

TITLE: TOBACCO FREE “NICONUTS” AND THE PROCESS THEREOF.

FIELD OF TECHNOLOGY: It is an established fact that tobacco; owing to the method of consuming and additional non required ingredients and waste other than nicotine for which tobacco is a source, there is a danger for acquiring cancer. Tobacco in which natural nicotine content is in sufficiently large quantity, however carries the risk of highly accelerated incident of negative health. It is the nicotine in tobacco that people seek for. It is not the nicotine that is the primary cause of negative health events. It is, therefore, possible that if a product could provide nicotine without the other ingredients of tobacco then the risk of negative health events would also diminish.

In the present era media through different modes of communication is giving the messages either through different slogans or the suggestions like while watching any movie in which smoking or eating tobacco is shown as a part, we see the message either at the beginning or as a caption below the screen that “smoking is injurious to health, it causes cancer” or “chewing tobacco is harmful to health as it causes cancer” and the like. Here it is important to note that when the tobacco is burned it produces carcinogenic polycyclic aromatic hydrocarbons and N-nitroso compounds; irritant substances such as acrolein; benzene; formaldehyde; ammonia; acetone; acetic acid, and carbon monoxide.

Inventors of the instant patent application address the issues associated with consuming tobacco as a source of nicotine by providing a product which has dual characteristics viz mouth and breath freshening and a tobacco free source of nicotine in a health friendly quantity. The present invention relates to an edible product popularly classified as mouth freshener that is free from tobacco leaves but gives the same satisfaction as a regular tobacco or gutkha eater or an active smoker hunts for. The subject invention names the product as “niconuts” and also provides the process for the preparation thereof. The product itself indicates that it contains nicotine but in such a small amount that could be health friendly and that can be used as a substituent for “gutkha” and is free from the

tobacco leaves. It is known that tobacco or gutkha eaters and smokers become addicted and gets the temptation to do so at regular intervals; which mainly happens due to the substance called “nicotine” present in tobacco leaves which is an active key material for all the products mentioned therein and the absence of which makes them uncomfortable. Here the inventors of the present invention want to emphasize the fact; that to fulfill the desire for nicotine, selection of its source also plays a vital role.

The product under the subject invention is capable of oral mucosal delivery of nicotine without leaving any waste in the mouth and gives the comfort to all the nicotine hunters. This invention is also intended to ease the discomforts associated with nicotine craving when a user of tobacco in any form is temporarily prevented from it; as nicotine is the key factor contained in all the tobacco based products. The subject invention not only eliminates the use of tobacco leaves but also does not leave any waste in the mouth upon eating and hence fully consumable. The fully consumable product under the subject invention comprises nuts, alkalisers (alkanisers), Humectants (moisture regulators), taste enhancers, sweeteners and the nicotine compound as the composition ingredients.

BACKGROUND OF THE INVENTION:

Nicotine is named after the tobacco plant “*Nicotiana tabacum*” which in turn is named after Jean Nicot de Villemain, French ambassador in Portugal, who sent tobacco seeds from Brazil to Paris in 1560 and promoted its medicinal use. Tobacco quickly grew in popularity in Europe and Asia though in China, Japan and Russia as well as in Muslim countries, there were harsh penalties for its use - ranging from the slitting of lips to execution. The Roman Catholic Church didn't ban tobacco as such, but it threatened with excommunication anyone who smoked in church. Some of the clergy got around this by sniffing powdered tobacco or snuff. By the end of the 17th century the use of snuff was common among the courts of Europe. Queen Anne of England was reputedly very fond of snuffing. When the French Revolution swept away the aristocracy, snuff went with it.

Nicotine is an alkaloid found in the nightshade family of plants “Solanaceae” which constitutes approximately 0.6 to 5.0% of dry weight of tobacco with biosynthesis taking place in the roots but gets accumulated in the leaves. Nicotine was first isolated from the tobacco plant in 1828 by German chemists Posselt & Reimann, who considered it to be a poison. Nicotine is hygroscopic, oily liquid that is miscible with water in its base form. Nicotine easily penetrates the skin. It functions as an “antiherbivore” chemical with particular specificity to insects; therefore, nicotine was widely used as an insecticide in the past. However, in the present era it has become a stimulant for the mammals and is one of the main reasons people get addicted to cigarettes or to tobacco or to gutkha. Studies by the National Institute on Drug Abuse [NIDA] have shown that nicotine activates reward pathways the circuitry within the brain that regulates feelings of pleasure and euphoria. According to the American Heart Association the Nicotine addiction has historically been one of the hardest addictions to break. The pharmacological and behavioral characteristics that determine tobacco addiction are similar to those that determine addiction to drugs such as heroin and cocaine.

Nicotine has an extremely short half life. Once it gets inside the body it breaks down pretty quickly and that explains why frequently people hunt for it. When one cigarette is smoked most of the nicotine gets burned and the amount that is inhaled with tobacco smoke is only a fraction of the amount contained in the tobacco leaves. It is generally known that active as well as passive smoking of tobacco products, such as cigarettes, cigars, and pipe tobacco, presents serious health risks to the user and those subjected to secondary smoke. It is also known that use of other forms of tobacco, such as chewing tobacco, chewing gutkha present serious health risks to the user. Furthermore, the use of tobacco products in public areas is increasingly either restricted or socially unacceptable.

It is also recognized that reducing or quitting tobacco use is often very difficult for persons accustomed to tobacco. This difficulty arises in large part from the addictive nature of nicotine. Efforts, therefore, have been made to provide alternate sources of nicotine to satisfy a tobacco user's cravings that occurs due to unavailability of nicotine products.

In recent years, nevertheless, nicotine replacement therapy (referred herein after as NRT) is used in helping people to stop smoking, because it saves them from many other harmful contents of tobacco smoke for example, the carcinogenic polycyclic aromatic hydrocarbons and N-nitroso compounds; irritant substances such as acrolein; benzene; formaldehyde; ammonia; acetone; acetic acid, and carbon monoxide (US environmental Protection Agency, monograph 4, NIH, publication No.93-3605). It has been successfully commercialized as a means to reduce or quit smoking or consumption of other forms of tobacco usage in the form of tobacco leaves, gutkha, snuffs etc.. Such commercial NRT or conventional anti smoking treatment usually include nicotine gums (e.g. NICORETTE), nicotine tooth picks, nicotine edible films and nicotine transdermal patches (e.g., NICODERM), which are specifically geared toward ceasing smoking or chewing tobacco or chewing gutkha altogether and often contain doses of nicotine in varying quantities which are less than those obtained from the typical cigarette or chewing tobacco or gutkha. There is an ongoing need to provide an improved alternate NRT. For example, users may prefer to use forms other than chewing gum, chewing gutkha, nicotine tooth picks, nicotine edible films or transdermal patches. Certain users may dislike or be unable to chew gum or to chew gutkha, and users may desire more rapid craving relief than typically provided by transdermal patches. In addition, nicotine lozenges have been marketed for example, as STOPPERS and NICOTINELL brand lozenges.

Research studies have also revealed that nicotine may be of therapeutic value to patients who suffer from a wide range of diseases and mental illnesses, such as Parkinson's disease, Alzheimer's disease, schizophrenia, and attention-deficit/hyperactivity disorder, as well as a means of appetite-control to promote weight loss.

The methods for delivering medicines or drugs into the human system through the skin or mouth in the prior art reveal fast dissolving oral films for breath fresheners, chewing gum, chewing gutkha or lozenges, drinking beverages, or applying gel or ointment compositions, sticking the patches to the skin.

It is also well known that gutkha is the most consumable form of tobacco based edible product which is consumed both by men and women and has

acquired a great popularity amongst the tobacco lovers throughout the world. However, the major disadvantage associated with chewing gutkha is that it causes mouth cancer and a great population amongst the users gets affected by it. The main ingredients of gutkha are tobacco leaves, nuts, catechu, and other flavoring agents. There is a lot of information available to the mankind for making the various types of gutkha.

US5593684 discloses methods and therapeutic systems for smoking cessation, utilizing transdermal nicotine delivery for obtaining base-line nicotine plasma levels, coupled with transmucosal administration of nicotine to satisfy transient craving. One preferred transmucosal delivery system is a lozenge for buccal delivery, comprising nicotine dispersed in an absorbent excipient and a nonnutritive sweetener, preferably made by direct compression.

US6082368 and US5048544 disclose nicotine confectionary forms like a nicotine candy in a cigarette shaped package or as lollypop. The candy uses food grade beta-pyridyl-alpha-N-methyl pyrrolidine dissolved or dispersed in any standard hard sugar candy. '544 discloses a cigarette substitute having an edible portion with nicotine, e.g., in the form of a conventional lollypop preferably with a hard or semi-hard candy.

US6923981 and US6596298 disclose fast-dissolving orally consumable films used to deliver breath deodorizing agents, antimicrobial agents and salivary stimulants to the oral cavity. The films can also be used to deliver pharmaceutically active agents.'298 discloses an improvement to films in the prior art, as well as the processes for making them.

US6893654 discloses a two-stage transmucosal medicine delivery system provided in a chewing gum or lozenge form to deliver a craving reduction substance through the mucosal tissues in the mouth. The system and apparatus can be adapted to reduce cravings for nicotine, alcohol, food and drugs (such as cocaine, opiates and the like). Likewise, describes a chewing gum delivery system with nicotine, a gum base and a buffer system with an improved release rate for nicotine.

US6479076 describes a nicotine delivery system through the skin of the user whereby a water-insoluble vinyl pyrrolidone copolymer in the form of a gel, ointment, solution, suspension or film is applied to the skin.

US6268386 discloses a liquid consisting of nicotine or alkaloid having the same direction of activity with one or any combination of water, carbonated water or natural juice and that the resulting composition could be consumed orally.

US20100247612 discloses a nonaqueous, extrudable composition which includes at least one thermoplastic polymer in an amount of more than 20% wt of the whole composition and tobacco. An extruded bioactive product in the form of a sheet made by extruding or hot melt shaping a non-aqueous composition comprising at least one thermoplastic polymer and a bioactive agent, the sheet being soluble in a user's mouth and resulting in sustained release of bioactive to the user and the bioactive agent is nicotine.

WO2012083947A1 discloses chewing gum composition with improved nicotine release profiles, and is environmentally friendly comprising a gum base matrix and a bulk portion, where the composition comprises nicotine and includes a cross linked polyacrylic acid (0.1-5 wt.%).

US20040037879A1 discloses oral dosage formulations comprising a nicotine active, optionally combined with an antidepressant, which through the controlled release of the active ingredient(s) alleviate rapid rise in blood plasma nicotine levels.

US20060162732A1 discloses a method for making a nicotine-containing toothpick where the concentration of the nicotine solution is adjusted to create toothpicks of varying nicotine levels.

US20050058609A1 discloses a medicated toothpick with an improved nicotine release profile over existing systems. The medicated toothpick is particularly useful for the delivery of nicotine and provides a physical and mental nicotine delivery system that may effectively be substituted for smoking.

US20040076665A1 discloses glassy matrix solid oral dosage forms useful for transmucosal oral administration of an active like nicotine.

While providing potential alternate nicotine replacement therapies (NRT) form, such compressed lozenges may not be appealing to certain users for

performance or aesthetic reasons. For example, compressed tablets tend to have a relatively grainy texture. In addition, commercial tablets of which the present inventors are aware that tablets are designed to have a relatively long dissolution period, such that craving relief is not as rapid as might be desired.

There are further disposal and inconvenience issues with prior art tobacco cessation products that are addressed by the present invention. Nicotine gum, nicotine containing toothpicks, patches and lozenges (if not consumed) contains enough residual nicotine to potentially poison children and pets and must be disposed off properly. The user of the nicotine gum has to follow a pattern of chew, park the gum along the gum line, chew, park, chew, park for a half hour or so until the nicotine is absorbed into the bloodstream. Chewing nicotine gum can also cause mouth, teeth or jaw problems because of the act of chewing. Sucking on a nicotine lozenge can be distracting to those around the user, while use of the nicotine gum or lozenge can be unacceptable in certain social situations. Because of the high amount of nicotine in the gum or lozenge, an overdose of nicotine can occur if more than one piece of gum or lozenge is chewed or consumed at the same time, or if many pieces are chewed or consumed one after another. Users of nicotine patches may experience irritation at the site of the patch on the skin due to adhesives in the patch or other skin sensitivities. Smoking also gets restricted in public places which make others very uncomfortable. The present invention overcomes the disadvantages encountered with the nicotine-containing products described therein in the prior art and hereinabove. Although nicotine containing edible films do not produce the disposable waste but its process for making requires film making equipment and also require plastisizers. Another problem in developing any nicotine based formulation product is the physical form of nicotine as liquid and its hygroscopic nature.

Mouth or breath fresheners in nut/solid form are very popular and nicotine based formulation in nut /solid form is novel and has neither been disclosed nor obvious to a person skilled in the art. Keeping all the factors into consideration inventors of the present invention have developed a novel edible product containing nicotine but free from tobacco leaves as such giving better safety profile to the consumers. Present invention discloses an edible nicotine based tobacco free product

comprising nuts, nicotine or its analogues and other ingredients as a dry powder like gutkha. The product of the subject invention can be used as a safer substituent for the usual gutkha and that will acquire the greater popularity both among men and women.

OBJECTS OF THE PRESENT INVENTION:

First aspect of the present invention is to provide a tobacco leaves free safer edible product that does not leave any waste after its consumption and gives the same satisfaction as a regular tobacco or gutkha eater or an active smoker hunts for.

Second aspect of the invention is the use of proper and safe source of nicotine for compounding the nicotine based product.

Third product of the present invention is to provide a safe solid nicotine based product that is superior over the other products known in the prior art.

Fourth aspect of the invention is to provide a nicotine based product that does not irritate or disturb others in the surroundings of the consumers.

Fifth aspect of the invention is to provide a nicotine based product that releases sufficient amount of nicotine to a consumer to pull a person out of nicotine craving symptoms.

Sixth aspect of the invention is to develop a safe tobacco leaves free product that can be used as a substituent for gutkha and which will acquire the good popularity amongst men and women.

Seventh aspect of the invention is to formulate a nicotine comprising safe and fully consumable product that will not exceed about 4% of nicotine content.

Eighth aspect of the invention is to provide a product that will incorporate the nicotine to such an amount that will give the desired satisfaction.

Ninth aspect of the invention is to provide a simple process for the preparation of such kind of product.

Tenth aspect of the invention is to provide a product of dual characteristics viz mouth/breath freshening and nicotine source.

Eleventh aspect of the invention to use product of the present invention as a safe alternate to nicotine replacement therapies (NRT).

ADVANTAGES OF THE INVENTION:

1. The main advantage of the product under the subject invention not only eliminates the use of unsafe tobacco leaves but also leaves no waste in the mouth and hence fully consumable and gives the same satisfaction to the consumers as a regular tobacco or gutkha eater or an active smoker hunts for.
2. Product of present invention being a solid is handled with an ease.
3. The process for making uses simple equipment like mixer or blender and dryer.
4. The product of the present invention does not produce any residual products such as ash and filters left after the smoking or gum left after using a chewing gum, a toothpick left after using nicotine toothpick.
5. The product of the present invention does not cause any irritation to others in the surroundings of the consumer or user.
6. The product of the present invention does not produce any tarry material in the body as produced by smoking.
7. The product of the present invention can be used as an alternate in nicotine replacement therapies (NRT).
8. The product of the present invention is also used as mouth/breath fresher.

SUMMARY OF THE INVENTION:

The present invention relates to a fully consumable safe product that is free from tobacco leaves as such but releases sufficient amount of nicotine to a consumer to pull a person out of nicotine craving symptoms and gives the same satisfaction to the consumers as a regular tobacco or gutkha eater or an active smoker hunts for. The product under the subject invention named as “niconuts” is a composition comprising nuts, alkalisers (alkanisers), Humectants (moisture regulators), taste enhancers, sweeteners and the nicotine compound. Compounding of the nuts with nicotine compound mix results into the nicotine content in the range of about 0.001% to about 4%.

The process used for the preparation of fully consumable safe product that is free from tobacco leaves comprising steps:

- i) Cutting or Granulation and heating of the of the nuts in a suitable pan like mixer or blender;
- ii) sprinkling of conditioning solution over nuts of the step i and ensuring the uniform distribution of conditioning solution over nuts;
- iii) incubation of the conditioned nuts from the step ii;
- iv) coating of the nuts from the step iii with nicotine compound mix and ensuring the uniform distribution of nicotine compound mix over the nuts;
- v) incubation of the nicotine compounded nuts from the step iv;
- vi) drying of the nicotine compounded nuts from the step v;
- vii) cooling of the nicotine compounded nuts from the step vi;
- viii) Packing of the product “niconuts” obtained from the step vii.

The various terms like conditioning solution, compounding etc. used hereinabove of the invention are described in details herein below under the heading of detailed description of the invention.

DETAILED DESCRIPTION OF THE INVENTION:

Disclosed herein is a safe tobacco leaves free edible product and process for the preparation thereof. The said edible product characterized by a fully consumable product that is free from tobacco leaves as such but releases sufficient amount of nicotine to a consumer to pull a person out of nicotine craving symptoms and gives the same satisfaction to the consumers as a regular tobacco or gutkha eater or an active smoker hunts for. The product under the subject invention named as “niconuts” is a composition comprising nuts, alkalisers (alkalisers), Humectants (moisture regulators), taste enhancers, sweeteners and a nicotine compound.

The process used for the preparation of fully consumable edible product that is free from tobacco leaves comprising steps:

- i) Cutting or Granulation and heating of the of the nuts in a suitable pan like mixer or blender and the like;
- ii) sprinkling of conditioning solution over nuts of the step i and ensuring the uniform distribution of conditioning solution over nuts;
- iii) incubation of the conditioned nuts from the step ii;
- iv) coating of the nuts from the step iii with nicotine compound mix and ensuring the uniform distribution of nicotine compound mix over the nuts;
- v) incubation of the nicotine compounded nuts from the step iv;
- vi) drying of the nicotine compounded nuts from the step v;
- vii) cooling of the nicotine compounded nuts from the step vi under controlled humidity;
- viii) packing of the product “niconuts” obtained from the step vii.

Cutting or the granulation of the nuts is to be in the range of about 3 to about 6 mm. Nuts used for the preparation of “niconuts” is selected from the group comprising areca nuts collected from the different geographical

regions of the globe, Colombian Ivory Palm nuts, kappa nuts, maize nuts, palm nuts and the like or mixture thereof. Preferably nut is areca nut.

Heating of the nuts is carried out at a temperature that should not spoil the desired characteristics of the nuts and the preferably nuts are heated at about 80°C.

Conditioning solution used for the preparation of the “niconuts” comprises water, alkanisers and humectants.

The term incubation means digestion of the conditioning solution over nuts to achieve the uniformity and is done at about 40 to about 60°C.

Nicotine compound mix used for the preparation of the “niconuts” comprises water, salts and a nicotine source ingredient. The nicotine source ingredient which is a source of nicotine is selected from the natural extract of tobacco and other natural sources known in the prior art and synthetic nicotine based compounds known in the prior art. The nicotine source for the preparation of niconuts of instant invention having about 0.001% to about 4% nicotine content.

Drying of the “niconuts” should be at a temperature that should not spoil the desired characteristics of the final product. Generally “niconuts” are dried at about 100°C with stirring or scrapping periodically. The equipment for the drying could be selected from SS treys, fluidized bed dryer and the like.

The different varieties of nuts used for the preparation of “niconuts” as a product of the invention is selected from the various geographical areas of the globe as mentioned herein below. The nuts used are selected from the group comprising Alupeetan, Api, Karigaie, RasoRasi, Bette, Kettbette, Dappapi, Kemp Barada, Vantadal, Hol Bette, Ben Muri, ChangiriRasMuri, Karigai Bette, Kemp Gotu, Chali, ChaliPatore, ChaliGotu, ChaliBarada all collected from the Karnataka region, RotaKatori, L.R.K., S.R.K., ChikniKatori, Rotha all collected from Assam region, R.K.D., B-1, B-2, KirchiSupari, Parcha all collected from Indonesia and various varieties of palm nuts, maize nut, Tapioca(kappa) nut or mixture thereof. In case when Tapioca (Kappa) is to be used in form of nuts it is to be processed properly as known in the art. Moreover

the product “niconuts” of the present invention with or without menthol remains under the scope of the invention.

Alkanisers used for the preparation of “niconuts” of the invention is selected from the group comprising ammonium bicarbonate, ammonium hydroxide, ammonium chloride, calcium carbonate, calcium chloride, calcium oxide, magnesium carbonate, magnesium hydroxide, magnesium oxide, potassium bicarbonate, potassium carbonate, potassium hydroxide, sodium bicarbonate, sodium carbonate, sodium hydroxide, sodium sesquicarbonate, sodium citrate, sodium lactate and the like or mixture thereof.

Humectants used for the preparation of “niconuts” of the invention is selected from the group comprising sodium maleate, sodium hydrogen maleate, sorbitol and sorbitol syrup, glycerol, xylitol, erythritol, polydextrose L and N, triacetin, propylene glycol and the like or mixture thereof.

Taste enhancers used for the preparation of “niconuts” of the invention is selected from the group comprising salts, ammonium chloride, spices edible gums, Rebudioside, Liqorice, tea extracts, plant tannins, polyphenols, myroballons, amla, herbs and their extracts, edible oils, acacia catechu, gambier and the like or mixture thereof.

A sweetener used for the preparation of “niconuts” of the invention is selected from the group comprising acesulfame potassium, aspartame, maltitol syrup, erythritol, polydextrose, isomalt, manitol, sorbitol, sorbitol syrup, xylitol, lactitol, sugar, glucose, dried glucose syrup, honey, bura, jiggery, golden syrup and corn syrup, liquid glucose, molasses, fructose and refined sugar and the like or mixture thereof.

In a general embodiment of the invention areca nuts or the palm nuts are cut or granueled into the pieces having the dimensions of about 3 to about 6mm and are heated in a pre heated suitable pans like rotary mixer or blender under the controlled humidity at temperature of about 80°C. These nut granules are then sprinkled with a conditioning solution comprising alkanisers and humectants in hot water maintained at about

80°C using a sprayer under the stirring at slow RPM (revolutions per minute) in such a way that the blades of the pan do not cut the nuts further. The stirring or mixing is continued at least for about 15 to about 20 minutes to have the uniform distribution of the conditioning solution over the nuts. This is followed by incubation at a temperature about 45 to about 50°C at least for about an hour so that the nuts get digested properly. In the next step of the process the conditioned nuts are coated with nicotine compound mix which comprises hot water, stevia, Mono ammonium Glycrrhizinate (taste enhancer(s), sweetener(s) and natural nicotine extract using fine mist sprayer at a temperature about 50°C under the stirring and is continued for about 20 minutes to get the uniform distribution of the nicotine compound mix. Coated nuts are further subjected for the incubation under stirring for about an hour at about 45°C to about 50°C to have the proper digestion of the nicotine compound mix over the conditioned nuts so that final “niconuts” will have the nicotine content in the range of about 0.001% to about 4%.

In next step of the process the nicotine coated nuts are dried for about one hour and 20 minutes by taking into a suitable dryer like SS tray or fluidized bed dryer (depending on the batch size) at a temperature of about 100°C with periodic scrapping using stainless still spatula followed by its cooling at controlled humidity at least for about two hours and is then finally taken for the packing the product as “niconuts”.

In a specific embodiment of the invention Alupeetan areca nuts are cut or granueled into the pieces having the dimensions of about 3 to about 6mm and are heated under stirring at low rpm in a pre heated blender at temperature of about 80°C. These nut granules are then sprinkled with a conditioning solution made comprising magnesium carbonate as an alkalizer and glycerol as humictant in hot water using a sprayer at a temperature of about 80°C and continued for about 25 minutes. These nuts are then further incubated for an hour at about 40°C to about 45°C during which the said nuts are properly digested.

In the next stage of the processing nicotine compound mix made by dissolving natural nicotine extract comprising nicotine oil extractacted from tabaccoo, taste enhancers and sweetener in hot water. The said nicotine compound mix solution is then sprayed over the conditioned said nuts using a fine mist sprayer keeping the temperature at about 50°C

under stirring and is continued for about 20 minutes. Nuts so obtained are incubated further at about 45°C to about 50°C for about one hour during which the said nuts get properly coated and digested. In the next stage of processing conditioned and coated nuts are taken into SS tray dryer and dried at about 100°C with frequent scrapping of the nuts using a stainless steel spatula and continued for about two hours. This is then followed by cooling under the controlled relative humidity for about two hours to get the “niconuts” as final product which is then taken for the packing.

During entire processing temperature and relative humidity of the surrounding is maintained at about 25±2°C and about 45% to about 50% respectively.

The invention is clearly understood by giving the following examples without limiting to scope of the invention.

EXAMPLES:

Example 1:

1.0 kg Alupeetan areca nuts are cut into pieces and are taken into a preheated blender maintained at 80°C and slow blending is continued for 15 minutes. In the mean time conditioning solution is prepared by dissolving 10.0 gm magnesium carbonate as an alkaliser and 0.5 gm glycerol as humectant in 120ml hot water and the resulting solution is maintained at 80°C. This conditioning solution is then sprinkled over the blended areca nuts using a sprayer keeping the temperature at 80°C and blending is continued for 15 minutes more to ensure the uniformity in the mass. This mass is then incubated further for another one hour to get the optimum digestion of the conditioning solution into the nuts. These conditioned nuts are then taken for the coating in the same container by spraying the nicotine compound mix made by dissolving 0.02gm stevia, 0.5 gm mono ammonium glycerrhizinate and 4.75gm natural nicotine extract in 30ml hot water keeping the temperature at 50°C under stirring and maintained for 15 minutes followed by incubation for an hour under the same condition to achieve the optimum digestion and uniformity of the granules. Resulting granules are then taken for the drying in stainless steel tray and dried for one hour and 20 minutes with occasional scrapping the nuts using spatula at temperature of 100°C. Finally nuts so

obtained are then cooled under controlled relative humidity for 2 hours to get “niconuts” as final product and then packed.

Example 2:

1.0 kg palm nuts are cut into pieces and are taken into a preheated blender maintained at 80°C and slow blending is continued for 15 minutes. In the mean time conditioning solution is prepared by dissolving 10.0 gm magnesium carbonate as an alkaliser and 0.5 gm sorbitol as humectant in 120ml hot water and the resulting solution is maintained at 80°C. This conditioning solution is then sprinkled over the blended palm nuts using a sprayer keeping the temperature at 80°C and blending is continued for 15 minutes more to ensure the uniformity in the mass. This mass is then incubated further for another one hour to get the optimum digestion of the conditioning solution into the nuts. These conditioned nuts are then taken for the coating in the same container by spraying the nicotine compound mix made by dissolving 0.02gm stevia, 0.5 gm mono ammonium glycerrhizinate, 3.5 gm natural nicotine extract in 30ml hot water keeping the temperature at 50°C under stirring and maintained for 15 minutes followed by incubation for an hour under the same condition to achieve the optimum digestion and uniformity of the granules. Resulting granules are then taken for the drying in ss tray and dried for one hour and 20 minutes with occasional scrapping the nuts using spatula at temperature of 100°C. Finally nuts so obtained are then cooled under controlled relative humidity for 2 hours to get “niconuts” as final product and then packed.

CLAIMS:

We claim:

1. A mouth freshener termed as “niconuts” characterized by the fact that the said “niconuts” are free from tobacco leaves and is used as an alternate in nicotine replacement therapies (NRT).
2. Nicotine containing composition; the said composition comprising nuts, alkalisers, humectants, taste enhancers, sweeteners; wherein said composition referred as “niconuts” contain about 0.001% to about 4% nicotine.
3. A process for the preparation of “niconuts” comprising steps:
 - i) Cutting or Granulation and heating of the of the nuts in a suitable pan like mixer or blender;
 - ii) sprinkling of conditioning solution over nuts of the step i and ensuring the uniform distribution of conditioning solution over nuts; wherein said conditioning solution comprises alkalisers, humectants and water;
 - iii) incubation of the conditioned nuts from the step ii;
 - iv) coating of the nuts from the step iii with nicotine compound mix and ensuring the uniform distribution of nicotine compound mix over the nuts; wherein nicotine compound mix comprises taste enhancers, sweeteners, nicotine compound and water
 - v) incubation of the nicotine coated nuts from the step iv;
 - vi) drying of the nicotine compounded nuts from the step v;
 - vii) cooling of the nicotine compounded nuts from the step vi under controlled humidity to give said edible “niconuts”;
 - viii) packing of the product “niconuts” obtained from the step vii.
4. Nuts as claimed in claim 1 are selected from the group comprising areca nuts, maize nut, Tapioca (kappa) nut, palm nuts or mixture thereof.

5. A process for the preparation of “niconuts” of claims 2 and 3 wherein alkalisers used is selected from the group comprising ammonium bicarbonate, ammonium hydroxide, ammonium chloride, calcium carbonate, calcium chloride, calcium oxide, magnesium carbonate, magnesium hydroxide, magnesium oxide, potassium bicarbonate, potassium carbonate, potassium hydroxide sodium bicarbonate, sodium carbonate, sodium hydroxide sodium sesquicarbonate, sodium citrate, sodium lactate or mixture thereof.
6. A process for the preparation of “niconuts” of claims 2 and 3 wherein humectants is selected from the group comprising sodium maleate, sodium hydrogenn maleate, sorbitol and sorbitol syrup, glycerol, xylitol, erythritol, polydextrose L and N, triacetin, propylene glycol or mixture thereof.
7. A process for the preparation of “niconuts” of claims 2 and 3 wherein taste enhancers is selected from the group comprising salts, ammonium chloride, spices edible gums, I+G, Rebudioside, Liquorice, tea extracts, plant tannins, polyphenols, myroballons, amla, herbs and their extracts edible oils, acacia catechu, gambier and mixture thereof.
8. A process for the preparation of “niconuts” of claims 2 and 3 wherein sweeteners is selected from the group comprising acesulfame potassium, aspartame, saccharin (Na, K and Ca salts), ncotame, stevia, sucralose, maltitol and maltitol syrup, erythritol, polydextrose, isomalt, manitol, sorbitol and sorbitol syrup, xylitol, lactitol, sugar, glucose, dried glucose syrup, honey, bura, jiggery, golden syrup and corn syrup, liquid glucose, molasses, fructose and refined sugar and mixture thereof.
9. Nicotine compound used for the preparation of “niconuts” as claimed in claims 1,2 and 3 is selected from the group comprising nicotine oil extracted from natural sources or synthetic nicotine based compounds known in the prior art or mixture thereof.