHRENS GERD ; BECKER TECHNOLOGIES GMBH ; KRISZIO HORST ; KUEHNEL ANDREAS ; MAYER HORST MARTIN

Inventor(s): (std): AHRENS GERD ; KRISZIO HORST ; KUEHNEL ANDREAS ; MAYER HORST MARTIN

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