

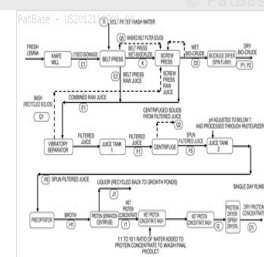
1) Family number: 49613208 (US2012110901A)

METHOD AND SYSTEM FOR PROCESSING OF AQUATIC SPECIES

Abstract: Source: US2012110901A Disclosed herein is a method and system of recovering multiple products from industrial-scale production of a biomass of an aquatic species.

Probable Assignee: PA LLC

Earliest Publication Date: 20110922



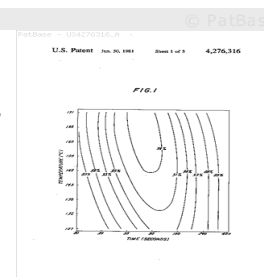
2) Family number: 1349923 (US4276316A)

PROCESS FOR TREATING NUTS

Abstract: Source: US4276316A A process including dry blanching of raw nuts is described. The nuts are heated with a gas at a temperature of 125 DEG to 175 DEG C. for 30 to 180 seconds and then immediately cooled to below 35 DEG C. within 5 minutes prior to blanching. This provides improved blanching, sorting and other steps in a process for producing products ranging from nuts per se to peanut butters or spreads.

Probable Assignee: CPC INT INC

Earliest Publication Date: 19790123



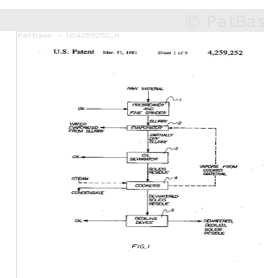
3) Family number: 1951057 (US4259252A)

RENDERING METHODS AND SYSTEMS

Abstract: Source: US4259252A An improved rendering process and system including the use of both a slurry evaporator and cooker. Renderable material is ground and mixed with oil to form a slurry which is then cooked under vacuum in an evaporator to remove some moisture. The resulting partially dewatered slurry is partially deoiled, and the solids residue resulting from deoiling is cooked in a cooker to remove additional moisture. The hot vapors generated by cooking the material in the cooker are used in the steam jacket of the evaporator. Preferably the dewatered solids residue from the cooker is further deoiled.

Probable Assignee: ANDERSON INT CORP

Earliest Publication Date: 19810331



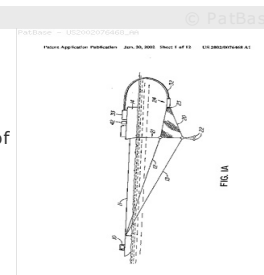
4) Family number: 28226758 (US2002076468A)

METHOD AND APPARATUS FOR HARVESTING, DIGESTION AND DEHYDRATING OF KRILL HYDROLYSATES AND CO-DRYING AND PROCESSING OF SUCH HYDROLYSATES

Abstract: Source: US2002076468A Method and apparatus used in producing a feed product or premix and the products made by the method. A predetermined quantity of krill hydrolysate is added to a predetermined quantity of dry carrier with or without a predetermined quantity of liquid marine protein. The mixture is subject to evaporation and drying steps in which relatively heavier particles are separated from relatively lighter particles. The mixture may be blended, ground and subject to chemical reaction in a balance tank prior to entering a dryer. The dryer utilizes a warm air source, a tower and a cyclone to dry the mixture following its entry into the dryer. Temperature sensitive enzymes or other bioactive products may be added to the product produced from the dryer. A method for obtaining enzymes from a fresh krill extract or an autolysed krill preparation and the product are also disclosed. A method for separating the bound protein and pigments from crustacean waste using krill enzymes and a product produced by the method are also described.

Probable Assignee: BIOZYME SYSTEMS INC

Earliest Publication Date: 19950831



5) Family number: 33753414 (KR20050059006A)

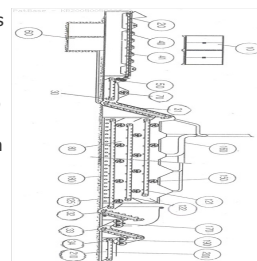
MICROWAVE HIGH-SPEED DRYING AND COMPLEX POWDER PACKING SYSTEM WITH RADIANT HEAT FROM INFRARED FILM PENETRATED INTO AND FERMENTATION- RIPENING, A MULTI-FUNCTIONAL DOOR

PatBase - US20050059006A

Abstract: Source: KR100587732B The purpose of this invention to various agricultural, and forest products, such as food and feed of the minutes containing all creatures to "inject" fermentation and aging, the infrared "won", and some dry moisture and take advantage of high-speed microwave heating method "genetic" dry powder materials and production of fodder needed for mechanical systems, food and feed ingredients, ferment and aging, or dry wash done only by powder-packed stage system. rethink 1 car washing, 2 car washing rinse your moderately dry to remove moisture, preheat the dryer to remove moisture in the style of the primary after drying, electromagnetic multilevel drying (120) commitment, step 4 belt conveyor transported to avoid commitment to building and won with infrared, fermented and matured as a dry product is the microwave waveguide (110) 5 this device only a belt conveyor (125), and the dry high speed drying on the finished product by cutting the cooling granules or powder materials production, vacuum packing is a system that takes place in succession to. steam and odors are caused by the dry air ducts in the auto-lifter (160) is made to purify the emissions absorbed, "microwave heating for high-speed and dry at the same time as" genetic sterilization and disinfection, storing relevant, "won in the infrared" minerals and nutritional ingredients in food, as long as the ship Castle has won a synthetic taste and flavor, and the preservation of quality health food powder materials and manufacture of animal feed, "the emergency food reserve development, production and utilization of food" and various foods, and a waste of time and moderation system, power development, rural incomes and the difference between the live industry employee hire date to expand-Friendster generation develops featuring Keywords multi-purpose food ingredients and feed the fermentation/ripening, won in the infrared and microwave, fast-drying powder materials and animal feed production

Probable Assignee: JO JUN HO

Earliest Publication Date: 20050617



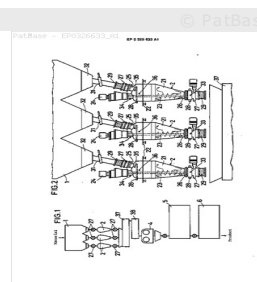
6) Family number: 10195713 (EP0326633A1)

METHOD AND APPARATUS FOR PROCESSING GRAIN.

Abstract: Source: EP0326633A1 An apparatus for processing a grain material has a plurality of digesters. The material to be processed is fed in batches into one digester after another and discharged from one digester after another in succession after being digested. Thus the material digested can be sent to the subsequent steps at a uniform rate. Since with this arrangement it is possible to use lock valves instead of rotary valves at the inlet and discharge ports of the digesters, pressurized steam introduced into the tanks for digestion is less liable to leak out. The material digested is then flaked, dried and cooled to a normal temperature for use as feed for domestic animals.

Probable Assignee: AMUSETSU KU KK

Earliest Publication Date: 19880225



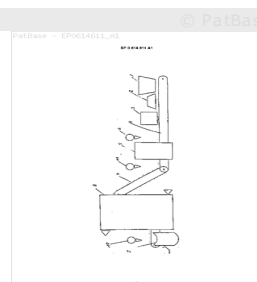
7) Family number: 10615556 (EP0614611A1)

TREATMENT AND PRESERVATION PROCESS FOR FEED AND/OR MOIST CROPS, APPARATUS FOR THIS PURPOSE.

Abstract: The invention consists in a process and an apparatus for treating and preserving feed and/or harvested crops by means of a combination of microwave and air drying and comprises a) subjecting the material to be treated, if appropriate after determining its initial moisture content (6), to a microwave pretreatment (5) at an energy level which results in a disrupted cell surface structure and in which the cell fluid is essentially retained; b) subsequently subjecting the pretreated material to a low-temperature air-drying step (8) in a temperature range from 70 to 110°C, depending on the intermediate moisture content (11), most of the moisture being removed from the material, and c) a predetermined residual moisture of the dried material being set and d) the waste heat being recovered from the apparatuses for carrying out the process and, if appropriate, from further apparatuses for operating or preheating the air-drying apparatus.

Probable Assignee: WOERLE STEFAN

Earliest Publication Date: 19930527



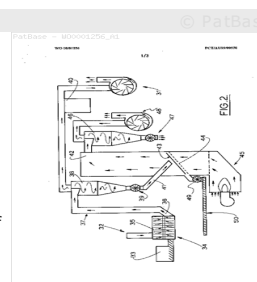
8) Family number: 11187147 (WO0001256A1)

LOW TEMPERATURE FLOW DRYER AND PROCESS

Abstract: Referring to the figure there is illustrated a low temperature dryer (10) where the central element of the dryer is a cold aerosolizer (11) having an infeed auger (12) from an infeed bin (13) and an air inlet (14) and a product, aerosol and air outlet duct (15). The core aerosolizer comprises a central shaft (16) and a plurality of blades (17). The outlet duct then carries the partially dried material, the aerosol and the air into a cyclone (18) where the plant material is extracted while the air and the aerosols flow to a condenser (19) where the liquids are removed. The dry air is discharged at an outlet (20) of the system. The expression "low temperature" referred to herein means a temperature, normally ambient, but can be above ambient, such as to minimise heat degradation of nutritional factors in the product or products being processed.

Probable Assignee: AKT CONSULTANTS

Earliest Publication Date: 20000113

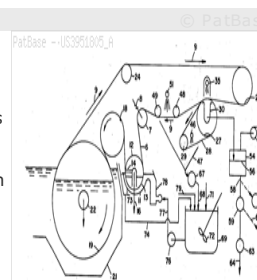


9) Family number: 1183942 (US3951805A)

ALGAE HARVESTER

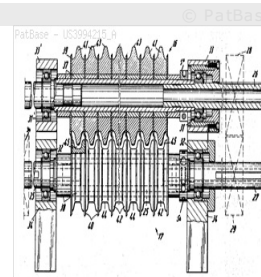
Abstract: Source: US3951805A From a water medium, a harvester recovers algae useful as animal feed. The harvester has a preferably endless, movable belt screen. A coating device puts a first coating of long fibers (such as glass fiber or asbestos mixed with paper fiber) onto one side of the belt screen. A container of algae in water discharges onto the first coating permitting much of the water to pass through it and the belt screen but holding back the algae largely as a second coating on the fibers. A second screen having finer openings than the first screen is disposed against the second coating. This second screen has openings large enough to pass the algae but small enough to hold back the fibers. A suction is applied to the second screen causing the algae and entrained water to move therethrough. Concurrently, a washer directs a stream through the first screen and through the first coating and so washes off the second coating of algae, the fine screen holding the fibers behind. A conduit carries the washed off algae from the second coating with some residual water into a centrifuge or other dryer for removing as much water as desired and leaving substantially pure algae for animal feed. Another washer removes the fibers from the screen. A second conduit carries the removed fibers back to the belt screen for reuse. The process of using the harvester is also disclosed.

Probable Assignee: DODD J C

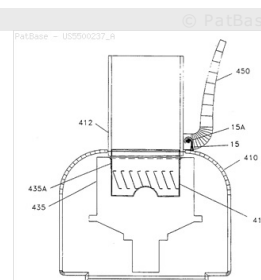


10) Family number: 1188242 (US3994215A)**METHOD AND APPARATUS FOR THE MANUFACTURE OF CHIPS OR FLAKES FROM FOOD SUBSTANCES**

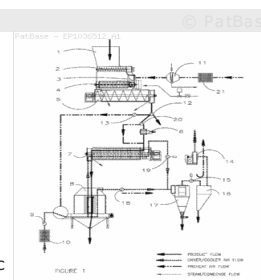
Abstract: Source: US3994215A Method and apparatus for the manufacture of chips or flakes from food, stimulant, or feed materials such as fruits, vegetables, potatoes or the like in which a moist mass of material is deposited on a rotating cylinder. The film is formed on the drum and then removed therefrom, cut into strips and formed into typical chip-like shape, and then removed. A plurality of rotating knives is provided downstream of the cylinder to cut the film into strips and preferably to shape the chips as they are being cut.

Probable Assignee: HANSHERMANN RABELER TE WOLFRATSHAUSEN BONDSREPUBLIC DUTSLAND**Earliest Publication Date:** 19750716**11) Family number: 12437478** (US5500237A)**REMOVABLE COFFEE ROASTER OVEN CHAMBER**

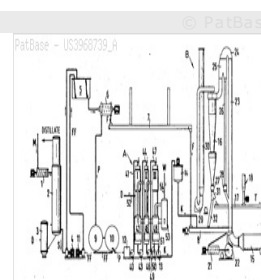
Abstract: Source: US5500237A A coffee roaster which roasts coffee beans in a removable oven chamber employing both radiant and convection heating techniques while the beans are continually intermixed in a fluidized bed rotating in the horizontal plane. Roaster control means are provided to terminate the roasting process by quenching the beans and oven chamber with relative cool air while maintaining the beans in a fluidized bed to avoid scorching or further roasting by the residual heat of the coffee bean mass. The oven chamber is provided with an insulated handle to facilitate its removal from the heating chamber for dispensing roasted coffee beans. It includes an upper transparent section through which the roasted charge of beans may be viewed to thereby facilitate poring beans from the removed chamber.

Probable Assignee: HUGO GEPO CO INC**Earliest Publication Date:** 19960319**12) Family number: 12990795** (EP1036512A1)**ELIMINATING SALMONELLA IN FEED MILLING INDUSTRY**

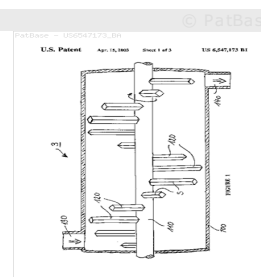
Abstract: Source: EP1036512A1 The invention describes a means of eliminating potential dangerous bacteria such as Salmonella out of a mash product such as compound feed as applied in the feed milling industries by heat treatment. The invention makes use of the known characteristics of various bacteria to be sensitive for exposure to heat over a certain time. The invention covers the combination, use, and control of known machinery in the feed milling industries but also a new application for a screw conveyor as heat reactor barrel and barrel mixer as drying and cooling apparatus for the heat treated mash product such as compound feed. The invention provides means to have absolute control over the applied product temperature, time of exposure to subject temperature and moisture content in the product after the cooling means, relative to the moisture in the product at the beginning of the process. The invention makes it possible to conduct a heat treatment of animal feed in such way that a true hygienic feed production can be realised, close to food grade standards.

Probable Assignee: CPM EUROP B V**Earliest Publication Date:** 20000920**13) Family number: 1302671** (US3968739A)**APPARATUS FOR THE PROCESSING OF VINASSE**

Abstract: Source: US3968739A An apparatus is provided for processing and drying vinasse, produced from fermented mash. The mash is crushed, distilled and the resulting vinasse is fractionated in a decanter where the clear liquid is then passed into a three-phase downdraft vaporizer to thicken the liquid. The resulting liquid is then recombined with the solids in a cross-winged mixer where it is then dried.

Probable Assignee: KARTOFFELVERWERTUNGS GMBH**Earliest Publication Date:** 19741015**14) Family number: 13166245** (US6547173B)**METHOD AND APPARATUS FOR REMOVING THE HUSKS OF OIL-BEARING SEEDS**

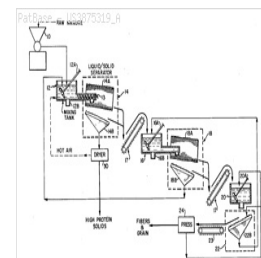
Abstract: Source: US6547173B A method and apparatus for removing the hulls of oil-bearing seeds, in particular sunflower seeds, in which a quantity of oil-bearing seeds are filled in a container (3). The seeds are agitated under pressure build-up within the container (3) by means of an agitating means (110, 120) and are pressed and rubbed against each other and against fragments of the hulls.

Probable Assignee: T AND T OLEOCHEMIE GMBH**Earliest Publication Date:** 20010228**15) Family number: 1318165** (US3875319A)**PROCESS AND APPARATUS FOR RECOVERING FEED PRODUCTS FROM ANIMAL MANURE**

Abstract: Source: US3875319A A process and apparatus for recovering valuable feed products from animal manure by adding water to the manure to form a slurry from which mineral matter, grain and fiber particles, proteinaceous material and water are recovered by successive slurry-forming and liquid/solid separation stages. The recovered water is reused in the forming of the initial manure slurry and in subsequent steps of the process. The recovered grain and fiber particles and proteinaceous material are useful as feed products which can be fed to the animals from which the manure is collected or, of course, other animals.

Probable Assignee: CERES ECOLOGY CORP

Earliest Publication Date: 19740405



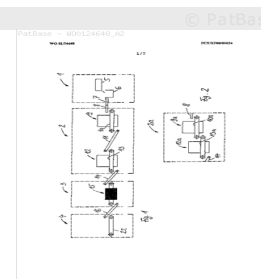
16) Family number: 15226818 (WO0124648A2)

METHOD FOR DRYING FRUITS AND VEGETABLES, CORRESPONDING FACILITY AND BELT DRYER

Abstract: The invention relates to a method for drying fruits and vegetables, to a facility for implementing said method and to an air conveyor dryer for said facility. A facility for drying fruits and vegetables having a pre-drying station, a microwave processing station and a post-processing station is already known. According to the invention, the fruits are distributed in a preferably continuous, evenly high, non-compact layer on the perforated belt of the air conveyor dryer and exposed to a tempered air flow from the bottom in one or several possible drying steps in such a way that the fruits are evenly kept in a suspended or semi-suspended state and predried to a residual moisture appropriate for puffing in a microwave chamber. The invention can be used in the production of instant fruit products, especially berry products.

Probable Assignee: SANTRADE LTD

Earliest Publication Date: 20010412



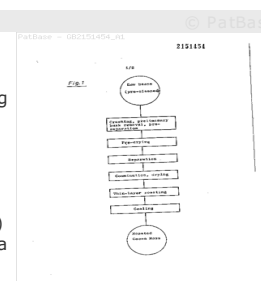
17) Family number: 1888681 (GB2151454A)

MANUFACTURE OF ROASTED COCOA AND A ROASTER THEREFOR

Abstract: Source: GB2151454A Roasted cocoa is produced by (a) crushing raw cocoa beans and partially removing the husks, (b) drying the beans to a moisture content of 3-4 percent, (c) separating the husks from the kernels, (d) comminuting and drying kernels to 2-3 percent moisture content under vacuum. (e) roasting the kernels in a thin moving layer and (f) cooling the roasted kernels. This produces an evenly roasted cocoa with good aroma. The roasting step may be performed in a cylinder (1) surrounded by a heating jacket (2) divided into three zones. Cocoa is supplied via aperture (6) and is picked up by wiper blades (12) rotating on shaft (11) and the cocoa is distributed as a thin layer on the wall and roasted. The temperature inside the cylinder is measured by sensors (13) and results transmitted to (14) and control (15) which can alter supply of heat to the three zones. The roasted cocoa is discharged at outlet (16) and hot and/or dry air may be supplied via aperture (7) and discharged via outlet (9) with any entrained cocoa being stopped by baffle (17).

Probable Assignee: NAGEMA VEB K

Earliest Publication Date: 19850502



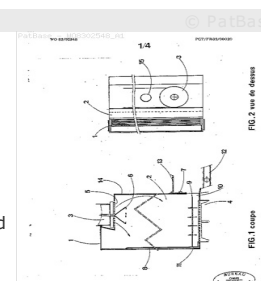
18) Family number: 2023032 (WO8302548A1)

VEGETABLE AND ANIMAL CONCENTRATED CREAMS

Abstract: Method for preservation by partial dehydration, fine chopping, mixing with vegetable oil in a percentage varying according to the desired density, simultaneously with indirect sterilization by a double sealed wall. All these operations are carried out in an air vacuum for the protection and collection of essences and gas aromas, all these operations being interconnected by a sealed canal. Said succession of stages starts with an active soaking, low collection wringing, constant temperature drying, collection of essences by a condensor to a battery of vacuum pumps. A canal (13) connected to a secondary pump discharges air to the outside, protects the transport and chopping of the material up to the tank of the mixer (24), above which oil is preheated, penetrates through (21) and is mixed at (24) to the raw material. The cooking flavourings are collected through a condensor at (22), the temperature is maintained by (18), the canal (32) avoids the thermal shock during the conditioning (31).

Probable Assignee: ROUAS C

Earliest Publication Date: 19830804



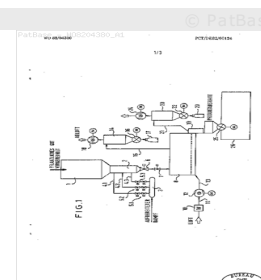
19) Family number: 2147178 (WO8204380A1)

METHOD FOR REMOVING THE SEED COATS AND INSTALLATION FOR IMPLEMENTING SUCH METHOD

Abstract: The method for removing the coat of seeds consists in impregnating with vapor the outer portion of seeds and causing the detachment of the coat by quick drying, the final removal of the coat being carried out simultaneously or during a subsequent stage. The method allows to separate completely the coat without damaging the seeds.

Probable Assignee: GIMBORN PROBAT WERKE

Earliest Publication Date: 19821215



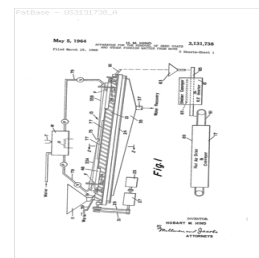
20) Family number: 22504711 (US3131738A)

APPARATUS FOR THE REMOVAL OF SEED COATS AND OTHER FOREIGN MATTER FROM NUTS

Abstract: Source: US3131738A (Claim 1) 1. Apparatus for removing seed coats and foreign matter from shelled nuts comprising an elongated rotatable screw conveyor, a rotatable abrasive member coextensive therewith, the depth of the thread in said conveyor and the distance between the surfaces of said conveyor and said abrasive member being so related to the diameter of the nuts as to prevent them from falling between the conveyor and the member as they are conveyed while said abrasive member acts on the seed coats and means to spray hot fluid on the nuts anywhere along the length of said conveyor and means to maintain the fluid at a temperature sufficient to soften the plant wax cut below that which will denature the surface protein.

Probable Assignee: MARS INC

Earliest Publication Date: 19640505



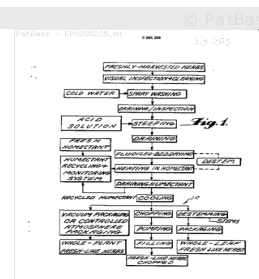
21) Family number: 2786758 (EP0285235A1)

METHOD AND APPARATUS FOR TREATING FRESH VEGETABLE PRODUCTS.

Abstract: Source: EP0285235A1 A method and apparatus for treating fresh harvested vegetable products such as herbs and spices includes a conveyor system for moving the product from a supply to a chilled water washing station which includes a drain portion; at a second station the product is steeped in a solution of citric and ascorbic or erythorbic acid and then drained; the product is then dried quickly at a third station in a fluidized bed dryer and then passed to heated huxectant bath at a fifth station and then drained again; at a sixth station, the product is rapidly cooled in a cooling chamber; at a seventh station the product may be destemmed and then chopped and packaged.

Probable Assignee: MCCORMICK AND CO INC

Earliest Publication Date: 19880811



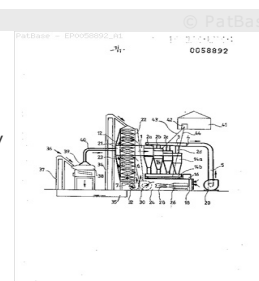
22) Family number: 2860086 (EP0058892A1)

PROCESS AND APPARATUS FOR DRYING OF CEREALS WITH HOT AIR.

Abstract: 1. A process for drying cereals in hot air wherein the hot air generated by an oil burner (26) is adjusted to a predetermined drying temperature sensed by thermostats (23) controlling the oil burner (26) located in a drying column (22) through which the cereals are blown through, characterised in that, depending on the technology applied, at least a portion of the dust arising in drying is separated out, dispensed into the oil burner (26) and combusted in the latter, the dispensing of the technological dust into the oil burner (26) and/or the oil supply for the oil burner (26) is regulated in dependence on the drying temperature actually required.

Probable Assignee: MALOM ES SUETOIPARI KUTATOIN

Earliest Publication Date: 19820901



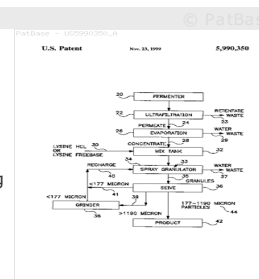
23) Family number: 29385021 (US5990350A)

PROCESS FOR MAKING GRANULAR L-LYSINE

Abstract: Source: US5990350A Process for the efficient production of a substantially dust-free, free flowing granular L-Lysine in which the L-Lysine content is adjustable. Cells are removed from a fermentation broth containing L-Lysine to make a substantially cell free L-Lysine broth. Water is removed from the L-Lysine broth to form a concentrated L-Lysine broth. The L-Lysine content of the concentrated L-Lysine broth may be adjusted to be between about 35 percent and 76 percent, measured as a percent of freebase per kg, by adding material containing L-Lysine to provide an enriched L-Lysine broth. The enriched L-Lysine broth is agglomerated by means of an atomized spray of the enriched L-Lysine broth directed onto a fluidized bed of percolating L-Lysine particles. The L-Lysine particulates act as seeds for the agglomeration process wherein the L-Lysine particulates grow in size to provide a substantially dust-free, free flowing granular L-Lysine. Granules in the size range between about 177 micron and 1190 micron, and preferably between about 177 micron and 420 micron, are selected by means of a sieving process and bagged. Granules which are larger than about 1190 micron are ground down and combined with particles which are less than about 177 micron and recycled back to the fluidized bed to act as seeds in order to sustain the agglomeration process.

Probable Assignee: ARCHER DANIELS MIDLAND CO

Earliest Publication Date: 19990616



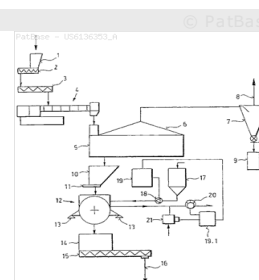
24) Family number: 29552894 (US6136353A)

METHOD OF INCORPORATING FATTY MATTER INTO GRANULATED PRODUCTS

Abstract: Source: US6136353A PCT No. PCT/CH96/00265 Sec. 371 Date Dec. 16, 1998 Sec. 102(e) Date Dec. 16, 1998 PCT Filed Jul. 22, 1996 PCT Pub. No. WO98/03080 PCT Pub. Date Jan. 29, 1998A method and apparatus for incorporating fatty matter into granulated feed products such as extrudates, pellets and expander pellets with a fat-supplying liquid. Pellets produced in the extruder or expander of press (4) are dried in a dryer (5) and pass through an intermediate container (10) into a mixer (12). Using a metering pump (18) a predetermined amount of fat-supplying liquid is added to the mixer (12) and spread on the surface of product pieces through the mixing process. After a predetermined period of time a vacuum pump (20) generates a negative pressure in the mixer so as to evacuate the air from capillaries or pores of the product pieces. The negative pressure in the mixer is then relieve through an expansion valve (21) so that the air entering into the mixer and into the pores or capillaries of the product pieces transports the fat-supplying liquid on the surface of the product pieces as well as additional fat-supplying liquid into the pores and capillaries, thereby filling them to the extend that a high proportion of approximately 30 percent fat-supplying liquid is incorporated in the pores of capillaries of the product pieces.

Probable Assignee: BUHLER AG

Earliest Publication Date: 19980129



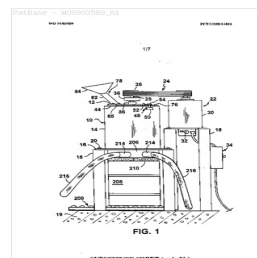
25) Family number: 30067232 (US2002095965A)

POLYACRYLAMIDE SUSPENSIONS FOR SOIL CONDITIONING

Abstract: Source: US2002095965A A stable aqueous suspension of water-soluble polyacrylamide particles is in a saturated solution of an ammonium salt. The polyacrylamide particles are characterized by a particle size of about -150 mesh, and preferably -270 mesh, with -400 mesh most preferred. The suspension is at least about 2.5 percent by weight polyacrylamide. When the ammonium salt is ammonium sulfate, PAM concentrations as high as about 15 percent by weight can be achieved while still being easily flowable. The suspension is made by stirring the small particle PAM into the saturated ammonium salt solution. The PAM can be quickly dissolved to form a less concentrated PAM solution by adding the suspension to water or to a dilute solution, which can include calcium salts or other soil enhancers.

Probable Assignee: PULSEWAVE LLC

Earliest Publication Date: 19990128



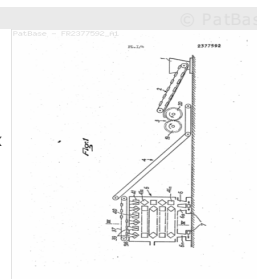
26) Family number: 31049880 (FR2377592A)

PROCEDE ET DISPOSITIF DESSICATEUR POUR LE SECHAGE DE PRODUITS VEGETAUX HOT AIR DRYER FOR FODDER AND VEGETABLE CROPS - PASSES CRUSHED MATERIAL THROUGH SUCCESSIVE DRYING CHAMBERS INSIDE COMMON SHELL

Abstract: Source: FR2377592A Machinisme agricole. La machine comporte une tremie 1 pour les produits vegetaux qui sont amenes par un transporteur 2 a un broyeur 3, puis par un transporteur 4 a une chambre de sechage 5 comprenant des chambres de dessiccation successives 41, 41a-41n menant a un organe de pressage. Fabrication de pastilles de ouillage sec, sechage de produits vegetaux divers. Process for drying vegetable material handled in bulk in small pieces, is claimed, e.g. for chopped cereals. The material is conveyed through a number of drying chambers in succession. Pre-chopped vegetable material is pref. crushed to expel sap, then passed through successive chambers of a drier and finally compression-moulded into blocks. A pref. drier comprises a set of horizontal drying chambers, arranged one above another for gravity transfer of material, and enclosed in a common outer shell. Each drying chamber comprises a horizontal tubular, passage rotating about a coaxial supporting pipe which extends end-to-end of the chamber. Rotation of the passage drives material axially through the chamber, pref. by means of inclined annular blades, fixed coaxially to be inside of the passage. A drying fluid, pref. hot air, is blown into each drying chamber, pref. via a common manifold and the supporting pipes which have outlet holes. Each drying chamber shell pref. contains several vertical sets of horizontal drying chambers, the top chamber of each set being fed by a single supply conveyor. Esp. used for drying chopped vegetable crops for the prodn. of fodder. Also drying for preservation such prods. as cereals, fruit and vegetables. High quality prod. may be obtd. from a simple process employing an inexpensive plant installation.

Probable Assignee: THIERION GABRIEL

Earliest Publication Date: 19780811



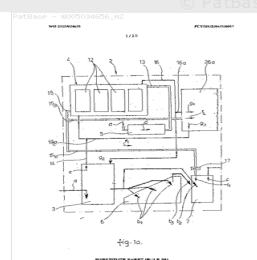
27) Family number: 31829905 (WO05034656A2)

PROCEDURE AND FACILITY FOR PROCESSING AGRICULTURAL PRODUCE, ESPECIALLY FRUITS, AND SOLAR COLLECTOR, PRE-DRIER, GRINDING PLANT, SECONDARY DRIER AND AIR-CONDITIONING PLANT ESPECIALLY FOR THE FACILITY

Abstract: In the course of the procedure the agricultural produce - after it is prepared for drying, especially after it is sorted and/or washed and/or chopped in a given case - is dried, and powdered final product is made from the dried produce. The procedure is based on that the produce is predried using heat gained from solar collector(s) (12), and then it is powdered by air-jet grinding; and the powdered product is submitted to secondary drying. The facility has drying and grinding units, and it is based on that - it has one or more decentralised processing units (2), which contain a fix indoor drying equipment (7) and - in a given case - outdoor mobile drying equipment, and - it has a centralised processing unit (11) provided with an air-jet grinding plant and secondary dryer (19) and with a compressor connected to this equipment. Also the facility has solar collectors (12) belonging to the processing units (2; 11), for the purpose of producing hot air that can be used for the drying operations, for making hot water for use and/or for heating the building.

Probable Assignee: KOEFALUSI GYOERGY

Earliest Publication Date: 20050421



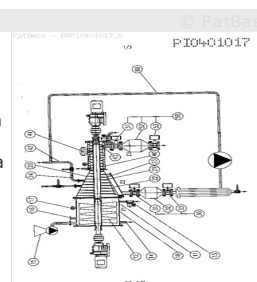
28) Family number: 32473797 (BRPI0401017A)

PROCESSADOR DE MATERIAIS VEGETAIS PROCESSOR PLANT MATERIALS (MACHINE TRANSLATION)

Abstract: Source: BRPI0401017A ss in Resumo "PROCESSADOR DE MATERIAIS VEGETAIS", compreendido por um reator/homogeneizador (10) com uma primeira zona de processamento (Z1), a qual esta em comunicacao fluida em um ambiente a 5 vacuo com um separador (20), provido de extratores de liquidos (30), configurando uma segunda zona de processamento (Z2); estando o separador (20) interligado em serie com um secador (40), que por sua vez tambem e provido de extratores (50) porem de solidos, configurando uma terceira zona de processamento (Z3); todas as zonas de processamento (Z1, Z2, Z3) dispostas io ou submetidas a um ambiente a vacuo, configurando em todo conjunto interligado um processo continuo e a vacuo. ss In summary "PLANT MATERIALS PROCESSOR", comprised of a reactor / homogenizer (10) composing a first processing zone (Z1) which is in fluid communication with an environment 5 vacuum with a separator (20), equipped with extractor liquid (30), setting a second processing zone (Z2); being the separator (20) connected in series with a dryer (40), which in turn also provided and extractors (50) of solids however, setting up a third processing zone (Z3); all the processing zones (Z1, Z2, Z3) arranged io or subjected to a vacuum environment by setting all together in a continuous and interconnected vacuo process.

Probable Assignee: ALBRECHT EQUIP IND LTDA

Earliest Publication Date: 20051116



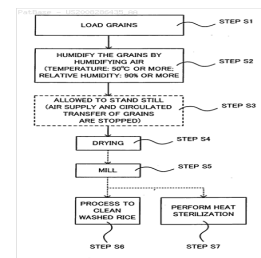
29) Family number: 42522670 (US2008286435A)

GRAIN OR LEGUME HAVING INCREASED CONTENT OF FUNCTIONAL COMPONENT AND A MANUFACTURING METHOD THEREOF

Abstract: Source: US2008286435A Grain or legume having an increased content of a functional component (gamma-aminobutyric acid) is obtained by humidifying grain (such as rice, wheat or corn) or legume (such as soybean and adzuki bean) by forcing the grain into an air having a temperature of 50 degrees centigrade or more and a relative humidity of 90 percent or more such that a moisture content thereof rises within the range of 16.0 percent to 18.5 percent, and thereafter, drying the grain or legume.

Probable Assignee: SATAKE CORP

Earliest Publication Date: 20081119



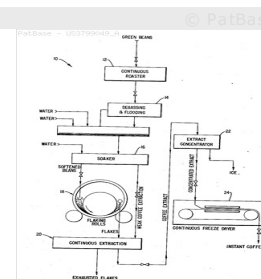
30) Family number: 539896 (US3799049A)

APPARATUS FOR PRODUCING SOLUBLE COFFEE CONCENTRATES

Abstract: Source: US3799049A The production of a soluble coffee concentrate by roasting green beans, softening and flaking the roasted beans and thereafter extracting the coffee solubles from them, concentrating the extract, and freeze drying the extracted solubles in the concentrate.

Probable Assignee: SMITHERM INDUSTRIES

Earliest Publication Date: 19720627



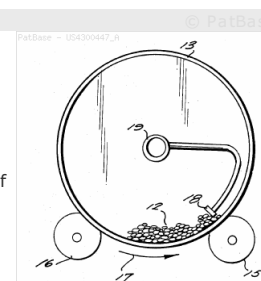
31) Family number: 8421377 (US4300447A)

NUT BLANCHER

Abstract: Source: US4300447A A device and a method for either the continuous or the batchwise removal (blanching) of skins from peanuts and other nut products are provided. The nut blanching device includes a rotatable cylinder containing a structure for introducing at least one jet of air along the inside of the cylinder. By placing nuts in this cylinder, nuts are carried along by the rotation of the cylinder into a head-on collision with air from the air jet. The nuts are thus, blanched within the cylinder by a combination of abrasive forces and the force of air.

Probable Assignee: UNIV NORTH CAROLINA STATE

Earliest Publication Date: 19811117



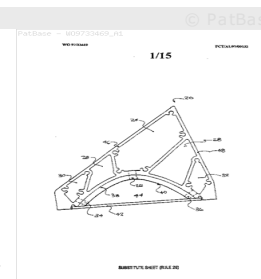
32) Family number: 8636617 (WO9733469A1)

ROTARY AND TUNNEL-TYPE KILNS WITH MULTI-DUCTED RADIANT HEATING

Abstract: The use of infrared and gas burner radiant emitters in tunnel-type, rotary and inclined kilns, together with supporting jackets is well established. There is a need, however, for more comprehensive geometry in this apparatus in order to provide in the one jacket (20), duct spaces (24, 28, 30, 32) for electric leads and/or gas supply, oxygen/air for the gas supply, coolant(s), additive(s), withdrawal of by-product(s) including fumes and wiring for monitoring and process control. The emitters (44) are formed by longitudinal extrusion and the ducts therein are formed in the same way and extend fully therethrough. A generally concave, preferably parabolic, recess (38) is provided along the length of the emitter to house the radiation source, with a reflecting surface (40) to direct the heat energy away from the jacket. A cover (42) made of quartz glass is mounted over the recess (38) to define an enclosed chamber. The integrated apparatus is used to treat nuts, peas and beans, such as soya, faba, cocoa, coffee, fruit and vegetables, starches, grains and cereals by such processes as roasting, blanching, instantising (pre-cooking), cooking, preservation, gelatinisation, sterilisation, drying, disinfestation, devitalisation and expansion.

Probable Assignee: ROASTING TECHNOLOGIES PTY LTD

Earliest Publication Date: 19970918



33) Family number: 1242440 (US3940505A)

PROCESS FOR DRYING FOODSTUFFS

Abstract: Source: US3940505A This invention relates to a rapid method for drying foodstuffs and the foods dried thereby. In particular, the method disclosed involves comminuting the foodstuff, blending therewith starch in an amount of 20 to 96 percent by anhydrous weight of the total mixture and drum drying to a desired moisture level. The resulting dried and extended foodstuff is superior to conventionally dried foodstuffs in color, fragrance, flavor retention and storage stability.

Probable Assignee: NAT STARCH CHEM CORP

Earliest Publication Date: 19760224

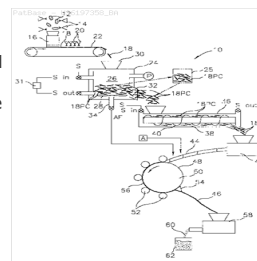
34) Family number: 14978516 (US6197358B)

WATERLESS PROCESS AND SYSTEM FOR MAKING DEHYDRATED POTATO PRODUCTS

Abstract: Source: US6197358B A process and system for making dehydrated potato products with reduced water usage, and reduced waste water production, are provided. In a first process embodiment potato flakes are fabricated by washing, peeling and slicing raw potatoes to form potato pieces. The potato pieces are then precooked using steam or microwave energy, and vacuum cooled in a process chamber. The vacuum cooled potato pieces are then cooked using steam or microwave energy, and riced to form a potato mash. Following ricing, effluents from the precooking step can be added back to the mash as a flavor enhancer. In addition, the potato mash is dried using a drying apparatus such as a drum drier, to form potato sheets. The potato sheets are then comminuted to form potato flakes having a moisture content of about 6 percent to 8 percent. In a second process embodiment potato granules are fabricated by precooking washed, peeled and sliced potato pieces using steam or microwave, cooling the precooked potato slices, and then cooking the cooled potato slices using steam or microwave energy. The cooked potato slices are then conditioned, screened, mixed, partially dried, and finish dried to a moisture content of about 6 percent to 8 percent.

Probable Assignee: MILES WILLARD TECHNOLOGIES LLP

Earliest Publication Date: 20001005



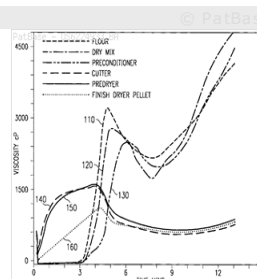
35) Family number: 20697439 (US6224933B)

PROCESS FOR EXPANDED PELLET PRODUCTION

Abstract: Source: US6224933B In the process of producing masa based expandable pellets, preconditioner steam and water addition, as well as extruder water and RPM, can be manipulated to precisely control the cook level, gelatinization, and moisture level of the meal during processing, and level of defects despite minor variation in the characteristics of the masa flour. Specifically, the preconditioner added steam-to-water ratio can be manipulated to effect cook, hydration, and partial gelatinization of the meal. In the extruder, lower extruder rotational speeds increase the residence time and increases cook. With the increase in residence time the volume of bed pack in the extruder increases. This can be reversed by adding water directly into the extruder, thereby decreasing the viscosity of the meal in the extruder. Product bulk density is changed by increasing and decreasing cook of the meal.

Probable Assignee: FRITO LAY NORTH AMERICA INC

Earliest Publication Date: 20010501



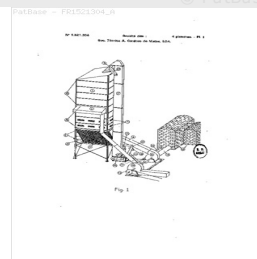
36) Family number: 21670604 (FR1521304A)

SECHOIR POUR CAFE EN CERISE, EN COCO OU EN GRAIN ET POUR AUTRES CEREALES DRYER FOR COFFEE CHERRY BY COCO OR GRAIN AND OTHER CEREALS (MACHINE TRANSLATION)

Abstract: Source: FR1521304A [Source: Claim 1] 1. Deux systemes de charge par tremie sur le transporteur et par entree de charge par l'elevateur; [Source: Claim 1] 1. Two systems by hopper load on the carrier and entry load by forklift;

Probable Assignee: TECNICA A CARDOSO DE MATOS SOC

Earliest Publication Date: 19680419



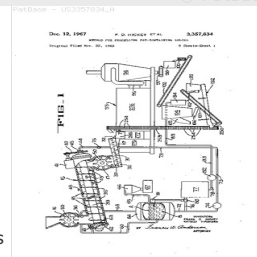
37) Family number: 23019644 (US3357834A)

METHOD FOR PROCESSING FATCONTAINING SOLIDS

Abstract: Source: GB1079423A Animal fat is processed to separate into meal, fat and stickwater and a portion of the stickwater and the meal are mixed to form pellets having a core of wet sticky meal and a cover of substantially dry meal, the pellets then being dried and granulated. The separation is effected in an inclined cooker from which the meal is fed to a rotary drum dryer from which substantially dry low protein meal is extracted and fed to a hopper. Some of the stickwater removed from the cooker is fed to a container attached to the meal containing hopper and is dropped on to meal being discharged from the hopper. The wet meal is fed to a shaker unit comprising a series of three inclined plates the second and third of which are screened and all of which support transverse baffles which are of varying heights and some of which are perforate. The mixture fed to the shaker unit works its way round the baffles and due to the continuous vibration they form wetted nuclei coated with dry particles which move through the perforations. The granules formed by this agglomerating process are fed back to the drier for further drying.

Probable Assignee: FMC CORP

Earliest Publication Date: 19650524



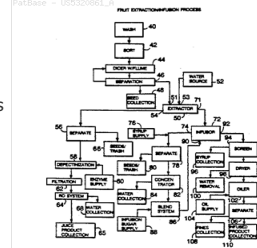
38) Family number: 29366701 (US5320861A)

FRUIT EXTRACTION AND INFUSION

Abstract: Source: US5320861A Extraction, especially of firm fruit such as cranberries, with improved yields of high quality, low tannin juices by using an improved countercurrent extractor employing longitudinal members positioned between adjacent flights and reinfusion of decharacterized, extracted fruit pieces with infusion syrups, such as juices from fruits other than that extracted, to produce a fruit food product of various flavors having a desired level of inherent soluble fruit component, without the need to bleed off spent syrup as a byproduct.

Probable Assignee: OCEAN SPRAY CRANBERRIES INC

Earliest Publication Date: 19930708



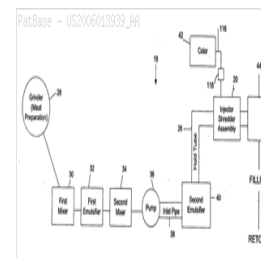
39) Family number: 30395992 (US2006013939A)

PET FOOD PRODUCT AND METHOD OF PRODUCING SAME

Abstract: Source: US2006013939A A pet food product is produced having a coloured exterior that simulates the appearance of real meat that has been a marinated or grilled appearance. The product may be manufactured using a vegetarian (meat free) formulation or a formulation combining meat with dry proteinaceous materials. The ingredients are processed to form an emulsion-like mixture, which is rapidly heated in a confined zone to allow the protein to coagulate. An injector/shredder assembly is positioned in the zone to disrupt and shred the coagulated product mass and inject a colourant. The colourant adheres to some of the exterior surfaces of the final product to create a simulated grilled or roasted appearance.

Probable Assignee: NESTEC SA

Earliest Publication Date: 20040325



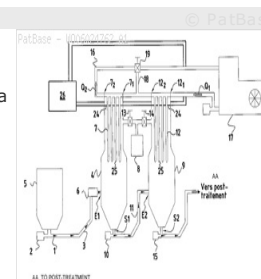
40) Family number: 32634454 (WO06024762A1)

REDUCED-PRESSURE COOLING METHOD AND INSTALLATION FOR IMPLEMENTING SAME

Abstract: The invention relates to a method and installation for the cooling of plants (1) from a temperature T1 to a lower temperature T3, in which the plants at temperature T1 are subjected to a reduced pressure in order to vaporise part of the water contained therein and to cool said plants to temperature T3. The invention is characterised in that the plants are subjected to fractional cooling comprising: a first step consisting in cooling said plants from temperature T1 to an intermediate temperature T2 by means of a first vaporisation process in a first cooling chamber (4) under a reduced absolute pressure P1; and a second step consisting in cooling same from temperature T2 to temperature T3 by means of a second vaporisation process in a second cooling chamber (9) under a reduced absolute pressure P2, said plants (1) being at a temperature T3 which is less than 30 degrees centigrade and, preferably, less than 28 degrees centigrade after the second cooling step.

Probable Assignee: IMECA SOC PAR ACTIONS SIMPLIFI

Earliest Publication Date: 20060210



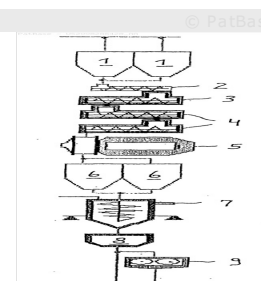
41) Family number: 33026010 (US2008286428A)

METHOD FOR MANUFACTURING FEEDSTUFF

Abstract: Source: US2008286428A A method for producing feedstuff, in particular pelletized feedstuff for chicken and pigs includes thermally holding pellets at a pellet press output and in post-conditioning said pellets in a rear container (6). Afterwards, the pellets come from the rear container (6) to a mixer (7), wherein liquids can be added without cooling. Drying and cooling are carried out afterwards, the pellets being transferred to a crumbler.

Probable Assignee: BUHLER AG

Earliest Publication Date: 20060524



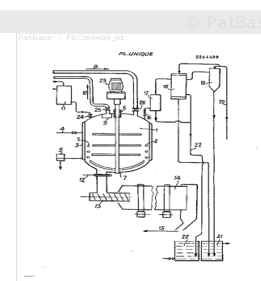
42) Family number: 3313075 (FR2264489A)

CATTLE FORAGE UPGRADING - BY CONVERSION OF CELLULOSE WITH PHOSPHORIC ACID

Abstract: Source: FR2264489A (Claim 1) R z V E N D I C A 2 I O 1i ss 1. Procède de transformation en sucres reducteurs de la cellulose contenue dans des matieres vegetales riches en cellulose comme la paille, caracterise en ce qu'on place ladite matiere dans une enceinte fermee et qu'on l'additionne d'environ 30 percent d'une solution aqueuse contenant de l'acide phosphorique et eventuellement de l'acide chlorhydrique ou de l'acide sulfurique, on malaxe la masse obtenue en chauffant a 1000C pendant au moins 1 heure, puis on fait monter rapidement la temperature de la masse a 120 - 1600C pendant 15 a 30 minutes, on refroidit ensuite rapidement et on seche le produit obtenu a une temperature ne depassant pas 1000C. Cellulose contg. forage, hay, straw, is upgraded in nutritional value by digestion with 30 percent aq. phosphoric acid, yielding novel prod. enriched in reducing sugars. Process is relatively simple, prods. can be used alone or in mixt. with other feeds. Phosphoric acid may contain HCl or H2SO4 and pref. contains 50 percent P2O5. Cellulose material is kneaded with acid for at least 1 hr. at 100 degrees C, temp. is raised to 120-160 degrees centigrade in 15-30 mins, rapidly cooled then dried at 100 degrees C.

Probable Assignee: THOMAS CHARLES

Earliest Publication Date: 19751017



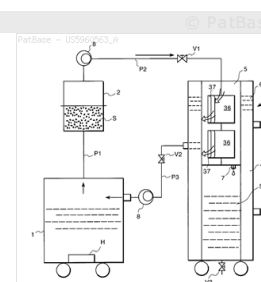
43) Family number: 33153748 (US5960563A)

EXTRACTION AND DRYING APPARATUS

Abstract: Source: US5960563A Apparatus and method for condensing moisture from an air stream. The condensing comprises an outer container, a middle container within the outer container, and an inner container within the middle container. The outer container contains a cooling material, such as water, and upon contact therewith, the air stream is cooled and moisture contained therein is condensed. The inner container also can contain a cooling material.

Probable Assignee: KAZUKO KUBOYAMA

Earliest Publication Date: 19990707



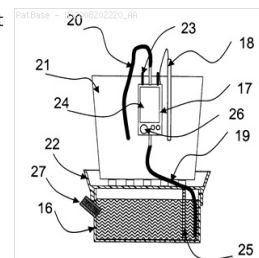
44) Family number: 33188859 (US2008202220A)

DEVICE FOR MEASURING THERMAL PROPERTIES IN A MEDIUM AND METHOD FOR DETERMINING THE MOISTURE CONTENT IN THE MEDIUM

Abstract: Source: US2008202220A The invention relates to a method and device for determining the water content of a medium, particularly of soils and the like, in which a probe or sensor (8) located in the medium is heated. A temporary change in temperature is effected by dissipating the thermal energy through the moisture in the area surrounding the probe, this change in temperature being used for determining the moisture content of the medium. An intermediate layer (13) is placed between the probe and the surrounding medium and is absorbent and mechanically deformable for mechanically coupling the probe to the surrounding medium and for decoupling the probe and the surrounding medium thereby enabling a precise measurement of moisture content to ensue while being subjected to the least possible thermal influence by the largely undetermined surrounding medium.

Probable Assignee: PLANTCARE AG

Earliest Publication Date: 20060810



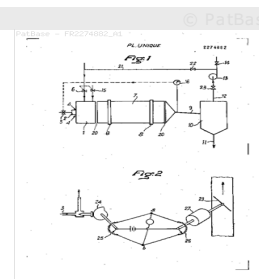
45) Family number: 3362496 (FR2274882A)

POLLUTION CONTROL SYSTEM FOR ROTARY DRUM DRYER - WHEATSTONE BRIDGE CONNECTED TO FUEL SUPPLY VALVE CONTROLS RECYCLED GAS

Abstract: Source: FR2274882A (Claim 1) 1.- Procédé de regulation de la teneur en eau des produits sortant dans un sechoir a tambour tournant caracterise en ce qu'on regle la duree de sejour dans le tambour qui est liee a cette teneur en fonction du debit en combustible. A rotary drum dryer for agricultural products, with fuel controlled by a valve (3) preceding the combustion chamber (1) and air (4) fed in at that point and further air supplied through control valves (15) above, and with a delivery pipe (9) feeding a cyclone (10) for discharge below, has a gas extraction fan (13) at the top of the cyclone, preceded by a damper (23) controlling a quantity of gas to be recycled through a line (21) and a valve (6) to the combustion chamber. The fuel supply valve (3) is controlled by a cam connected to a potentiometer forming a part of a Wheatstone bridge with another potentiometer connected to a motor controlling the position of the exhaust gas damper (23), the fuel supply being altered in proportion to the temperature and hence the humidity of the product measured by a device (16) connected to the discharge line (9).

Probable Assignee: JOUIN CLAUDE

Earliest Publication Date: 19760109



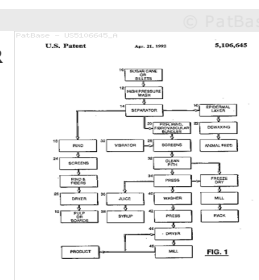
46) Family number: 3433946 (US5106645A)

PRODUCT AND PROCESS OF MAKING A HIGH FIBER FLOUR-TYPE PRODUCT DERIVED FROM SUGAR CANE

Abstract: Source: US5106645A Disclosed is a flour-type product derived from sugar cane which contains a high dietary fiber concentration. This product is made by separating the pith of the sugar cane from the rind and epidermal layer and then removing from the pith any rind residue from a first stage separation and long fibrovascular bundles embedded in the parenchyma cells of the pith. The clean pith is dried and milled to shred the walls of the parenchyma cells into fiber having a length not exceeding 300 microns.

Probable Assignee: ANDREWS KEVIN R

Earliest Publication Date: 19910822



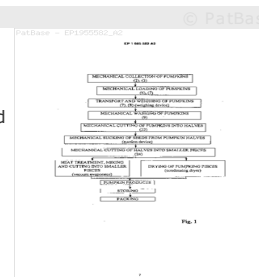
47) Family number: 36061380 (EP1955582A2)

DEVICE AND METHOD FOR PROCESSING CUCURBITA MOSCHATA AND FOOD PRODUCTS PRODUCED IN THIS WAY

Abstract: Source: EP1955582A2 The device and method for processing cucurbita moschata, and products produced in this way, solve the problem of simple and healthy production of products from cucurbita moschata (1), which primarily consist of collecting and loading by means of the harvesting device (3) and conveyor belt (6), of washing of cucurbita moschata (1) in the washing device (9), of cutting into halves in the cutting device (22), sucking of seeds, cutting of pumpkin halves into smaller pieces using the saw (24) and of heat treatment of pumpkin pulp in the vacuum evaporator or drying of pieces in the condensing dryer. The harvesting device (3) consists of the conveyor belt (4) and collecting area (5), which, together with the conveyor belt (6), enable mechanical collecting and loading of cucurbita moschata (1) without any internal or external damages. The same applies for washing of cucurbita moschata (1) in the washing device (9), which basically consists of the outer vessel (10) and the inner vessel (11), which are connected on a flow-through basis, the turbulence is caused by water and/or air, which is brought into the vessel (11) through the tubes (14).

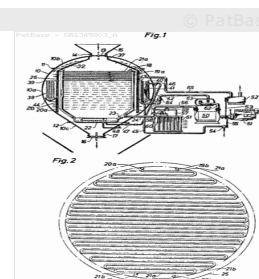
Probable Assignee: TIKEV D O O

Earliest Publication Date: 20070831



48) Family number: 3790604 (GB1345903A)

APPARATUS FOR DRYING MATERIALS



Abstract: Source: GB1345903A 1345903 Refrigerant fluid dryers; heat pumps KAMAS KVARNMASKINER AB 8 April 1971 9097/71 Headings F4G and F4H A dryer (for material such as vegetables, berries, seeds, corn or grain) comprises a sealed container 10 maintained under vacuum and containing a refrigerant condenser 18 (which supplies heat to the material contained in a casing 25 to boil off the moisture from the material) and a refrigerant evaporator 38 (which condenses the moisture boiled off from the material), the condenser 18 and evaporator 38 being separated by a gas permeable casing wall 28, 32 (comprising perforated metal sheet and filter cloth). The condenser 18 comprises two interleaved sets of pipes 21a (Fig. 2), each set being connected to a supply and a return pipe 19a, and 20a, 19b and 20b respectively. Gaseous refrigerant is supplied from a compressor 50 via pipes 56 and 24 to the supply pipes 19a, 19b, and partly-condensed refrigerant passes through the return pipes 20a, 20b to a reservoir 22. Condensed refrigerant is drawn from the reservoir 22 (by the compressor 50) through a pipe 42 and an adjustable expansion valve 46 to the evaporator 38 which comprises a distributor 41 supplying refrigerant via tubes 40 to coiled pipes 39. An annular trough 44 for condensed moisture is disposed below the pipes 39 and is drained by a pipe 45 connected to a water pump 54. The coiled pipes 39 are connected to a manifold 43 from which gaseous refrigerant is returned to the compressor 50 via a temperature sensor 64 controlling the expansion valve 46 and a liquid trap 63. A heat exchanger 61 is connected to the output pipe 56 of the compressor 50 by means of inlet pipes 57, 58 containing solenoid valves 59, 60, whereby the fraction of the refrigerant passing through the heat exchanger 61 to be cooled may be varied to adjust the heat supplied to the material to that which is necessary for evaporation of the moisture from the material without raising the temperature (68° F., 20° C.) of the material. The heat exchanger 61 comprises parallel flanged refrigerant pipes cooled by forced air. The compressor 50, the water pump 54 and the air extractor 52 are driven by a diesel engine 51 by means of V-belts 53 and 55.

Probable Assignee: KAMAS KVARNEMASKINER AG

Earliest Publication Date: 19740206

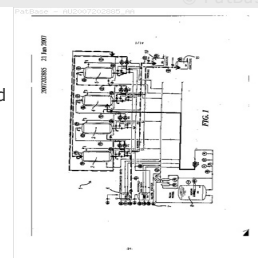
49) Family number: 42900744 (AU2007202885A)

PROCESS AND PLANT FOR PRODUCING SUGAR PRODUCTS FROM GRAPES

Abstract: Source: AU2007202885A -7 SPROCESS AND PLANT FOR PRODUCING SUGAR PRODUCTS FROM GRAPES ABSTRACT OO 5 The process for producing sugar products from grapes 00 CI consists of treating a solution of liquid rectified concentrated must by chromatography, to separate at least 0 one sugar contained in it. The plant for producing sugar products from grapes comprises a plurality of columns connected together in series, each column implementing in succession all the steps of the chromatographic process, but implementing steps of the process which are different from the other columns. A recirculation step is provided in passing from one step to the next. N:\Melbourne\Caeaa\Patent\72000-72999\P72322.AU\Speci8\P72322AI GH SPEC.doc: 21/06/07

Probable Assignee: CANTINE FORACI S R I

Earliest Publication Date: 20090115



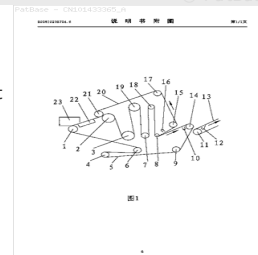
50) Family number: 43369017 (CN101433365A)

DISTRIBUTION METHOD OF NET BELT TYPE LAVER DRYER AND EQUIPMENT

Abstract: Source: CN101433365A The invention relates to a material distribution method for a net-belt laver dryer and a device thereof. The method comprises the following steps: after fresh laver is washed cleanly, the laver is cut into small sections not more than 12cm and mixed with water so as to form suspension; the suspension is sent into a stock discharge box through a pipe; the stock discharge box evenly spreads the suspension onto a formed net and water is filtered out; after the vacuum dehydrating is carried out by a suction chamber, the laver enters the cracks of a top net and the formed net; then after multi-level centrifugal dehydrating, the laver is stripped off the top net and the formed net successively by airflow and is thrown and piled on a dry net moving at a low speed; the piling thickness is not more than 100mm; and hot air which is blast upwardly from below the dry net is used to further dehydrate the laver and reduce the falling speed of the laver onto the dry net. The speed ratio of the forming net to the dry net is between 50 and 100. The laver is sent to a next drying procedure by the dry net.

Probable Assignee: UNIV SHAANXI SCIENCE AND TECH

Earliest Publication Date: 20090520



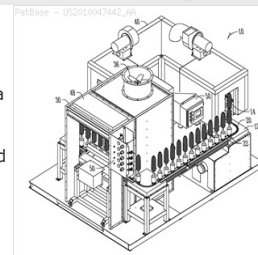
51) Family number: 44433656 (US2010047442A)

HIGH THROUGHPUT AUTOMATED APPARATUS, METHOD AND SYSTEM FOR COATING EARS OF CORN

Abstract: Source: US2010047442A Apparatuses, methods and systems for applying a coating to an ear of corn in a high throughput manner are disclosed. The system includes means for moving the ear of corn through the system and means for coating the ear of corn with a coating while passing through the system. The apparatus includes a carrying position for an ear of corn, an automated line having a plurality of the carrying positions, and an automated coating station adapted to apply a coating to the ear of corn on the automated line. The method includes staging a plurality of ears of corn on an automated line, passing the automated line through an ear coating process, and coating the plurality of ears of corn with a coating.

Probable Assignee: SHI R2 SOLUTIONS INC D B A DEIMCO FINISHING EQUIPMENT

Earliest Publication Date: 20100225

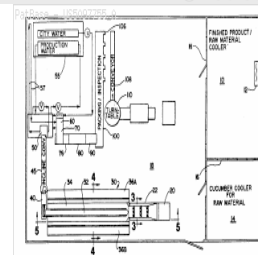


52) Family number: 4962333 (US5097755A)

METHOD AND APPARATUS FOR PROCESSING PRODUCE

Abstract: Source: US5097755A A method and apparatus are disclosed for processing produce and particularly fresh vegetables for salads. The vegetables are stored in an area near the beginning of the process line, and the storage area is partitioned by vinyl strips to create a temperature gradient for different vegetables. The vegetables are first cleaned on mesh conveyors under high pressure nozzles that spray chlorinated water at the desired storage temperature of the vegetables. A trimming table includes a lower conveyor for moving the vegetables for hand processing. An upper, cleated conveyor carries the vegetables to a slicer. Another cleated conveyor lifts the sliced vegetables vertically into a hopper where they are mixed with cooling water that then flows through a significant horizontal length of pipe. The vegetables move to shaker tables that provide the bulk of the dewatering and then vibrate the vegetables into a single layer for air drying. The air drying is provided by air knives and a vacuum that draws water through the cotton belt on which the vegetables travel. Additional drying is provided by a fluidizing bed with a perforated belt of different sized holes, and then the vegetables move to a vibratory table for packing.

Probable Assignee: REDI CUT FOODS INC



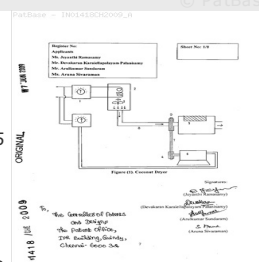
Earliest Publication Date: 19920324
53) Family number: 53197725 (IN01418CH2009A)

COCONUT DRYER

Abstract: Source: IN01418CH2009A Sun drying of agricultural products in the open air is the traditional method employed in most of the developing countries. A new system which concerns about the drying process of coconut is introduced. The dryer system consists of three parts, they are heating unit, air blower unit and coconut container. Heating unit is designed to accept electric input. The optimum temperature required for drying the coconut is 70C-75 degrees centigrade. The coconut dryer system consists of a container in which the coconuts are cut into two halves and it is kept inside. The hot air produced in the heating unit is sucked using air blower and it is passed for several hours into the container. Temperature is maintained at a constant level throughout the process. An AC motor is used to rotate the container in order to transform uniform spreading of heat. When the hot air is passed around the coconut the moisture content present in the coconut gets absorbed. The coconut pulp gets shrinked and it can be easily removed from the outer shell. After few hours of heating the pulp again continuously, the pulp is ready for the extraction of coconut oil. The hot air (exhaust) is passed out through the outlet. This dryer system is predestined for application on small farms in developing countries due to its low investment. This dryer, does not affect the productivity in rainy season, reduces time from weeks to several hours, needs only less work space, utilizes natural resources, cut the manpower requirement to a certain extent and pollution free solution to the oil mills and also it does not affect the quality and quantity of the oil.

Probable Assignee: MR DEVAKARAN KARAIELLAPALAYAM

Earliest Publication Date: 20130315



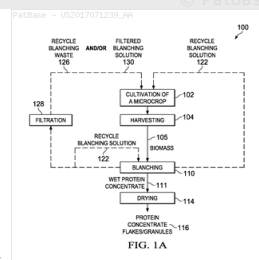
54) Family number: 65151861 (US2017071239A)

METHODS AND SYSTEMS FOR PROCESSING A HIGH-CONCENTRATION PROTEIN PRODUCT FROM A MICROCROP AND COMPOSITIONS THEREOF

Abstract: Source: US2017071239A The present disclosure relates, according to some embodiments, to methods and systems for processing a high-concentration protein product from a microcrop (e.g., aquatic species, Lemna) and compositions thereof. According to some embodiments, the present disclosure relates to a method of processing a biomass comprising a microcrop (e.g., Lemna), where the method may include: blanching a first portion of the biomass in a blanching solution to form a wet protein concentrate; separating the first wet protein concentrate from a separated solution (e.g., using a screw press, using a vibratory screen); and drying the first wet protein concentrate to form at least one of a first protein concentrate flake and a first protein concentrate granule. In some embodiments at least one of the first protein concentrate flake and the first protein concentrate granule may comprise at least 45 percent protein and a Protein Digestibility Corrected Amino Acid Score (PDCASS) value of at least 0.88. In some embodiments, the present disclosure relates to protein products and compositions derived from a microcrop (e.g., derived from Lemna).

Probable Assignee: PARABEL LTD

Earliest Publication Date: 20170316



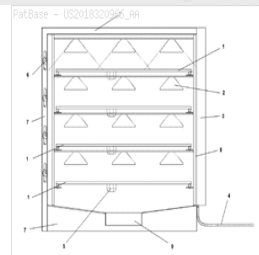
55) Family number: 65617346 (US2018320966A)

DRIER WITH SOLAR RADIATION SIMULATION

Abstract: Source: US2018320966A The present invention is a portable drier with solar simulator that can be used by small or medium scale farmers, which provides drying of the fruits and vegetables in general in the agriculture sector, in an organic manner through natural methods, which benefits from IR and UV rays during this process, and as a result, creates a difference in the extension of their shelf life, and which, in order to protect human health, minimizes the chemical remnants that cause diseases.

Probable Assignee: MURAT Tuerkyilmaz

Earliest Publication Date: 20170511



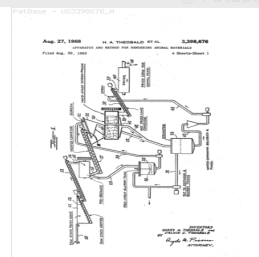
56) Family number: 834487 (US3398676A)

APPARATUS AND METHOD FOR RENDERING ANIMAL MATERIALS

Abstract: Source: US3398676A ABSTRACT OF THE DISCLOSURE The invention is directed to methods and apparatus for continuously rendering animal material comprising in a continuous operation reducing said material to such size that at least 90% by weight thereof is in pieces of about 2"-Vi", then heating said material to a temperature in the range of about 140 degrees -250 degrees F. without reducing the water content thereof by more than 40% by weight of that originally in said material and without reducing the fat content thereof by more than 65% by weight of that originally in said material and then while in said condition subjecting said material to increasing pressures to express molten fat and water therefrom and to provide a residue whose fat content is no greater than 20% by weight there- _ of on an anhydrous basis, recovering said expressed fat and also recovering said residue.

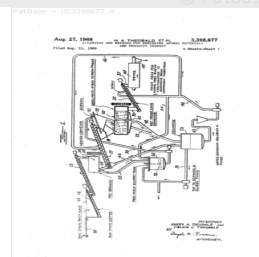
Probable Assignee: HARRY A THEOBALD

Earliest Publication Date: 19680827



57) Family number: 834488 (US3398677A)

APPARATUS AND METHODS FOR RENDERING ANIMAL MATERIALS AND PRODUCTS PRODUCED THEREBY



Abstract: Source: US3398677A ABSTRACT OF THE DISCLOSURE The invention is directed to apparatus and methods for rendering animal materials including bones as part thereof, in a continuous operation from a source of supply by continuously: (a) reducing said material to such size that at least 70% by weight thereof is passable through a Wz" mesh screen and retainable on a Va" mesh screen; then (b) heating said material in a range of about 140 degrees -215 degrees F. and maintaining the water content thereof at a level of at least 60% of that originally in said material and the fat content thereof at a level of at least 35% of that originally in said material; then (c) while in said temperature range and measuring at least 40% by weight of said material after said size reduction and containing fat measuring at least 35% of that originally in said material and water measuring at least 60% and no greater than about 100% of that originally in said material, subjecting said material to increasing pressures in a continuously operating screw press to separate fat and water therefrom until a residue is obtained whose fat content is no greater than about 20% by weight thereof on the dry basis, and separating said bones from the remainder of said residue. This application is a continuation-in-part of our copending application, Ser. No. 303,384, filed Aug. 20, 1963.

Probable Assignee: HARRY A THEOBALD

Earliest Publication Date: 19680827

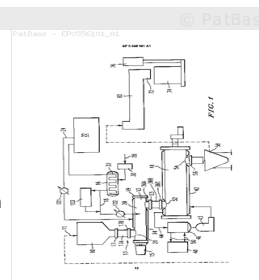
58) Family number: 8381506 (EP0556101A1)

METHOD AND APPARATUS FOR CONTINUOUS STERILIZATION AND DRYING OF SPICES AND LEAFY HERBS.

Abstract: Source: EP0556101A1 A selected type of superficially cleaned and dried vegetable product such as leafy herb is fed from a supply along a conventional conveyor 11 to a hopper 10 which has an outlet feed to an air lock which comprises a first valve 17, followed by a metering chamber 17A and a second valve 17B which may be an airlock such as a conventional rotary, multi-vane valve which discharges directly to the inlet 21 of a sterilizing vessel 12. The vessel 12 may be of commercial construction and will typically be of stainless steel in cylindrical form having a motor drive and gearing box 15 adjacent the inlet end thereof and a bearing mount and seal wall 19 at the opposite end thereof adjacent the discharge outlet 23. Preferably the vessel 12 is jacketed as indicated at 14 to facilitate close control of the temperature of the interior of the vessel.

Probable Assignee: MCCORMICK AND CO INC

Earliest Publication Date: 19930808



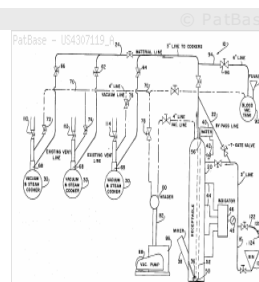
59) Family number: 8450366 (US4307119A)

PROCESS FOR MAKING A FEED PRODUCT

Abstract: Source: US4307119A Method for processing and manufacture of chicken feed in using hatchery waste products, egg shells, dead chickens and spoiled eggs, blood, offal, by-products of waste water treatment, and fat in which there is a tank to provide intake and mix the various ingredients of a chicken feed, feeding mixed ingredients to cooker or dryer tanks or ovens over a vacuum line, and providing for ancillary or auxiliary venting through a vacuum blood storage tank, and in which hatchery waste and other material can be conveniently inmixed into a receiver tank in mixing ingredients for cooking into a chicken or animal feed.

Probable Assignee: ROBINSON SR JIM D

Earliest Publication Date: 19811222



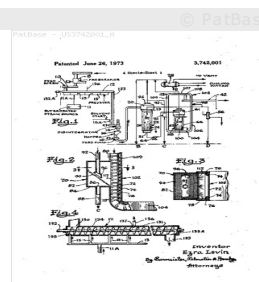
60) Family number: 983294 (US3742001A)

RENDERING PROCESS

Abstract: Source: US3742001A The process reduces the water content of a biological tissue, in particle form and retaining a fat content by coagulating the particles, and thereafter contacting the particles with a gas at an elevated temperature and having a water vapor pressure, at the temperature to which the gas raises the biological tissue, that is less than the vapor pressure of water contained in the tissue at that temperature. Subsequently, the at least partially dehydrated biological particles are extracted. In one embodiment of the invention the extraction is accomplished by warm polar type fat solvent, and in another embodiment of the invention partially dehydrated particles are introduced into a water-immiscible, fat, solvent, and by azeotropic distillation of water and solvent the water content is further reduced and by extraction the fat content is reduced. The process is preferably performed in a continuous manner by utilizing specific apparatus. The dehydrated, defatted product is treated for solvent removal.

Probable Assignee: VIO BIN CORP

Earliest Publication Date: 19660214



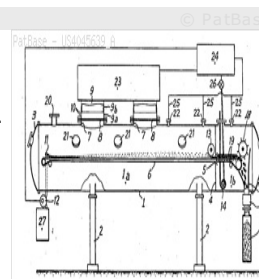
61) Family number: 1436487 (US4045639A)

CONTINUOUS MICROWAVE AND VACUUM DRYER

Abstract: Source: US4045639A This invention relates to an apparatus, namely a continuous microwave and vacuum dryer, useful for evaporating a liquid from a liquid containing material by means of microwave and vacuum. This apparatus, especially suitable for continuous dehydration of foodstuffs, comprises a housing forming a closed elongated space, means for evacuating said closed space, means for partitioning the closed space into two chambers which communicate through a slit provided in the partition, a conveyor belt disposed longitudinally in the two chambers, means for feeding on the conveyor belt a material to be evaporated, at least one source of microwave energy fed into the first one of the two chambers by at least one adjustable microwave cavity at atmospheric pressure through an air tight membrane provided on the first chamber.

Probable Assignee: FOOD PROCESSING SYSTEMS CORP

Earliest Publication Date: 19740502



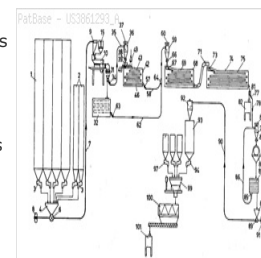
62) Family number: 19116692 (US3861293A)

APPARATUS FOR MAKING FOODS AND FEEDS

Abstract: Source: US3861293A Apparatus for making foods and animal feeds from starchy raw materials, such as flour, meal and grits of cereals, pulses, starch roots, tubers, oil seeds, cakes of oil seeds, milk products, or mixtures of these materials, which includes: mixing water and at least one high-temperature resistant enzyme with the raw materials to form an extrudable paste; effecting partial gelatinization and initiating fermentation by extruding the paste while heating the paste to a temperature of from 65 degrees centigrade (149 DEG F) to 115 degrees centigrade (239 DEG F); converting the starch into dextrins and sugars by treating the extruded product in a fermentation apparatus for 40 to 90 minutes at a temperature of 55 degrees centigrade (131 DEG F) to 90 degrees centigrade (194 DEG F) in a high humidity atmosphere, as near as possible to saturation; and drying the product after fermentation.

Probable Assignee: UNITED NATIONS CHILDRENS AND O F

Earliest Publication Date: 19711207



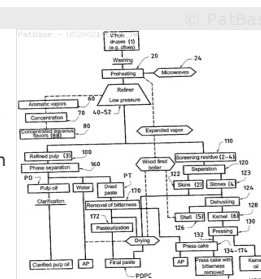
63) Family number: 28243687 (US2002106431A)

PROCESS AND APPARATUS FOR THE INTEGRAL UTILIZATION OF OIL-PRODUCING DRUPES, PARTICULARLY OLIVES, AND SPECIFIC PRODUCTS OBTAINED

Abstract: Source: US2002106431A A process and an apparatus for the processing of oil-producing drupes, notably olives, is described comprising at least one device (20, 24) for the processing of whole drupes which effects a physical destructuring with incipient detachment of the drupe pulp from the skins and stones, under conditions which substantially avoid the oxidation mainly of the pulp's natural antioxidants; at least one device (42, 52; 110; 120, 124, 130, 134, 160, 170) for the physical separation and recovery (at 100) of the pulp essentially devoid of stones and advantageously skins, and (at 92, 96, 110) of the stones essentially devoid of pulp, advantageously with the skins, ly under conditions which substantially avoid oxidation; and at least one device (160, 170, 172, 174) for the separation and recovery of the pulp oil essentially devoid of stone oil and containing the pulp's natural antioxidants, thereby improving the purity and oxidation resistance of the pulp oil.

Probable Assignee: JEAN PIERRE MARTEL

Earliest Publication Date: 20020605



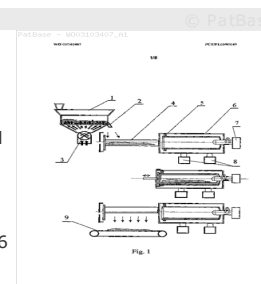
64) Family number: 30182300 (WO03103407A1)

METHOD TO DRY DIELECTRIC MATERIALS AND AN EQUIPMENT TO DRY DIELECTRIC MATERIALS

Abstract: The method of drying dielectric materials is based on at least 2 phases. In Phase I the reduced in size dielectric material is dried in the initial process starting from the initial moisture of the dielectric material in the range from 80 percent to 90 percent to the level of 20 percent to 45 percent. After that in Phase II the initially dried dielectric material is dried with the use of microwave energy, that is carried out in a rotating cylindrically shaped chamber with the use of pressure level from 1kPa to 6kPa and frequency of microwave energy in the range of 600 MHz to 6 GHz and with the delivered microwave power of 2W to 40 W per gram of the dried material leading to obtain the moisture level of 8 percent to 30 percent. In this phase the material is heated up to the temperature not greater than 80 degrees Celsius. Subsequently the final drying process is carried out to obtain moisture level from 6 to 10 percent. The method to dry dielectric materials equipped with product preparation segment, initial drying, microwave chamber and final drying segment. The microwave chamber has a cylindrically shaped chamber of the form of a dielectric cylinder 5 inside its metal cavity 6. Additionally, metal cavity 6 is connected to the vacuum pump 7 and is equipped with microwave generators 8 characterised by low ripples of microwave power $\tau < 20$ percent.

Probable Assignee: PROD HANDLOWA PAULA SP Z OO FA

Earliest Publication Date: 20031215



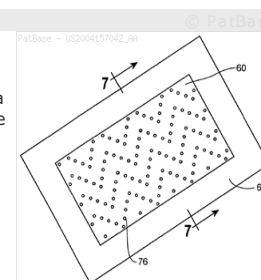
65) Family number: 30780958 (US2004157042A)

SHEET MATERIAL MANUFACTURING APPARATUS AND METHOD OF PRODUCING A SHEET MATERIAL

Abstract: Source: US2004157042A A processing substrate includes a top layer having a cut resistant surface and a bottom layer-secured to the top layer. The bottom layer includes a ply adapted for contact with a supporting surface wherein the ply has a combination gloss and matte finish for controlling a coefficient of friction of the processing substrate.

Probable Assignee: S C JOHNSON HOME STORAGE INC

Earliest Publication Date: 20040812



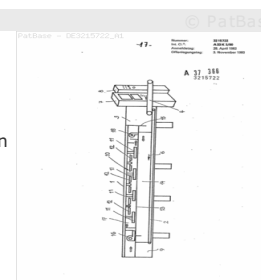
66) Family number: 3185866 (DE3215722A1)

PROCESS FOR PRESERVING FEEDSTUFFS AND/OR CROPS AND APPARATUS FOR CARRYING OUT THIS PROCESS

Abstract: Source: DE3215722A1 To preserve feedstuffs and/or crops, in particular for cattle, at least some of the product is subjected to a high frequency radiation. By this means, the product is dried in a short time with savings in energy and costs. The nutrient losses are small. In addition, protection of protein is achieved, which suits the physiology of digestion of the ruminant. The apparatus for carrying out the process is provided with high frequency sources of radiation, in the radiation field of which is situated the storage area for the product. The apparatus has a simple construction and requires only a small amount of installation space.

Probable Assignee: BISCHOFF THEO

Earliest Publication Date: 19831103



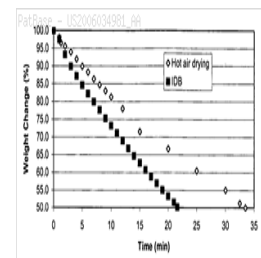
67) Family number: 32626081 (US2006034981A)

NOVEL INFRARED DRY BLANCHING (IDB), INFRARED BLANCHING, AND INFRARED DRYING TECHNOLOGIES FOR FOOD PROCESSING

Abstract: Source: US2006034981A This invention relates to food processing and, in particular, blanching and dehydration of foods. Conventional blanching and dehydration requires use of steam and forced hot air. This invention is the first to effectively use infrared radiation energy to perform simultaneous blanching and dehydration of fruits and vegetables. Since this technology does not involve the addition of steam or water in the process of blanching, it has been named "infrared dry-blanching" (IDB) technology. IDB is intended to be a replacement for current steam, water and/or microwave blanching methods. It can be used to produce many kinds of value-added dried, refrigerated, frozen and dehydrofrozen foods such as fruit and vegetable products. In general, the advantages of IDB include (1) uniform heating which enhances energy efficiency and limits damage from over-heating, (2) capability of zone heating to address differential density, (3) ability to treat large or small lots with the same piece of equipment, (4) portability, since equipment can be built on wheels, and (5) a safe, non-toxic process with no harmful side-effects to humans or the environment.

Probable Assignee: DEPT OF AGRICULTURE US SEC

Earliest Publication Date: 20060216



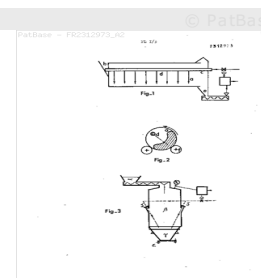
68) Family number: 3580365 (FR2312973A)

PROCEDE ET INSTALLATION DE DESHYDRATATION DE PRODUITS AGRICOLES DEHYDRATION OF AGRICULTURAL PRODUCTS ESP. LUCERNE - PREHEATING THE RAW MATERIAL WITHOUT DEHYDRATION BEFORE PROCESSING

Abstract: Source: FR2312973A (Claim 1) REVENDICATIONS 10) Procédé de deshydratation de produits agricoles dans lequel, selon le brevet principal, on sépare les phases liquide et solide, on concentre la phase liquide, et on sèche la phase solide, et dans lequel une opération préalable de broyage est facultative, procédé caractérisé en ce que, avant de séparer les phases liquide et solide, on élève la température des produits dans des conditions ne pouvant pas amener leur deshydratation même partielle. 20) Procédé selon la revendication 1, caractérisé en ce que l'on élève la température de la luzerne à traiter de manière continue. 30) Procédé selon la revendication 1, caractérisé en ce que l'on élève la température de la luzerne à traiter de manière discontinue. 40) Procédé selon l'une quelconque des revendications 2 et 3, caractérisé en ce que l'on presse la luzerne obtenue dans une presse à vis. 50) Procédé selon la revendication 4, dans lequel on sèche puis on granule la phase solide obtenue à la fin de l'opération de pressage, caractérisé en ce que l'on obtient une phase solide dont la teneur en matières sèches est comprise entre 32 s et 42 percent. 60) Procédé selon l'une quelconque des revendications 2 et 3, caractérisé en ce que l'on presse la luzerne obtenue dans une presse à bande. 70) Procédé selon la revendication 6, dans lequel on sèche puis on granule la phase solide obtenue à la fin de l'opération de pressage, caractérisé en ce que l'on obtient une phase solide dont la teneur en matières sèches est comprise entre 38 percent et 58 percent. The process of the parent patent comprising sepg. the liquid and solid phases, concentrating the liquid phase and drying the solid phase; is improved by heating the agricultural prods. under conditions such that no dehydration can take place, before sepg. the liquid and solid phases. An appts. for carrying out the improvement comprises a horizontally turning drum in which the temp. of the lucerne is raised continuously, by passing low pressure steam into a bed of lucerne in the drum. Appts. for a discontinuous process, comprises a controlled pressure autoclave into which low pressure steam is passed, the residence time of the lucerne in the autoclave is 3-10 mins. The products are used for animal feeds. The principal patent enables more stable dehydrated products to be produced under mild conditions. The improvement makes the process easier, cheaper, with better yield and quality of products. The preheating increases the solids content of the extract obt'd. after pressing.

Probable Assignee: PROD PROCEDES STE INDLE SA

Earliest Publication Date: 19761231



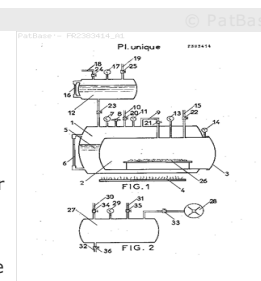
69) Family number: 3648941 (FR2383414A)

APPAREIL A DESHYDRATER ET A DISTILLER PAR DETENTE DE LA VALEUR D'EAU STEAM BOILER DRYER ESP. FOR FISH MEAL AND FODDER - AND ESSENCE DISTN., OPERATES AT OPTIMUM TEMP. FOR PROD. QUALITY

Abstract: Source: FR2383414A Dispositif permettant de deshydrater et de distiller, a toute température, par détente de la vapeur d'eau. Il comprend une chaudière fermée 1, dans laquelle se fixe une marmite 2, munie d'un couvercle étanche et amovible 3. La chaudière assure un chauffage continu de la marmite et lui fournit de la vapeur d'eau c'aude, sous pression, pour activer la vaporisation de l'eau de la matière à traiter qu'elle contient. La détente de la vapeur d'eau de la marmite, vers l'extérieur, amène la deshydratation de la matière tout en fournissant un distillat L'invention est conçue pour la fabrication des produits de conserve et des farines, propres à l'alimentation de la volaille et des animaux de boucherie, ainsi que pour la distillation des produits volatils nécessaires à l'industrie des parfums et des produits pharmaceutiques. The material is processed inside a drying chamber located inside a steam-raising boiler. The material is first heated indirectly by heat transfer from the boiler via the chamber wall. Steam is then piped from the boiler into the chamber for direct contact with the material. Finally, the steam transfer valve is closed and the chamber is vented to atmos. or lower pressure to dry the material by vapour expansion. The chamber vent can be connected to a condenser when distillate is to be extracted.

Probable Assignee: GUYOT MARTIN

Earliest Publication Date: 19781006



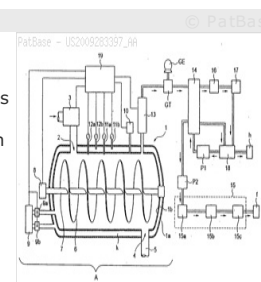
70) Family number: 41672116 (US2009283397A)

ORGANIC WASTE TREATMENT SYSTEM

Abstract: Source: US2009283397A [Object] To provide an organic waste treatment system in which general wastes from home, ordinary offices, and the like as well as industrial wastes including sludge, waste plastics, and the like can be subjected to treatment such as decomposition by a hydrothermal reaction under a subcritical water condition and in which treated wastes can be taken out in a dried state, sorted, and recycled. [Approach] In a waste treatment system for hydrolyzing organic wastes while stirring the wastes under a high-temperature and high-pressure environment and thermally decomposing or carbonizing the wastes in a double-walled pressure-resistant container 1, the system includes at least: water vapor supply means 9a for supplying high-heat saturated water vapor into the container 1; pressure regulating means 10 for regulating pressure in the container 1 by using an on-off valve; and stirring means 6 having a shaft 7 for stirring the charged wastes in the container 1 and provided to penetrate the container 1 and the system includes the steps of: hydrolyzing the wastes while adjusting temperature to 230 degrees centigrade or higher and pressure to 3 MPa in the container 1 and stirring the wastes and thermally decomposing or carbonizing the wastes; adjusting the pressure in the container 1 to atmospheric pressure or lower and discharging the treated wastes out of the container while maintaining a dried state of the wastes; and sorting the discharged treated wastes and forming at least one of fertilizer, feed, and auxiliary fuel depending on types of the wastes.

Probable Assignee: ECO MATERIAL CO LTD

Earliest Publication Date: 20080403



71) Family number: 43232236 (US2010223807A)

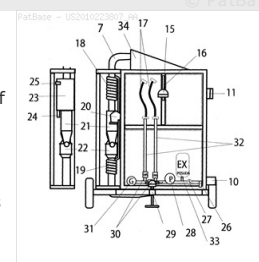
PatBase

SOLAR AND ELECTRIC ENERGY DRYERS

Abstract: Source: US2010223807A Solar and electric energy dryers use the sun as a main energy-generating product, and electric power as an additional energy-generating product. Dryer has a single pipe system of fluidity of fluids regulated by a microprocessor /8/ and electromagnetic valves /30/. Pipes wind the inside of the dryer and gradually climb up to the top of the dryer, and then descend and fill in the horizontal space all up to the end of the dryer, at the same time these enable equal temperature balance along the cubic volume of the dryer. At the top of the dryer there is an outlet dome /34/ that accepts evaporations, directs it into an outlet pipe /7/, which is enclosed either by a cooling tank /23/ or a cooling spiral /18/ and extends it up to the condenser /49/. Ventilator /22/ pushes the air through the input pipe /13/ and back into the dryer. Solar panel /44/ is coupled to the dryer in an elastic coupling /17/ and makes a functional unity. The angle of the solar panel /44/ is adjusted by the hook /15/ of the solar panel and it depends on the latitude and the position of the sun. The invention is intended for drying: wholesome, spicy and aromatic herbs, mushrooms, fruits and vegetables.

Probable Assignee: VESELINOVIC MILOS

Earliest Publication Date: 20090514



72) Family number: 48766778 (US2011091620A)

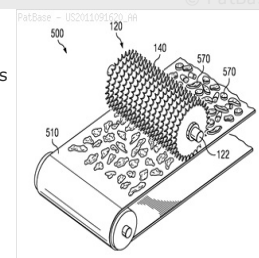
PatBase

APPARATUS AND METHOD FOR PERFORATION OF FRUITS AND VEGETABLES

Abstract: Source: US2011091620A An apparatus and method for the perforation of the skins or hulls of food pieces to more efficiently produce a dried, shelf-stable product. The apparatus contains two parallel and adjacent blade wheels positioned longitudinally within a frame in substantially the same horizontal plane at a distance from each other such that the blades' teeth contact product passing between the blade wheels and make perforations. Each blade wheel comprises a plurality of circular blades with a plurality of teeth around the circumference mounted on a rotatable shaft. In one aspect, a guard is provided for each blade wheel to ensure that no product remains on the blades after perforation. The shape, size and number of blades and the distance between the blade wheels may be modified with respect to the size and shape of the product and the strength of the product's skin or hull.

Probable Assignee: FRITO LAY NORTH AMERICA INC

Earliest Publication Date: 20110421



73) Family number: 51579444 (CN102578686A)

PatBase

INTELLIGENT DEEP PROCESSING SYSTEM FOR PASTURE

Abstract: Source: CN102578686A The invention discloses an intelligent deep processing system for pasture. The intelligent deep processing system utilizes a novel technology for intelligent production, processing efficiency is high, quality of processed pasture products is good and technological content is high, and the whole set of the processing system is controlled by a closed circuit. Processing parameters can be set for processing pasture intelligently. In the intelligent deep processing system for pasture, a pasture automatic conveyer and a special forklift are used for conveying materials to conveying lines. The intelligent deep processing system for pasture is composed of a bag breaking machine, a vibrating screen, an intelligent dust separator, material guiding device and a rolling device. The continuous intelligent processing of pasture is completed by a sealed high-speed pasture crusher, an ultrasonic moisture centrifugal machine, a steam dryer, a material separator, a negative pressure pasture crusher, a pasture powder packaging machine, a nutrient solution filling machine, an intelligent closed circuit control system, and matching devices such as a steam oven, a vacuum pump, an air compressor and a hydraulic forklift. The daily processing amount of pasture products includes more than 500T of crushed pasture and pasture powder, and high-concentration nutrient solution. The deeply processed pasture products can be stored for a long period of time.

Probable Assignee: JINHAI SUN

Earliest Publication Date: 20120718

74) Family number: 51936436 (CN102657370A)

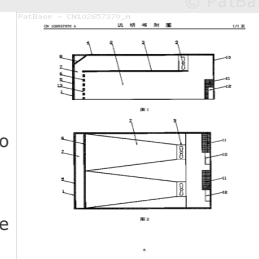
PatBase

COLD-AIR DRYER FOR PRESERVED FRUITS

Abstract: Source: CN102657370A The invention discloses a cold-air dryer for preserved fruits. Existing drying equipment includes a heating dryer, a freeze dryer, a vacuum dryer, an infrared dryer and the like, and realizes drying by heating or freezing. Fruits contain glucose, fructose, cane sugar, cellulose, vitamin, pigments, enzyme, water and protein which are sensitive to temperature, the preserved fruits is hard in texture and poor in taste due to low temperature, and effective components in the preserved fruits are destroyed at over-high temperature, so that the preserved fruits change color and flavor and lose all flavor. Under the combined action of an air conditioner, a fan and a dehumidifying device, the preserved fruits are dried at the temperature not higher than 37 DEG C, the temperature in the whole drying process is similar to the room temperature of Chinese southern China, the effective components in the fruits are not destroyed, and the flavor of the fruits is kept.

Probable Assignee: HEPU GUOXIANGYUAN FOOD CO LTD

Earliest Publication Date: 20120912



75) Family number: 52091484 (DE102011016181A1)

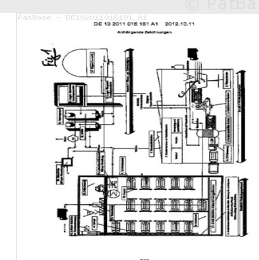
PatBase

UTILIZING AND PROCESSING SYSTEM FOR PROCESSING E.G. LEGUMES, HAS DRYING REGION INCLUDING MULTI-USE AND/OR SEPARABLE GREENHOUSE, WHICH IS USED FOR BREEDING SEEDLINGS, FOR OPERATING AND INSTALLING DRYING DRUMS AND/OR FOR AIR DEHUMIDIFICATION

Abstract: The system has a threshing region for threshing edible nuts e.g. hazelnuts (1), and legumes. A drying region dries the edible nuts and the legumes. A region allows energetic and/or material usage of shells of the legumes and/or waste materials. The drying region includes a multi-use and/or separable greenhouse, which is temporally and/or spatially differentially used for breeding seedlings, for operating and installing drying drums (9), and/or for air dehumidification. A high pressure container system (4) removes the delivered edible nuts and the legumes from fruits affected with pest. An independent claim is also included for a method for utilizing and processing of edible nuts and legumes.

Probable Assignee: BAKIR IRFAN

Earliest Publication Date: 20121011



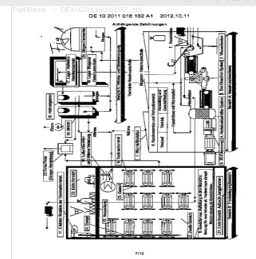
76) Family number: 52094135 (DE102011016182A1)

SYSTEM FOR PROCESSING AND TREATING LEGUMINOUS PLANTS OR SHELL FRUIT E.G. HAZELNUTS, HAS DRYING AREA THAT IS PROVIDED WITH MULTI-USABLE OR DIVISIBLE GREENHOUSES USED FOR REARING OF YOUNG PLANTS AND UTILIZED AS DEWATERING SPACE

Abstract: The system has a thresh region, a drying region and a region for generation of energy from wastes or shells. The drying area is provided with multi-usable or divisible greenhouses that are used for rearing of young plants and utilized as dewatering space. Drying equipment such as drying drum is installed in drying region for dehumidifying moist air developing during dewatering. An independent claim is included for method for processing and treating leguminous plants or shell fruit.

Probable Assignee: BAKIR IRFAN

Earliest Publication Date: 20121011



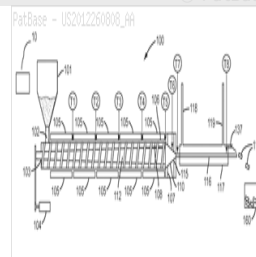
77) Family number: 52131111 (US2012260808A)

DISTILLER GRAIN PELLET PRODUCTION DEVICES

Abstract: Source: US2012260808A A device for producing a high density compact livestock feed from a loose granular material according to various embodiment can include a source for supplying a loose granular material to be treated. A series of successive treatment zones comprises a heating zone, a compression zone, and a cooling zone. The heating zone comprises at least one heater and at least one screw compression dryer configured to receive the loose granular material to be treated for drying. Rotation of the screw transfers the treated material to the compression zone. The compression zone comprises a compression chamber for compacting the treated material to form a high density compact body. The treated material is pressed through the compression chamber while a two-dimensional cross-section compression is applied to the treated material. The cooling zone comprises a cooling unit for cooling the high density compact body received from the compression zone.

Probable Assignee: NATIONWIDE 5 LLC

Earliest Publication Date: 20121016



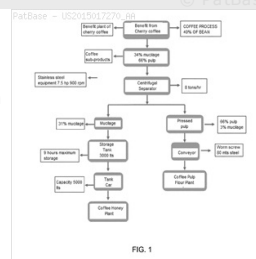
78) Family number: 54120823 (US2015017270A)

PROCESS FOR OBTAINING HONEY AND/OR FLOUR OF COFFEE FROM THE PULP OR HUSK AND THE MUCILAGE OF THE COFFEE BEAN

Abstract: Source: US2015017270A The present invention relates to a method for using the by-products of coffee in the production of proteins, polyphenols, vitamins and minerals, through methods of concentrating and conserving the mucilage and the pulp (husk) in order to obtain industrially processed coffee honey and/or pulp meal (husk), which is/are suitable for use in products for human or animal consumption, drugs, cosmetics or as raw materials for the production of alcohol for fuel (ethanol), wherein said process makes it possible to reduce the pollution of the environment by avoiding the waste of coffee by-products and to exploit the properties and advantages of same for producing the aforementioned products.

Probable Assignee: LOPEZ JUAN CARLOS JARAMILLO

Earliest Publication Date: 20130620



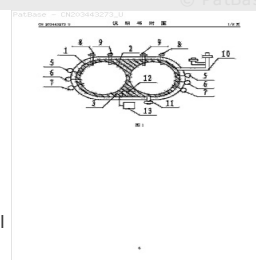
79) Family number: 55874858 (CN203443273U)

ELECTRIC CONDUCTANCE OIL FRUIT AND VEGETABLE DRYER

Abstract: Source: CN203443273U The utility model relates to fruit and vegetable drying devices, in particular to an electric conductance oil fruit and vegetable dryer. The electric conductance oil fruit and vegetable dryer comprises a barrel, at least one drying cylinder and drying racks, wherein the barrel is provided with a front end opening of a vacuum interlayer, the at least one drying cylinder is fixed inside the barrel, the gap of the at least one drying cylinder and the inner wall of the barrel is even, and the drying racks can be placed inside the drying cylinders. The gap between the inner wall of the barrel and all the drying cylinders forms a closed electric conductance oil layer. Cylinder doors corresponding to all the drying cylinders are arranged at the opening end of the barrel. The barrel is provided with thermometers, hygrometers and pressure gauges corresponding to all the drying cylinders. The barrel is provided with air inlet pipes and exhaust pipes which are correspondingly communicated with all the drying cylinders. An oil inlet pipe and an oil spilling pipe which are communicated with the electric conductance oil layer are further arranged at the top end of the barrel, and an oil outlet pipe which is communicated with the electric conductance oil layer is arranged at the bottom end of the barrel. An electric heating ring is arranged inside the electric conductance oil layer, and the on-off control end of the electric heating ring is connected with the control end of a temperature controller. The problems that a commonly-used fruit and vegetable dryer in the market is high in drying cost and can pollute the environment in the drying process are solved.

Probable Assignee: DU WEN

Earliest Publication Date: 20140219



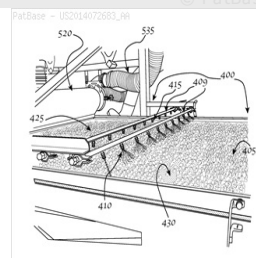
80) Family number: 55979370 (US2014072683A)

METHOD FOR DISINFECTING, STERILIZING, AND PACKAGING READY-TO-EAT PRODUCE

Abstract: Source: US2014072683A This invention generally relates to a method for efficiently disinfecting, sterilizing, and packaging produce so that it is Ready-To-Eat by a consumer. The claimed method removes dirt, soil, pathogens, and renders produce with a longer shelf life. The claimed method is a multi-step sanitizing process that is designed to not cause bruising or other physical harm to produce. Ultimately, this method yields produce disinfected, packaged, and ready-for-sale on the market shelf.

Probable Assignee: MUNGER BROS LLC

Earliest Publication Date: 20140313



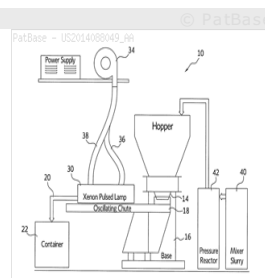
81) Family number: 56035893 (US2014088049A)

METHOD AND APPARATUS FOR VITAMIN D ENHANCEMENT IN MUSHROOMS

Abstract: Source: US2014088049A An apparatus and method for increasing Vitamin D content in mushrooms is disclosed. A mushroom slurry of comminuted or pulverized mushrooms or mushroom parts and liquid, such as water, is passed under a UV light source and subjected to one or more pulses of UV light. The slurry may be conveyed to the UV light source by a vibrating conveyor. After UV light exposure, the treated slurry may be dried and ground into a powder, or the treated slurry may be filtered and the insoluble portion may be dried and ground into a powder. The irradiated mushroom powder has a mass fraction of Vitamin D2 of at least 2500 IU/gram of powder, and more preferably at least 20,000 IU/gram of powder. Irradiated mushroom powder may be incorporated into consumable food product for humans or animals, and/or may be incorporated into topical preparations for cosmetic use.

Probable Assignee: OAKSHIRE HOLDINGS INC

Earliest Publication Date: 20140327



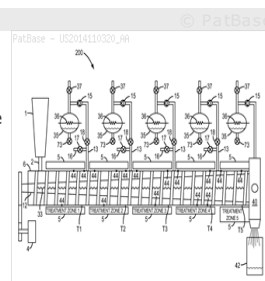
82) Family number: 56295071 (US2014110320A)

CONTINUOUS FLOW DRYER FOR TREATING BULK MATERIAL

Abstract: Source: US2014110320A A continuous flow dryer system according to various embodiments can include a source for supplying a material to be treated having a high moisture content, such as a distiller wet grain, a profile screw compression dryer, a profile screw, and a drive coupled to the profile screw for axially rotating the profile screw. The profile screw compression dryer includes an inlet for receiving the material for drying, which is fed therein in a controlled manner. The profile screw is provided within the housing of the dryer. The profile screw has a diameter that increases in dimension in a direction away from the inlet for increasing the compressive force applied to the material to assist with drying as the profile screw rotates and moves the material longitudinally along the profile screw to produce a final product, for example, a distiller dried grain for use as an animal feed.

Probable Assignee: NATIONWIDE 5 LLC

Earliest Publication Date: 20140424



83) Family number: 56829296 (US2016037792A)

METHOD FOR PRODUCING ROASTED COFFEE BEANS

Abstract: Source: US2016037792A The present invention provides a method for producing roasted coffee beans useful as a starting material for a coffee beverage having rich body, suppressed in unpleasant taste and reduced in the amount of hydroxyhydroquinone. The method for producing roasted coffee beans of the present invention includes placing starting material roasted coffee beans in an airtight container and subjecting the roasted coffee beans to a heat treatment at from 100 to 160 degrees centigrade under humidified conditions.

Probable Assignee: KAO CORP

Earliest Publication Date: 20140703

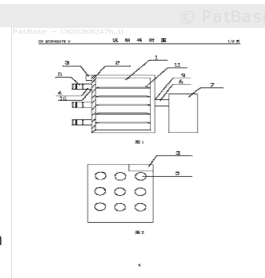
84) Family number: 56861270 (CN203692476U)

MUSHROOM DRYER

Abstract: Source: CN203692476U The utility model provides a mushroom dryer, which comprises a drying box which has a cabinet-type structure, wherein the front face is a drying box door, a plurality of air inlets are disposed on one side of the drying box and are all uniformly distributed on one side of the drying box, each of the air inlets is connected to an inlet pipe, the inlet pipes are connected to a dustproof device, an air outlet is disposed on the other side of the drying box relatively to the air inlets, an outlet pipe connected to a vacuum pump is connected to the air outlet, a plurality of blocking strips are horizontally disposed in order in the drying box from top to bottom, the blocking strips can be pushed and pulled, and a heating device is disposed inside one side of the drying box, which is equipped with the air inlets. The mushroom dryer in the utility model has the beneficial effect that mushrooms can be protected from dust pollution during drying, relatively clean environment is ensured in the dryer, and the dustproof device can be assembled continuously in order to realize multi-layer dust prevention; the mushrooms can be heated relatively uniformly inside the dryer; and moisture can be discharged during drying as soon as possible to prevent mushroom mildew; and the mushrooms can be put in and taken out easily.

Probable Assignee: TIANJIN LVSHENG PENGYUAN AGRICULTURAL SCIENCE AND TECHNOLOGY DEV CO LTD

Earliest Publication Date: 20140709



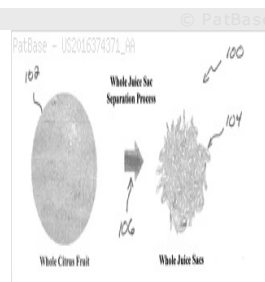
85) Family number: 58242286 (US2016374371A)

SYSTEMS AND METHODS FOR AUTOMATICALLY CORING, OR ISOLATING FIBER OR WHOLE JUICE SACS FROM CITRUS FRUIT

Abstract: Source: US2016374371A A system and method for automatically coring a whole citrus fruit, isolating fiber or substantially whole juice sacs from at least a portion of a whole citrus fruit.

Probable Assignee: COCA COLA CO

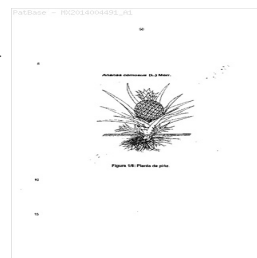
Earliest Publication Date: 20150108



86) Family number: 59102897 (MX2014004491A)

PROCESS FOR OBTAINING DEHYDRATED PINEAPPLE FIBER FROM PINEAPPLE RESIDUES AND THE APPLICATION THEREOF IN THE FOOD INDUSTRY.

Abstract: SOLID RESIDUES ARE ONE OF THE TROUBLES FACED BY COMPANIES, THESE GENERALLY RESULT FROM THE CLEANING, WASHING, CUTTING, PITTING, PEELING AND CORING OF AGRICULTURAL PRODUCTS. THE SPECIFIC CASE OF THE INVENTION IS THE INDUSTRIALIZATION OF THE PINEAPPLE, WHERE A RESIDUE OF ABOUT 65 PERCENT OF THE FRUIT IS GENERATED. BESIDES THE CROWN, (UPPER PORTION OF THE FRUIT), THE CORE AND THE PEEL, BAGASSE IS OBTAINED, WHICH CORRESPONDS TO THE VEGETABLE MATERIAL OF THE PLANT WITH A HIGHER CONTENT OF INSOLUBLE FIBER, THIS RESIDUE REPRESENTING AN OPPORTUNITY TO BE USED AS RAW MATERIAL IN THE AGROINDUSTRY AND GIVING AN ADDED VALUE TO THIS BYPRODUCT. AT LEAST 46.5 PERCENT OF THE WEIGHT OF THE PINEAPPLE FIBER IN POWDER PERTAINS TO THE CLASSIFICATION OF INSOLUBLE FIBER OR UNAVAILABLE CARBOHYDRATES, THUS NOT BEING ABSORBED BY THE HUMAN SMALL INTESTINE. DUE TO THE AFOREMENTIONED CHARACTERISTICS, IT IS IMPORTANT TO INCORPORATE STEPS TO CURRENT INDUSTRIAL PROCESSES FOR REDUCING THE AMOUNT AND TYPE OF RESIDUES OR WASTES, AND USING THE SAME IN NON-TRADITIONAL APPLICATIONS FOR MANUFACTURING COMPOST, OR AS A FILLER MATERIAL IN CONSTRUCTION INDUSTRIES, ALSO BEING ADDED, DUE TO THEIR POTENTIAL FOOD VALUE, TO PRODUCTS FOR INCREASING THE AMOUNT OF AVAILABLE FIBER, GIVEN THE PROBLEMS OF OUR COMMUNITY WHERE EVERY DAY LESS NATURAL FIBER IS CONSUMED. THE POSSIBILITY OF INCORPORATING THE DEHYDRATED FIBER OF PINEAPPLE INTO PRODUCTS SUCH AS COOKIES, FRUIT FILLERS, ETC., ALLOWS THE AMOUNT OF FIBER TO BE INCREASED IN A NATURAL MANNER WITH A PRODUCT THAT HAS PROVEN TO BE USED WITHOUT PROBLEMS INTO THE FOOD INDUSTRY IN A SAFE MANNER.



Probable Assignee: ORGANIZACION ALTEX S A DE C V

Earliest Publication Date: 20141209

(87) Family number: 59141816 (US2016249639A)

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IMPROVED PELLETS CONTAINING VITAL GLUTEN AND PROCESS FOR THEIR PRODUCTION

Abstract: Source: US2016249639A The present invention relates to a process for preparing pellets of compressed proteins comprising vital gluten, pellets obtainable by such a process and an apparatus used in such a process.

Probable Assignee: SUDZUCKER MANNHEIM OCHSENFURT AG

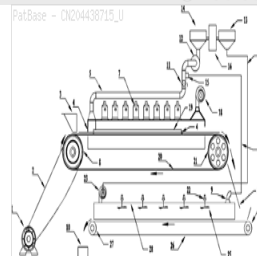
Earliest Publication Date: 20150507

(88) Family number: 59158271 (CN204438715U)

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HEAT PUMP TYPE WASTE HEAT RECOVERY MICROWAVE OXYGEN ISOLATION DRYER

Abstract: Source: CN204438715U The utility model discloses a heat pump type waste heat recovery microwave oxygen isolation dryer. A glass shield is channel-shaped, is externally provided with a microwave unit and is fixed on a substrate under a conveyor belt; materials on the conveyor belt arrive at the conveyor belt of an isolation box body by a slide carriage after being heated by the microwave heating unit in the channel-shaped glass shield; an outlet of the channel-shaped glass shield is provided with a barrier curtain and a blower; the inlet of the channel-shaped glass shield is provided with a barrier curtain and an exhaust pipe; heat in the exhaust pipe enters a hot air drying system of the isolation box body after being transferred by a heat pump. The heat pump type waste heat recovery microwave oxygen isolation dryer realizes the continuous efficient enzyme deactivation and synchronous oxygen isolation drying under a non-vacuum condition, and facilitates industrialized implementation; the heat pump is low in electricity consumption and high in heating coefficient and realizes full recovery of waste heat, and the cost and power consumption are reduced; due to later hot air counterflow, mild drying and consistent qualities are facilitated, and the heat pump type waste heat recovery microwave oxygen isolation dryer is particularly suitable for drying of agricultural products easily subjected to enzyme-promoting and high temperature oxidizing browning, and has broad application prospect.



Probable Assignee: UNIV JISHOU

Earliest Publication Date: 20150506

(89) Family number: 59343338 (RU2552070C)

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STABILISED PECTIN-CONTAINING PUMPKIN PULP PRODUCTION METHOD

Abstract: Source: RU2552070C FIELD: food industry.SUBSTANCE: invention relates to food industry. According to the method, fruits are washed (with washed fruits stalks removed), crushed to separate seeds, pumpkin pieces are milled with the help of a grinder; juice is separated from the produced squash with the help of a double-screw press until the produced pulp moisture content is 75-82 percent. Then the squash is washed to remove water-soluble ballast compounds, pigments and metal inclusions during 15-45 min at 40-50 degrees centigrade by way of stirring a mixture of pulp with purified water at a ratio of at least 4:1, the stirring rate being 40-43 rpm, in a vessel equipped with a heating system. Then the produced suspension is separated into a liquid and a solid phases with the help of a vacuum drum filter; the mass remaining on the filter fabric is squeezed out with the help of a double-screw press. The washing and separation operations are repeated 2-8 times. Then one performs staged drying. At the first stage, the mass is dried according to a counter-flow cross scheme in a rotor drum dryer until production of a product with residual moisture content equal to 30-32 percent. The heat transfer medium is represented by air heated to 150-180 degrees centigrade At the second stage, the pulp is additionally dried in a vacuum dryer at a temperature of 55-60 degrees centigrade till residual moisture content is equal to 6-10 percent.EFFECT: invention allows to reduce pumpkin pulp production time, enhance the pulp consumer properties and extend its storage life.3 cl, 6 tbl, 1 ex

Probable Assignee: NPOB EVROPA BIOFARM ZAO NPO EVROPA BIOFARM AOZT

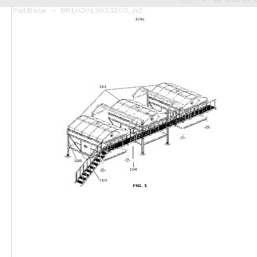
Earliest Publication Date: 20150527

(90) Family number: 60285425 (BR102013033203A)

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EQUIPAMENTO DE SECAGEM EM LEITO RETRATRIL E PROCESSOS DE FUNCIONAMENTO

Abstract: Source: BR102013033203A equipamento de secagem em leito retratil e processos de funcionamento, refere-se a patente de invenção de secador em leito retrátil e processos de funcionamento, aplicado em grãos e sementes, particularmente em café e grãos sensíveis, de baixa fluidez,, onde inicialmente o produto está muito úmido, durante a secagem o produto tende a grudar dificultando a movimentação do produto e no final esta solto permitindo a movimentação por gravidade e por elevação vertical, para recirculação. o equipamento de secagem da presente patente substitui etapas de secagem de grãos e sementes em terreiro ou outros processos convencionais, trazendo vantagens adicionais de ser modular, permitir secagem parcial, permitir secagem uniforme, causar menos danos as paredes celulares, permitir a realização de movimentação somente quando desejado, permitir remontagem de produto semi-seco e otimizar espaço para receber novo produto a secar em modulo vazio remanescente, ser flexível tanto para o grande como para o pequeno produtor.



Probable Assignee: COOL SEED INDUSTRIA E COMERCIO DE EQUIPAMENTOS DE AERACAO CONDICIONADA LTDA E P P

Earliest Publication Date: 20150825

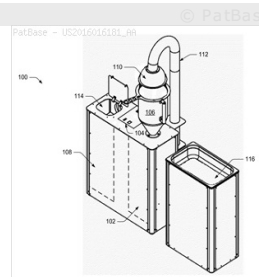
91) Family number: 61451496 (US2016016181A)

BEAN ROASTER WITH CONTROLLABLE FLUID LOFT AND ELECTROSTATIC COLLECTOR

Abstract: Source: US2016016181A A bean roaster with controllable fluid loft and electrostatic collector is provided. An example system reduces large industrial features into a smaller roaster, without sacrificing roast flavor. A user can select custom airflow parameters to establish a bean loft mode and fluid loft pattern for a particular roast. Airflow parameters, including air volume and pressure may be user-selected along a continuum. Selected airflow interacts with a cyclonic diffuser to create airflow streams in the roast hopper, which in turn interact with the geometry of the roast hopper itself and the beans, including their size, mass, number, and streamline properties, to create a fluid loft pattern, such as helical pattern or spray pattern. An electrostatic collector applies static charge to chaff and smoke particulates enabling these to be secured within a small machine footprint. The condensed features provide a bean roaster that can use ordinary electrical hookup and common residential venting.

Probable Assignee: GANTS SHAWN

Earliest Publication Date: 20160121



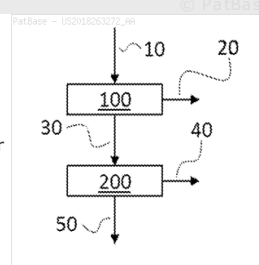
92) Family number: 62738289 (US2018263272A)

PROCESS FOR CONVERTING BERRY AND FRUIT MATERIALS TO ANTIMICROBIALY ACTIVE FRACTIONS

Abstract: Source: US2018263272A The invention relates to process for converting berry and/or fruit materials to fractions comprising bioactive compounds, said process comprising the steps, where at least one berry material or fruit material selected from berries, fruits, by-products, side streams and waste materials originating from berries or fruits, and any combinations thereof is sieved whereby a seed fraction is separated from a skin fraction, the seed fraction is subjected to sanding and a seed coat fraction comprising surface layer of the seeds and a sanded seed fraction comprising the sanded seeds are obtained.

Probable Assignee: TEKNOLOGIAN TUTKIMUSKESKUS VTT OY

Earliest Publication Date: 20160620



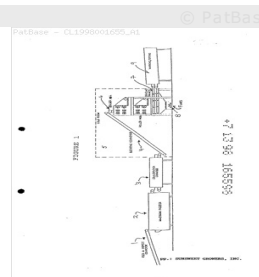
93) Family number: 62829976 (CL1998001655A)

PROCEDIMIENTO PARA PRODUCIR FRUTA SECA FRAGMENTADA, QUE COMPRENDE CONGELAR FRUTA QUE TIENE UNA HUMEDAD ENTRE 22 Y 30 PERCENT, IMPACTAR LA FRUTA CONGELADA Y SECAR LOS TROZOS DE FRUTA CONGELADA METHOD FOR PRODUCING DRIED FRUIT FRAGMENTED, WHICH COMPRISES FREEZING FRUIT THAT HAS A HUMIDITY BETWEEN 22 AND 30 PERCENT, IMPACT THE FROZEN FRUIT AND DRYING THE PIECES OF FROZEN FRUIT (MACHINE TRANSLATION)

Abstract: Source: CL1998001655A Un metodo para producir fruta seca fragmentada que no contiene preservantes congelando frutas con bajo contenido de humedad (que tienen preferentemente un contenido de humedad de 22 percent -30 percent) antes de triturar la fruta congelada (preferentemente con un molino de rodillos) para producir pedazos de fruta fragmentados de formas irregulares (con un tamaño preferido principalmente en el intervalo de 0,64 cm a 96 cm (1/4 a 3/8 de pulgada). Los pedazos de fruta fragmentados son secados optativamente (por ejemplo mientras son calentados en una secadora de aire caliente) para reducir su contenido de humedad a 22 percent -25 percent antes de envasar. En un paso de procesamiento preliminar optativo. las frutas secas son rehidratadas primero hasta que tengan un contenido de humedad de 26 percent -30 percent (preferentemente 28 percent -29 percent) a fin de producir frutas con bajo contenido de humedad. Las frutas con bajo contenido de humedad son deshuesadas y luego congeladas. Las frutas congeladas con bajo contenido de humedad son fragmentadas despues (y luego son secadas optativamente) de acuerdo con el invento. Fragmented A method for producing dried fruit which does not contain preservatives freezing fruits with low moisture content (preferably having a moisture content of 22 percent -30 percent) before crushing the frozen fruit (preferably with a roll mill) to produce fragmented pieces of fruit irregular shapes (with a preferred principally in the range of 0.64 cm to 96 cm (1/4 to 3/8 inch) size. the fragmented pieces of fruit are optionally dried (for example while being heated in a hot air dryer) to reduce its moisture content to 22 percent -25 percent before packing. in an optional preliminary processing step. dried fruit are rehydrated first until they have a moisture content of 26 percent -30 percent (preferably 28 percent -29 percent) to produce fruits with low moisture content. fruits with low moisture content are deboned and then frozen. The congeladas fruits with low moisture content are then fragmented (and optionally then are dried) according to the invention.

Probable Assignee: SUNSWEET GROWERS INC UNA SOC ORGANIZADA BAJO LAS LEYES DEL ESTADO DE CALIFORNIA

Earliest Publication Date: 19990430



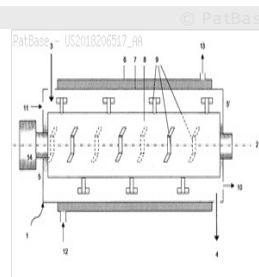
94) Family number: 64617774 (US2018206517A)

COCOA EXTRACTS, COCOA PRODUCTS AND METHODS OF MANUFACTURING THE SAME

Abstract: Source: US2018206517A Disclosed is a method for processing cocoa beans or nibs comprising the steps of: (a) adding water to cocoa beans or nibs to form a suspension; (b) wet grinding said suspension; (c) subjecting said suspension to a heat treatment at a temperature of 70 degrees centigrade or less; (d) separating the suspension into: a water phase (heavy phase), a fat phase (light phase) comprising cocoa butter, and a solid phase comprising cocoa powder and fluid components; (e) continuously separating the fluid components from the solid phase obtained in step (d) to obtain cocoa aroma and cocoa powder by supplying a flow of said solid phase to a mixing device; wherein the mixing device comprises: a cylindrical, tubular body with a horizontal axis having an inlet opening for the solid phase, an outlet opening for the dried solid phase and an optional outlet opening for a vapor phase comprising cocoa aroma; end plates closing the tubular body at its opposite ends; a coaxial jacket heating or cooling the internal wall of the tubular body to a temperature of from 55 degrees centigrade to 150 degrees centigrade; and a bladed rotor, which is supported for rotation in the tubular body, its blades being arranged as a helix and oriented for centrifuging the solid phase and simultaneously transporting it towards the outlet opening.

Probable Assignee: ODC LIZENZ AG

Earliest Publication Date: 20170111



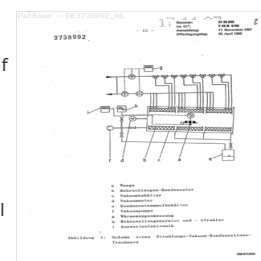
95) Family number: 6492215 (DE3738992A1)

METHOD AND APPLIANCE FOR RADIATION VACUUM CONDENSATION DRYING

Abstract: Source: DE3738992A1 In the known vacuum dryers, either the energy input is limited or the discharge of the steam formed presents problems. The object of the novel method is to provide, without damaging the material, for a high energy input by electromagnetic radiation in conjunction with rapid discharge of the steam formed. The method is characterised in that lumpy material and/or bulk solids (bulk material) or solutions in a vacuum-tight, sealed container at reduced system pressure are exposed to electromagnetic radiation having frequencies from the range of from 50 to 7.5.10 Hz, the steam produced being condensed on cooled surfaces situated in the immediate vicinity of the material inside the vacuum container, and the condensate being discharged. The method enables drying of temperature-sensitive, finely dispersed or colloidal materials (substances) of the pharmaceutical, chemical and ceramic industry, but also of the materials to be dried in the food industry.

Probable Assignee: ROEDEL ANDREAS

Earliest Publication Date: 19880428



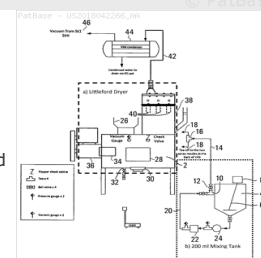
96) Family number: 65976032 (US2018042266A)

METHOD FOR REMOVING GLUCOSINOLATES FROM OILSEED MEALS

Abstract: Source: US2018042266A A process to remove the glucosinolates of oilseed meals, such as *Brassica carinata* oilseed meals, is provided. In one embodiment, exogenous myrosinase is used to convert the glucosinolates to volatile isothiocyanate compounds, which can then be removed under conditions of mild heat and negative pressure. In another embodiment, heat and pressure are used to remove glucosinolates from *Brassica carinata* oilseed. The processed meals may contain less than 80 percent of their starting levels of glucosinolates and may be suitable for use in various applications, including as animal feeds.

Probable Assignee: AGRISOMA BIOSCIENCES INC

Earliest Publication Date: 20170608



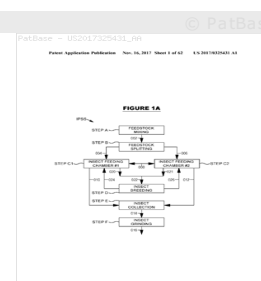
97) Family number: 67490628 (US2017325431A)

INSECT PRODUCTION SYSTEMS AND METHODS

Abstract: Source: US2017325431A Variable-scale, modular, easily manufacturable, energy efficient, reliable, and computer operated Insect Production Superstructure Systems (IPSS) may be used to produce insects for human and animal consumption, and for the extraction and use of lipids for applications involving medicine, nanotechnology, consumer products, and chemical production with minimal water, feedstock, and environmental impact. An IPSS may comprise modules including feedstock mixing, enhanced feedstock splitting, insect feeding, insect breeding, insect collection, insect grinding, pathogen removal, multifunctional flour mixing, liquid mixing, shaping, cooking, flavoring, biocatalyst mixing, exoskeleton separation, liquid separation, and lipid extraction. An IPSS may be configured to be constructed out of a plurality of containerized modules.

Probable Assignee: INSECTERGY LLC

Earliest Publication Date: 20171116



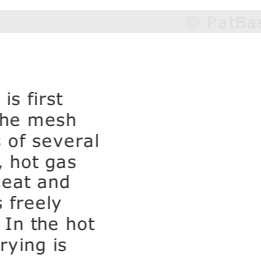
98) Family number: 68828964 (CN107782124A)

HOT AIR AND MICROWAVE JOINT DRYING METHOD

Abstract: Source: CN107782124A The invention discloses a hot air and microwave joint drying method. A material is first dried by hot air and then dried by microwave. Specifically, the material is evenly laid on a mesh belt by a feeder. The mesh belt is made of stainless steel mesh and is dragged by a transmission device to move in a dryer. The dryer consists of several units. In each unit, the hot air is circulated independently, exhaust gas is discharged by a special dehumidifying fan, hot gas passes through the mesh belt covered with the material from bottom to top or from top to bottom to complete the heat and mass transfer process, the material moisture is taken away and the mesh belt slowly moves, the operating speed is freely adjusted according to the temperature of the material, and dried products continuously fall into a material receiver. In the hot air and microwave joint drying method, a new process of atmospheric hot air drying and vacuum microwave joint drying is adopted, the obtained products have maintained better nutrition ingredients and color, and the production cost is far lower than that of vacuum freeze-drying products. The hot air and microwave joint drying method has the advantages of short production cycle, low cost and good product quality.

Probable Assignee: LI SHUCUN

Earliest Publication Date: 20180309



99) Family number: 68953718 (WO18053220A1)

FIBER WASHING METHOD AND SYSTEM

Abstract: The present invention provides to a fiber washing system, optimized for the use of hydrolytic enzymes in the system. Furthermore, the present invention provides to a method for improving starch and gluten yield in a wet milling process, preferably comprising the optimized fiber washing system.

Probable Assignee: NOVOZYMES INC

Earliest Publication Date: 20180322

