

CACTUS FRUIT HEALTH PRODUCTS

Field of the Invention

5 The present invention relates generally to the field of botanical and nutritional products for human consumption and care, and more particularly to botanical products comprising cactus fruit and ginseng berry ingredients. Preferred embodiments of the present invention comprise novel compositions of cactus fruit, ginseng berry and other beneficial ingredients prepared for human consumption and care through ingestion and topical application.

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BACKGROUND

The human physiological need for vitamins has been well established. Regular dietary consumption of vitamins is essential to good health. Various organizations and government agencies have published recommended quantities for vitamin consumption. One well known standard in the United States is the U.S. Recommended Daily Allowance (RDA) which recommends quantities for the daily intake of vitamins.

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While the need for vitamins is well known, the average person fails to consume the recommended daily intake of vitamins through their normal diet. Often this is due to a busy work schedule that encourages the consumption of "fast food" that is high in fat and sugar content. For others, food rich in vitamin content may just not be readily available. Whatever the reason, many people do not consume enough vitamins in their daily diet.

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Vitamin supplements have become common and are distributed in a variety of forms. Pills, capsules, elixirs, tablets and other forms abound on the market as a means for obtaining a proper daily vitamin intake. For some, this is an acceptable source of vitamins, however, many people cannot consume vitamins in these forms. Children and the elderly are especially averse to consumption of these products. This may be due to sensitive gag reflexes or a strong distaste for the product's form or taste. Regardless of the reason, many people find concentrated vitamin supplements unpalatable and unacceptable as a source of daily vitamin intake.

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30 Fruit juice drinks are a common source of refreshment and nutrition. Many fruit drinks contain naturally occurring vitamins. Others may be vitamin enriched through the addition of vitamin supplements. However, the addition of large amounts of vitamin supplements can adversely affect the taste and mouth feel of a fruit drink or food product. The addition of vitamin supplements can cause a metallic taste, a fish-like taste and distinctly non-fruit-like aromas. These are obviously unpalatable and undesirable in a fruit juice or food product.

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Common fruit drinks with high vitamin content are often highly acidic. For example, citrus fruits often have very high acidity. For those with sensitive stomachs and digestive tracts, this acidity can cause an upset stomach and aggravate existing problems such as ulcers and stomach reflux, thereby precluding consumption of those juices. Fruit
5 juices with high vitamin content, but less acidity, are preferred by these consumers.

Natural foods are popular among health-conscious consumers today. Many people prefer to get their vitamins and other nutrients in a "natural" way from naturally occurring sources. "Natural" vitamins are now in high demand. These are vitamins which are found in a product in its natural state without vitamin supplements or vitamin
10 "fortification." Because many fruits have high vitamin content, fruit flavors and aromas are often associated with healthy vitamin-rich products.

Among these natural vitamin containing foods and drinks, the health-conscious consumer often prefers a flavor which is unique or exotic and mildly sweet. This gives the perception of a healthy substance that is not high in calories. Unique and exotic tastes
15 are often preferred and perceived to be more refreshing so long as they can be associated with a natural fruit, vegetable, herb or other natural source.

The majority of Americans, and people of many other cultures, are accustomed to consuming stimulants as a part of their daily routine. In the United States, the stimulant of choice is currently caffeine. Millions of cups of coffee are imbibed each
20 morning to kick-start the day and throughout the day to provide a pick-me-up in the afternoon or evening. Cola drinks are also a source of caffeine which are consumed in large amounts. Other cultures prefer tea as a source of caffeine stimulant. The addictive nature of caffeine may explain its widespread acceptance and enormous consumption rate. Caffeine-containing drinks continue to be popular despite effects that are
25 detrimental to the body. Caffeine can be detrimental to the digestive tract as well as other systems. Caffeine's addictive effects and a user's psychological dependence on caffeine's stimulation make it difficult to abandon after continued use. An alternative product which can provide gentle stimulation would be a welcome alternative to caffeine-containing drinks.

30 Human skin is a part of the body that is extremely susceptible to the temperature and humidity extremes of our environment. However, when skin care products are properly used to counteract adverse environmental conditions, skin can remain healthy and beautiful under a variety of extreme environmental conditions. The environmental factors that most often affect the skin adversely are ultraviolet radiation and humidity.

35 Ultraviolet radiation varies with time of day, from day to night, with seasons of the year and weather conditions. The geographic region where one lives and the climate

will also affect the amount of radiation to which one's skin is exposed. The sun's rays can dry skin through direct moisture loss or through the effects of radiation on the skin which may cause tanning and burning as well as moisture loss.

5 Skin may also face adverse conditions in the workplace where excessive temperatures or low humidity may harm skin. Exposure to chemicals may also remove moisture from the skin causing damage and actual skin chafing and loss if not treated properly.

10 In addition to environmental factors, skin must also be properly nourished. Maintaining healthy skin requires maintenance of proper moisture in the skin as well as delivery of essential vitamins to the skin. Vitamins may be consumed in the diet or may be applied directly to the skin.

15 For some people, oral consumption of vitamin C, especially in large doses, can have detrimental side effects ranging from mouth irritation to overdose. Yet large doses are sometimes necessary to provide the skin with the maximum beneficial amount of vitamin C. Vitamin C promotes collagen synthesis through its free radical scavenging attributes and its enzyme reactions which, in turn, promotes wound healing and skin health. Vitamin C is also toxic to many cancer cells including melanoma and has been found to catalyze the immune reaction to viral and bacterial infections.

20 Similar to natural foods, natural skin care products and remedies are popular among health-conscious consumers. Many people prefer to enhance their appearance, skin tone and health with vitamins and other nutrients in a "natural" way from naturally occurring sources. Natural vitamins are those found in a product in its natural state without vitamin supplements or vitamin "fortification." While fruit and vegetable juices are known to have high concentrations of vitamins in their natural state and are often a preferred source of vitamins for internal consumption, many natural fruit and vegetable products are largely overlooked as a topical skin application.

SUMMARY OF THE INVENTION

30 Preferred embodiments of the present invention provide a natural health product without the detrimental effects of vitamin fortification or addition of non-natural ingredients. These embodiments proved a natural-feeling or natural-tasting nutritional supplement or topical application which contains many essential vitamins, minerals and amino acids as well as the benefits of selected herbs and, in some embodiments, royal jelly. An unique or exotic flavor or sensation is provided through the use of cactus fruit or products created from cactus fruit or extracts therefrom combined with natural health promoting ingredients. In some preferred embodiments, ginseng berry products or

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ginseng berry juice is combined with cactus fruit products to add nutrients and/or flavor.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

5 The present invention may be embodied in other specific forms without departing from its spirit or essential characteristics. The described embodiments are to be considered in all respects only as illustrative, and not restrictive. The scope of the invention is, therefore, indicated by the appended claims, rather than by the foregoing description. All changes which come within the meaning and range of equivalency of the claims are to be embraced within their scope.

10 A preferred embodiment of the present invention comprises a health product, such as a food or drink product or topical application product, made from cactus fruit and other select ingredients. A preferred genus of cactus is the *Cereus* genus with several preferable species such as *Cereus grandiflorus*, *Cereus giganteus* and *Cereus thurberi*. Another preferred genus is the *Opuntia* which includes many preferred species including
15 *Opuntia strigil*, *Opuntia basilaris*, *Opuntia rufida*, *Opuntia phaeacantha*, *Opuntia engelmannii*, *Opuntia erinacea*, *Opuntia humifusa*, *Opuntia phaeacantha*, *Opuntia chlorotica*, *Opuntia polycantha*, *Opuntia violacea*, *Opuntia spinosabacca*, *Opuntia lindheimeri* and *Opuntia macrorhiza*. The species within the *Opuntia* genus of cactus have relatively flat, oval-shaped pads, similar to the leaves or branches of a bush, which
20 may or may not have spines thereon. Cactus fruit or "pears" generally grow around the perimeter of the oval-shaped pads on these cacti. In the practice of embodiments of the present invention, juice or a juice/pulp mixture is derived from the cactus fruit. In some presently preferred embodiments, juice or pulp may also be derived from the cactus pads or stems.

25 Cactus fruit grow in several varieties with varying color, seed content, sugar content and size. Colors range from green and yellow to purple, orange and red. Fruits generally range in size from 110 grams to 150 grams. Seed content, by weight, typically ranges between 2 and 4 grams per fruit while sugar content generally ranges between 11% and 16%. Cactus fruit used in a preferred embodiment of the processes and
30 compositions of the present invention are red with average to high sugar content obtained from the *Cereus Grandiflorus* species.

Laboratory analysis of the juice from cactus fruit used for some preferred
embodiments of the present invention shows a high concentration of essential vitamins. The following Table 1 gives the result of a laboratory analysis of the cactus juice
35 squeezed from the *Cereus Grandiflorus* cactus used in some preferred embodiments of the present invention.

Table 1

Thiamin	116.6 ug / gram of product
Riboflavin	221.9 ug / gram of product
Vitamin C	8.35 mg / gram of product
Vitamin A	309 IU
Vitamin E	1.36 IU
Vitamin D3	120 IU
Beta Carotene	16.6 IU
Cyanocobalamine B12	91 mg / gram of product

Cactus fruit juice has also been found to be an effective anti-oxidant. Laboratory analysis reveals that one gram of cactus fruit contains 7 times more antioxidant than 10mg of Vitamin C. The results of these tests prove that cactus fruit juice is an excellent source of vitamins.

As well as supplying nutrients beneficial to the skin and body, cactus fruit juice is also an effective skin moisturizer. Laboratory tests using skin surface hydration measurements show that cactus fruit extract has a noticeable and enduring moisturizing effect on the skin. In these laboratory tests a tuberculin syringe was used to deliver 0.05 cc of cactus fruit extract to a 5x5 cm square on the volar forearms of 8 healthy volunteers. A glass rod was used to evenly spread the material over the test site. Immediately before treatment and at 2 and 4 hours thereafter, a series of skin surface hydration measurements were taken using a Skicon-200 conductance meter which was equipped with a Measurement Technologies probe. As a follow-up test the test sites were briefly wetted with water and the resulting change in conductance measured 2 minutes later. The results are tabulated below in Table 2.

Table 2

<u>Time</u>	<u>No Treatment</u>	<u>Cactus Fruit Extract</u>
	Mean $\pm$ SD	Mean $\pm$ SD
Baseline	160.6 $\pm$ 48.2	163.3 $\pm$ 48.3
Post 2 hours	152.8 $\pm$ 52.6	203.2 $\pm$ 53.3
Post 4 hours	157.2 $\pm$ 51.2	201.8 $\pm$ 57.7
2 min. post wet	292.4 $\pm$ 149.4	427.2 $\pm$ 164.8

Clearly, the skin surface hydration levels are markedly enhanced at the location where cactus fruit extract has been applied. These tests also show an enduring moisturizing effect lasting over 4 hours. Results of the follow-up test, shown in the

bottom row of table 2, also show a significant increase in skin surface hydration levels after wetting. This indicates that the water binding capacity or the water retention properties have been noticeably improved by the application of cactus fruit extract leading to improved re-moisturizing as well as improved moisture retention.

5 Cactus fruit extract has also been found to promote proliferation of normal human fibroblasts thereby promoting wound healing. The Thymidine Incorporation Assay is commonly used to study proliferation of cells exposed to various chemicals. As cells grow, they must replicate their genome with every division cycle. If radiolabeled thymidine is present in the media, the cell will import this and incorporate it into the
10 replicating DNA. Consequently, the rate at which cells divide can be quantified by the relative amounts of labeled thymidine in the cell. The goal of this study is to determine whether the addition of Cactus fruit extract to normal and transformed cells will increase the cell proliferation.

In this study, crude cactus fruit (21.17g) was diluted in 25 ml of sterile Hanks
15 buffer solution. The mixture was centrifuged for 5 min @ 1460 rpm to pellet debris. The supernatant was filtered through a 0.2- μ m sterile filter.

Raji cells (established, transformed human lymphocytes) and FS-10 cells (normal human foreskin fibroblasts) were grown to log phase in RPMI media. 100- μ l of cell suspension was added to each of 5 wells on a 96-well plate for each dilution. Dilutions
20 of cactus fruit extract were made in sterile Hank's buffer solution. 100- μ l of each dilution was added to each well. Pure Hank's buffer was used as a control. Cells were incubated for 21 hours. H^3 radiolabeled thymidine was added to RPMI media at a concentration of 1- μ l thymidine (15.4 Ci/mmol) : 49- μ l media. 50- μ l of thymidine solution was added to each well, and the plate was incubated for 3 hours. After 24 hours
25 total incubation, cells were harvested using a cell harvester. The plates were allowed to dry overnight. Radioabsorption was subsequently measured.

The addition of cactus fruit extract to Raji cells (a cancerous cell line) did not cause a significant increase in thymidine incorporation. In fact, the levels were consistently lower than controls. Normal fibroblasts grown in the presence of cactus
30 berry extract, however, showed as high as 38.6% increase in thymidine incorporation. Repeat experiments were performed with similar results. Only the results of FS-10 normal cells have been included in this document

This preliminary study gives the indication that cactus fruit extract does promote cell proliferation in normal human fibroblasts but not in transformed cells. This could play a major role in wound healing. The extent to which cactus fruit extract promotes wound healing may be determined by further analysis. Regardless of the extent of this proliferating effect, this increase in cell proliferation may aid in healing of skin wounds in the digestive tract as well as the skin and other parts of the body. Results of this analysis are shown in Table 3 below.

Table 3

Cactus Fruit Extract		
FS-10 normal human fibroblasts		
Dilution Factor	Absorption	% Increase
1:4	1031.4	38.6%
1:9	961.6	29.3%
1:49	978.7	31.6%
1:99	914	22.9%
1:299	749	0.7%
Control	743.9	

Preferred embodiments of the present invention may also contain ingredients made from the ginseng berry. Although the ginseng root is sometimes used as an herbal supplement, the ginseng berry has been overlooked as a food product or medication due, at least in part, to its high seed content. Ginseng berries contain a large number of seeds which make up a large percentage of the berry's volume. These seeds must be removed in order to make a liquid or pulp with uniform consistency that is also suitable for conversion to a cream, lotion, powder or other form.

Laboratory analysis of the juice from ginseng berries used for some preferred embodiments of the present invention shows a high concentration of essential vitamins. The following Table 4 gives the result of a laboratory analysis of the essential vitamins and ingredients found in ginseng berry juice.

Table 4

Riboflavin	171.9 ug / gram of product
Vitamin A	109 IU
Vitamin E	1.5 IU
Beta Carotene	16.9 IU

Advantageously, ginseng berry juice also acts as an anti-oxidant. Laboratory analysis reveals that one gram of ginseng berry contains 1.4 times more antioxidant than 10mg of Vitamin C.

5 Modern machinery may be used to produce juice from cactus fruit or ginseng berries, however a preferred method of the present invention comprises a manual process.

The skin of the cactus fruit is peeled off by hand, using a knife, leaving the soft red meat of the fruit exposed. Seeds are then removed by filtration through a coarse screen. The remaining meat is squeezed in a press to remove as much juice as can be practically removed. The squeezed meat is subsequently blended, preferably with a mixer-type appliance and filtered through a 0.2 micron filter using a micro-filtration system. Cactus pads are processed in a similar way. Juice is extracted from cactus pads and cactus fruit separately so that the two juices may be blended in specific proportions.

Juice is extracted from ginseng berries in much the same way as cactus except the berries need not be peeled before crushing. Whole ginseng berries are mixed and crushed in a press thereby removing the majority of juice. Seeds are then removed from the juice by filtration through a coarse screen filter. When a solids-free liquid is desired, the juice may be further filtered in a 0.2 micron micro-filtration system to remove finer solids. Some solids content may be acceptable or desired to improve texture or add fiber to the final product. When this is the case, the micro-filtration step may be omitted.

20 After juice has been extracted, it is blended with other natural ingredients which may add flavor, sweetness, texture, nutrients, protectants and other nutritional and physiological benefits.

Application or consumption of natural herb products along with the beneficial vitamins contained in cactus fruit and ginseng berry juice may also increase health and vitality. The effects of various herbs and plant products are beneficial to the nervous, digestive and circulatory systems as well as other physiological functions. Herbs which, when consumed, are beneficial to one's health and vitality may be considered to be "natural health promoting ingredients." The combination of herbal ingredients with healthful and rejuvenating cactus fruit juice products offers the health advantages of natural vitamins and herbs in a health product that can be used as or added to myriad food products and topical applications such as lotions, shampoos, tooth pastes and creams.

35 Ginseng root also has beneficial physiological effects. It is believed to help regulate blood pressure and increase the body's resistance to adverse physical, chemical and biological influences. Ginseng root can stimulate physical and mental activity and protect against the adverse effects of mental and physical stress. It may also improve concentration and stimulate brain cells. Ginseng root may be considered to be a natural

health promoting ingredient or an herbal stimulant. In the prior art, like some vitamins, ginseng root is often offered in capsules or tablets in a raw form. This can be difficult for some to ingest due to gag reflexes, physical impairment or psychological aversion to tablet or capsule consumption.

5 Royal jelly is a natural substance produced by worker bees as a food source for the queen bee. It is known to have beneficial physiological effects when consumed by humans as well. It contains vitamins A, C, E and numerous B vitamins. It also contains minerals and many amino acids necessary for the body. Royal jelly is believed to increase vitality and longevity in humans. Royal jelly may be considered a natural health
10 promoting agent.

 In the prior art, royal jelly is also distributed in capsule form, making it undesirable to those averse to capsules. Nectar or elixir forms are also available, but these concentrated liquids are also unpalatable or otherwise unacceptable to some consumers. It has been discovered that an exotic-tasting, vitamin-rich fruit drink is an
15 excellent medium for consumption of royal jelly.

 Preferred embodiments of the present invention combine the juice of cactus fruit with herbal stimulants and/or other natural health promoting agents to create a food or drink product or a topical application that is pleasurable to consume and which provides a great variety of ingredients essential to health and vitality.

20 The powdered food supplements of the present invention allow a user to benefit from many of the beneficial effects of cactus fruit, ginseng berry and ginseng root without the requirement of ingesting tablet or capsules. For those who prefer tablets or capsules, the powder product of the present invention may be pressed into tablets or dispensed in capsules as desired.

25 Cactus fruit juice may be concentrated by known techniques to form a concentrated extract or syrup. This concentration may be performed on the pure juice of the cactus fruit or it may be performed after mixing the juice with other ingredients. This concentrated extract then be dried to a powder form. When more fiber or texture is desired, the final filtration step of the juice making process using a 0.2 micron filter may
30 be omitted or replaced with a step which utilizes a coarser filter as described in the powder making processes below. Alternatively, fiber and texture producing ingredients may be added as needed for powder texture and consistency.

 Some powder embodiments of the present invention may be created from cactus fruit juice and/or pulp either before or after addition of other ingredients. The cactus fruit
35 is crushed and squeezed after which the seeds are removed by filtration. This creates a slurry solution which can be further processed into a powder.

Under one method of the present invention the slurry solution is dried by a hot air drying method wherein the slurry is placed on a conveyor belt exposed to extremely hot air. Once dry, the product is ground to a specific size.

Another drying method used to create some powder embodiments of the present invention employs a freeze-drying method wherein the slurry is frozen and then dehydrated in a vacuum. The resulting dehydrated product is then ground to the desired size.

In yet another, alternative drying method for producing the powdered products of the present invention, the slurry solution is further filtered using a 0.2 micron micro-filtration system to produce a liquid product. All particles of the fruit and seeds are thereby removed. The liquid product is then spray-dried to powder form.

In the spray-drying process the liquid product is sent to an atomizer which uses a nozzle or centrifugal rotating wheel to atomize the liquid product into a spray. Droplets created by the atomizer contain both water and cactus fruit solids. This atomized spray is sent to a drying chamber with a controlled temperature and air flow. Atomized droplets are kept in contact with the heated air until the desired moisture content is achieved. During this process, the droplets become particles which are subsequently separated from the air stream. The resulting particles may then be ground to a finer powder if desired.

Regardless of the drying process used, the powder may be blended with other ingredients to create the novel vitamin-rich and stimulating powdered health products of the present invention.

A generalized formula for a product of the present invention comprises cactus fruit juice combined with ginseng berry juice and/or one or more natural health promoting ingredients. Natural health promoting ingredients may include, for example and not by way of limitation, ginseng root, chinese white flower, purslane herb, cinnamon bark, gou ten, cassia tora seed, mint herb, licorice root, silver flower, sorbitol, lycium fruit, liriopie root, schizandra seed, forsythia fruit, japanese sophora, chinese dodder, marsh parsley, chinese lovage, angelica root, paris herb, anise seed, ginger root, imperate root, poria (mushroom powder), orange peel, cornel fruit, bamboo leaf, hawthorn berry, eucomia bark, lemon extract, agnus castus (vitex agnus-castus), agrimony (agrimonia eupatoria), anise (pimpinella anisum), arjuna (terminalia arjuna), arnica (arnica montana), asafoetida (ferula assa-foetida), astragalus (astragalus membranaceus), avens (geum urbanum), bay laurel (laurus nobilis), beleric myrobalan (terminalia belerica), betony (stachys officinalis), bilberry (vaccinium myrtillus), bistort (polygonum bistorta), black cohosh (cimicifuga racemosa), blackcurrant (ribes nigrum), black haw (viburnum

prunifolium), bogbean (*menyanthes trifoliata*), boldo (*peumus boldus*), boneset
 (*eupatorium perfoliatum*), buchu (*barosma betulina*), bugleweed (*lycopus virginicus*),
 burdock (*arctium lappa*), calendula (*calendula officinalis*), calumba (*jateorhiza palmata*),
 cardamom (*elettaria cardamomum*), cayenne (*capsicum frutescens*), cerasee (*momordica*
 5 *charantia*), chiretta (*swertia chirata*), cinchona (*cinchona*), cinnamon (*cinnamomum*
verum), clove (*eugenia caryophyllata*), codonopsis (*codonopsis pilosula*), coltsfoot
 (*tussilago farfara*), comfrey (*symphytum officinale*), common plantain (*plantago major*),
 cornsilk (*zea mays*), cowslip (*primula veris*), crampbark (*viburnum opulus*), damiana
 (*turnera diffusa*), dandelion (*taraxacum officinale*), devil's claw (*harpagophytum*
 10 *procumbens*), echinacea (*Echinacea* spp.), eggplant (*solanum melongena*), elder
 (*sambucus nigra*), elecampane (*inula helenium*), ephedra (*ephedra sinica*), eucalyptus
 (*eucalyptus globulus*), evodia (*evodia rutaecarpa*), evening primrose (*oenothera biennis*),
 eyebright (*euphrasia* spp.), fennel (*foeniculum vulgare*), fumitory (*fumaria officinalis*),
 galangal (*alpinia officinarum*), garlic (*allium sativum*), gentian (*gentiana lutea*), ginger
 15 (*zingiber officinale*), ginkgo (*ginkgo biloba*), goat's rue (*galega officinalis*), goldenrod
 (*solidago vigaurea*), hanbane (*hyoscyamus niger*), hops (*humulus lupulus*), horsemint
 (*monarda punctata*), Indian gooseberry (*emblica officinalis*), jamaica dogwood (*piscidia*
erythrina), java tea (*orthosiphon aristata*), jujube (*ziziphus jujuba*), kantakari (*solanum*
xanthocarpum), lavender (*lavandula officinalis*), lapacho (*tabebuia* spp.), lemon (*citrus*
 20 *limon*), lemon balm (*melissa officinalis*), licorice (*glycyrrhiza glabra*), linden (*tilia*),
 lobelia (*lobelia inflata*), lycium (*lycium chinense*), manioc (*manihot esculenta*),
 meadowsweet (*filipendula ulmaria*), milk thistle (*carduus marianus*), muira puama
 (*liriosma ovata*), mullein (*verbascum thapsus*), myrrh (*commiphora molmol*), nettle
 (*urtica dioica*), oats (*avena sativa*), passionflower (*passiflora incarnata*), patchouli
 25 (*pogostemon cablin*), picrorrhiza (*picrorrhiza kurroa*), prickly ash (*zanthoxylum*
americanum), purslane (*protulaca oleracea*), rehmannia (*rehmannia glutinosa*), rosemary
 (*rosmarinus officinalis*), sarsaparilla (*smilax* spp.), schisandra (*schisandra chinensis*),
 skullcap (*scutellaria lateriflora*), slippery elm (*ulmus rubra*), soapwort (*saponaria*
officinalis), spiny restharrow (*ononis spinosa*), squaw vine (*mitchella repens*), sweet basil
 30 (*ocimum basilicum*), tea tree (*melaleuca alternifolia*), tree lungwort (*lobaria pulmonaria*),
 turmeric (*curcuma longa*), thyme (*thymus vulgaris*), vervain (*verbena officinalis*), white
 willow (*salix alba*), winter cherry (*physalis alkekengi*), withania (*withania somnifera*),
 wormwood (*artemisia absinthium*), yarrow (*achillea millefolium*), yellow dock (*rumex*
crispus) as well as vitamins, minerals and amino acids.

35 The formula may also contain other ingredients to promote health or adjust flavor.
 These other ingredients, given by way of example and not by limitation may be

sweeteners, flavorings, or preservatives. The formula may also contain juices from other fruits, vegetables or herbs to provide vitamins or other health promoting ingredients or simply to adjust flavor or provide a variety of flavors. Juices found to be desirable for beverage embodiments of the present invention, especially by those with sensitive digestive tracts, are passion fruit, mango, guava and melons. However, citrus fruits and other tropical fruits may be equally palatable and nutritious.

In powder embodiments, after the powder is formed, it may be used directly in powder form as an ingredient in food or drink products. The powder may also be dispensed into capsules. In some embodiments, tablets may also be formed from the powder of the present invention.

The following generalized formulas illustrate the ingredients currently used in preferred embodiments of the present invention. One presently preferred embodiment of the present invention comprises the following ingredients in the amounts indicated by weight percentage:

15	Cactus Fruit Juice	about	15%-75%
	Ginseng Berry Juice	about	15%-50%
	Fruit Juice	about	0%-50%
	Cactus Pad Juice	about	0%- 30%
20	Herbal ingredient	about	0%-15%
	Natural sweetener	about	0%-15%
	Royal Jelly	about	0%-8%

Another presently preferred embodiment of the present invention comprises the following ingredients in the amounts indicated:

	Cactus Fruit Juice	about	15%-75%
	Ginseng Berry Juice	about	15%-50%
	Cactus Pad Juice	about	0%-30%
30	Ginseng (root)	about	0%-15%
	Wild Honey	about	0%-15%
	Royal Jelly	about	0%-8%

Yet another presently preferred embodiment of the present invention comprises the following ingredients in the amounts indicated:

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	Cactus Fruit Juice	about	15%-75%
	Ginseng Berry Juice	about	15%-50%
	Sorbitol	about	0%-15%
	Wild Honey	about	0%-15%
5	Royal Jelly	about	0%-8%
	Sodium Benzoate	up to	0.1%

The following examples further illustrate the ingredients currently used in preferred embodiments of the present invention.

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EXAMPLE 1

	cactus fruit extract	20%
	ginseng berry extract	10%
15	mint	7%
	silver flower	7%
	chuan xiong root	7%
	golden bell fruit	7%
	Chinese catnip	7%
20	bell flower root	7%
	American lovage root	7%
	angelica root	7%
	licorice	4%
	bamboo leaf	4%
25	burdock seed	3%
	reed root	3%

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EXAMPLE 2

	Cactus fruit extract	20%
5	ginseng berry extract	10%
	ginseng root	7%
	atractylodis root	7%
	poria (mushroom powder)	7%
	licorice	7%
10	pinellia root	7%
	orange peel	7%
	cinnamon bark	7%
	fennel seed	7%
	amonium seed	7%
15	mint	7%

EXAMPLE 3

	cactus fruit extract	20%
20	cassia seed	10%
	akebia stem	10%
	ginseng berry extract	10%
	alisma tuber	10%
	cnidium	10%
25	atractykides rhizome	10%
	siler	10%
	magnolia flower	10%

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EXAMPLE 4

	cactus fruit extract	20%
	Chinese yam	7%
5	forty knot root	7%
	ginseng	7%
	leek seed	7%
	poria (mushroom powder)	7%
	cornel fruit	7%
10	papermulberry	7%
	eucommia bark	7%
	mongoliavine fruit	4%
	morinda root	4%
	broomrape	4%
15	senega root	4%
	fennel seed	4%
	lycium fruit	4%

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EXAMPLE 5

	Replenishing Masque for Dry Skin	
5	Cactus (<i>Cereus Grandiflorus</i>) Fruit	5%
	Cactus (<i>Cereus Grandiflorus</i>)	3%
	Ginseng (<i>Panax Ginseng</i>) Berry	3%
	Water	28.9%
	SD Alcohol 40B	10%
10	Glycerin	7%
	Hybrid Sunflower (<i>Helianthus Annuus</i>) Oil	6%
	Polyacrylamide	5%
	C13-14 Isoparaffin	5%
	Laureth-7	5%
15	Cyclomethicone	5%
	Grape (<i>Vitis Vinifera</i>) Seed Extract	3%
	Ginseng (<i>Panax Ginseng</i>) Root	2%
	Avocado (<i>Persea Gratissima</i>)	1%
	Cucumber (<i>Cucumis Sativus</i>)	1%
20	Jasmine (<i>Jasminum Officinale</i>)	1%
	Orange (<i>Citrus Aurantium Dulcis</i>) Peel	1%
	Flowery Knotweed (<i>Polygonum Aviculare</i>)	1%
	Hibiscus Sabdariff	1%
	Mulberry (<i>Morus Alba</i>) Leaf	1%
25	Riboflavin (Vitamin B2)	1%
	Tocopheryl Acetate (Vitamin E Acetate)	1%
	Niacin (Vitamin B3)	1%
	Pantothenic Acid (Provitamin B5)	1%
	Disodium Edta	0.1%
30	Phenoxyethanol	0.2%
	Methylparaben	0.2%
	Butylparaben	0.2%
	Ethylparaben	0.2%
	Propylparaben	0.2%

EXAMPLE 6

	Revitalizing Facial Cleanser	
5	Cactus (Cereus Grandiflorus) Fruit	3%
	Cactus (Cereus Grandiflorus)	3%
	Water	54.5%
	Sodium Cocoyl Isethionate	5%
	Sodium Methyl Cocoyl Taurate	4%
10	Peg-8	4%
	Octyldodecyl Benzoate	3.5%
	Myristic Acid	3%
	Glyceryl Stearate SE	3%
	Ginseng (Panax Ginseng) Root	3%
15	Ginseng (Panax Ginseng) Berry	3%
	Chrysanthemum Coccineum	1%
	Cucumber (Cucumis Sativus)	1%
	Sage (Salvia Officinalis)	1%
	Grapefruit (Citrus Grandis) Peel	1%
20	Kiwi (Actinidia Chinensis)	1%
	Lemon (Citrus Medica LI)	1%
	Algae	1%
	White Water Lily (Nymphaea Alba)	1%
	Niacin (Vitamin B3)	1%
25	Tocopheryl Acetate (Vitamin E Acetate)	1%
	Butylene Glycol	0.2%
	Phenoxyethanol	0.2%
	Methylparaben	0.2%
	Butylparaben	0.2%
30	Ethylparaben	0.2%
	Propylparaben	0.2%

EXAMPLE 7

	All-Day Hydrating Nourisher	
5	Cactus (<i>Cereus Grandiflorus</i>) Fruit	3%
	Cactus (<i>Cereus Grandiflorus</i>)	3%
	Water	53%
	Shea Butter (<i>Butyrospermum Parkii</i>)	3.5%
	Glycerin	3.5%
10	Cyclomethicone	3.5%
	Glyceryl Stearate	3%
	Stearic Acid	3%
	Sodium Behenoyl Lactylate	3%
	Ginseng (<i>Panax Ginseng</i>) Berry	3%
15	Grape (<i>Vitis Vinifera</i>) Seed Extract	3%
	Ginseng (<i>Panax Ginseng</i>) Root	3%
	Avocado (<i>Persea Gratissima</i>)	1%
	Cucumber (<i>Cucumis Sativus</i>)	1%
	Jasmine (<i>Jasminum Officinale</i>)	1%
20	Orange (<i>Citrus Aurantium Dulcis</i>) Peel	1%
	Flowery Knotweed (<i>Polygonum Aviculare</i>)	1%
	Hibiscus Sabdariff	1%
	Mulberry (<i>Morus Alba</i>) Leaf	1%
	Pyridoxine (Vitamin B6)	1%
25	Riboflavin (Vitamin B2)	1%
	Tocopheryl Acetate (Vitamin E Acetate)	1%
	Pantothenic Acid (Provitamin B5)	1%
	Xanthan Gum	0.2%
	Carbomer	0.2%
30	Disodium Edta	0.1%
	Phenoxyethanol	0.2%
	Methylparaben	0.2%
	Butylparaben	0.2%
	Ethylparaben	0.2%
35	Propylparaben	0.2%
	Triethanolamine	0.2%

EXAMPLE 8

	Advanced Spot Control	
5	Cactus (<i>Cereus Grandiflorus</i>) Fruit	5%
	Cactus (<i>Cereus Grandiflorus</i>)	1%
	Water	61.4%
	SD Alcohol 40B	7%
	Glycerin	5%
10	Ginseng (<i>Panax Ginseng</i>) Berry	5%
	Grape (<i>Vitis Vinifera</i>) Seed Extract	2%
	Ginseng (<i>Panax Ginseng</i>) Root	2%
	Chrysanthemum Coccineum	1%
	Cucumber (<i>Cucumis Sativus</i>)	1%
15	Sage (<i>Salvia Officinalis</i>)	1%
	Grapefruit (<i>Citrus Grandis</i>) Peel	1%
	Kiwi (<i>Actinidia Chinensis</i>)	1%
	Lemon (<i>Citrus Medica Limonum</i>)	1%
	Orange (<i>Citrus Aurantium Dulcis</i>) Peel	1%
20	Niacin (Vitamin B3)	1%
	Folic Acid	1%
	Tocopheryl Acetate (Vitamin E Acetate)	1%
	Triclosan	1%
	Carbomer	0.3%
25	Triethanolamine	0.3%

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EXAMPLE 9

	Body Wash	
5	Cactus (<i>Cereus Grandiflorus</i>) Fruit	4%
	Cactus (<i>Cereus Grandiflorus</i>)	4%
	Water	53%
	Decyl Glucoside	6%
	Aloe Barbadensis Gel	6%
10	Peg-120 Methyl Glucose Dioleate	6%
	Ammonium Laureth Sulfate	5%
	Disodium Cocoamphodiacetate	4%
	Grape (<i>Vitis Vinifera</i>) Seed Extract	1%
	Chrysanthemum Coccineum	1%
15	Cucumber (<i>Cucumis Sativus</i>) Sage	1%
	Kiwi (<i>Actinidia Chinensis</i>)	1%
	Lemon (<i>Citrus Medica Limonum</i>)	1%
	Rose (<i>Rosa Damascena</i>)	1%
	White Water Lily (<i>Nymphaea Alba</i>)	1%
20	Riboflavin (Vitamin B2)	1%
	Tocopheryl Acetate (Vitamin E Acetate)	1%
	Peg-7 Glyceryl Cocoate	1%
	Cocamidopropyl Betaine	1%
	Fragrance	0.2%
25	Phenoxyethanol	0.2%
	Methylparaben	0.2%
	Butylparaben	0.2%
	Ethylparaben	0.2%
	Propylparaben	0.2%
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EXAMPLE 10

	Hair Conditioner	
5	Cactus (Cereus Gradiflorus) Fruit	6%
	Cactus (Cereus Gradiflorus)	6%
	Cactus (Cereus Gradiflorus) Stem	2%
	Water	56%
	Isopropyl Palmitate	6%
10	Behentrimonium Methosulfate	6%
	Grape (Vitis Vinifera) Seed Extract	3%
	Avocado (Persea Gratissima)	1%
	Cucumber (Cucumis Sativus)	1%
	Jasmine (Jasminum Officinale)	1%
15	Orange (Citrus Aurantium Dulcis) Peel	1%
	Chrysanthemum Coccineum	1%
	Pantothenic Acid (Provitamin B5)	1%
	Phytantriol	1%
	Folic Acid	1%
20	Biotin (Vitamin H)	1%
	PG-Hydroxyethylcellulose Cocodimonium Chloride	1%
	Tridecyl Stearate	1%
	Neopentyl Glycol Disaprylate	1%
	Tridecyl Trimellitate	1%
25	Silk Amino Acids	1%
	Phenoxyethanol	0.2%
	Methylparaben	0.2%
	Butylparaben	0.2%
	Ethylparaben	0.2%
30	Propylparaben	0.2%

EXAMPLE 11

	Tooth Paste	
5	Cactus Fruit	4%
	Stevia	25%
	Deionized Water	23.6%
	Hydrated Silica	20%
	Sorbitol	18%
10	Ginseng berry	4%
	Sodium Lauroyl Sarcosinate	1.5%
	Flavor	1%
	Peg-6	0.8%
	Tetrasodium Pyrophosphate	0.5%
15	Cellulose gum	0.5%
	Sodium Benzoate	0.5%
	Triclosan	0.3%
	Hydrogen Peroxide	0.3% of 35% actives

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EXAMPLE 12

	Bar Soap Formula	
	Cactus Fruit Extract	4%
	Sodium Palmate	55%
25	Sodium Cocoate	16%
	Water	14.9%
	Glycerin	3%
	Ginseng Berry Extract	2%
	Sorbitol	2%
30	Spearic Acid	2%
	PPG-10 Methyl Glucose Ether	1%
	Pentasodium Pentetate	0.05%
	Tetrasodium Etidronate	0.05%

23

EXAMPLE 13

A beverage within the scope of the present invention was prepared by mixing the following ingredients in amounts given by weight percentage:

	Cactus Fruit Juice	40%
5	Ginseng Berry Juice	20%
	Cactus Pad Juice	10%
	Ginseng (root)	10%
	Wild Honey	15%
	Royal Jelly	5%

10 This juice beverage was found to be mildly sweet, mentally and physically stimulating and nutritious.

EXAMPLE 14

A beverage within the scope of the present invention was prepared by mixing the following ingredients in amounts given by weight percentage:

15	Cactus Fruit Juice	49%
	Ginseng Berry Juice	20%
	Sorbitol	15%
	Wild Honey	10%
	Royal Jelly	5%
20	Sodium Benzoate	1%

This juice beverage was found to be mildly sweet and nutritious.

EXAMPLE 15

A carbonated beverage within the scope of the present invention was prepared by mixing the following ingredients in amounts given by weight percentage:

25	Carbonated Water	45%
	High Fructose Corn Syrup	
	or Sucrose	13%
	Cactus Fruit Extract	19%
	Ginseng Berry Extract	15%
30	Flavoring	5%
	Citric Acid	2%
	Sodium Benzoate	< 0.1%
	Gum Arabic	1%

35 This juice beverage was found to be effervescent, mildly sweet and nutritious.

EXAMPLE 16

A hard candy within the scope of the present invention is prepared by mixing the following ingredients in amounts given by weight percentage:

	Water	5 %
5	Fructose	20%
	Sugar	20%
	Cactus Fruit Extract	25%
	Ginseng Berry Extract	15%
	Citric Acid	10%
10	Flavoring	5 %

This hard candy formula will yield a sweet candy with an exotic flavor. Various flavorings may be added to tailor the taste to a specific palate. Fruit flavorings have been found to be most delicious.

EXAMPLE 17

15 A jelly candy within the scope of the present invention is prepared by mixing the following ingredients in amounts given by weight percentage:

	Cactus Fruit Extract	30%
	Ginseng Berry Extract	20%
	Hydrogenated Starch	20%
20	Modified Food Starch	15%
	Citric Acid	10%
	Flavoring	5%

EXAMPLE 18

25 A dehydrated fruit "leather" within the scope of the present invention is prepared by mixing the following ingredients in amounts given by weight percentage:

	Fructose	20%
	Sugar	20%
	Cactus Fruit Extract	30%
	Ginseng Berry Extract	15%
30	Citric Acid	10%
	Flavoring	5 %

EXAMPLE 19

A fruit jelly product within the scope of the present invention is prepared by mixing the following ingredients in amounts given by weight percentage:

5	Fructose	20%
	Sugar	20%
	Cactus Fruit Extract	25%
	Ginseng Berry Extract	20%
	Pectin	10%
10	Flavoring	5 %

What is claimed is:



1. A health promoting product for human use, comprising:
cactus fruit extract.
2. The product of claim 1 wherein said product is a solid dietary supplement.
3. The product of claim 1 wherein said product is a topical application for
moisturizing skin.
4. The product of claim 1 further comprising a natural health promoting ingredient.
5. The product of claim 1 further comprising ginseng berry extract.
6. The product of claim 1 further comprising ginseng root.
7. The product of claim 1 further comprising an ingredient selected from the group
consisting of akebia stem, alisma tuber, american lovage root, ammonium seed,
angelica root, angelica sinensis (Dong Quai), apple, asparagus, atractykides
rhizome, atractylodis root, bamboo leaf, banana, barley sprouts, barley, bee
pollen, bell flower root, black bean, blueberry, broccoli, broomrape, burdock
seed, cabbage, cactus, camellia flower, cantaloupe, carrot extract, carrot, Cassia
seed, Cassia toa, Cassia tora extract, Cassia tora, Chinese date, Chinese yam,
Chinese lovage root, Chinese catnip, Chinese plum, Chinese Dodder, Chinese
Privet, chrysanthemum extract, Chrysanthemum flower, chuan xiong root, chuan
xiong, cinnamon bark, citrus peel, cnidium, cornel fruit, dong quai, eucommia
bark, fang-feng root, fennel seed, forty knot root, ganoderma, ginger root, golden
bell fruit, grape seed extract, grape juice, grapefruit, grapes, honeydew, jasmine
flowers, ji tsau herb, Ji-ling Genseng, Jing-jie, kelp, leek seed, lemon, Lentinus
edodes (Shiitake Mushroom), licorice, licorice root, lotus seed, Lotus root, loutus
leaf, luffa, lycium fruit, magnolia flower, menthol leaf, mint, mongoliavine fruit,
morinda root, mulberry, mushroom, orange peel, papermulberry, peach, pear, pear
juice, pear juice concentrate, pearl powder, Pearl Extract, peas, peppermint,
perilla, pineapple, pineapple juice concentrate, pinellia root, poria (mushroom
powder), radish, red date, reed rhizome, reed root, rice sprouts, rice, royal jelly,
senega root, siler, silver flower, Soybean, Soybean extract, spinach, Stevia,
strawberry, tangerine peel, tomato, vanilla, white willow bark, Wild ginger, and
yeuan wu root.



* C L M S *

27

8. A health promoting product for human ingestion, comprising:
cactus fruit extract; and
ginseng berry or ginseng berry extract.
9. The product of claim 8 wherein said product is a powder.
- 5 10. The product of claim 8 wherein said product is a beverage.
11. The product of claim 8 wherein said ginseng berry or ginseng berry extract is freeze-dried.
12. The product of claim 8 wherein said ginseng berry is freeze-dried whole and coated with a coating of cactus fruit extract.
- 10 13. The product of claim 8 wherein said product is a food product.
14. The product of claim 8 further comprising ginseng root as a natural stimulant for caffeine replacement.
15. A topical skin care application, comprising:
cactus fruit extract; and
15 at least one health promoting ingredient.
16. The skin care application of claim 15 wherein said at least one health promoting ingredient comprises ginseng berry extract.
17. The skin care application of claim 15 or 16 wherein said product is selected from the group consisting of shampoos, skin masques, facial cleansers, body washes, soaps, hair conditioners, toothpastes, skin creams, skin lotions, and skin rejuvenation treatments.
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