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An Improved Hydration Product

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ABSTRACT

A frozen hydration product for human consumption is provided that comprises a mixture of water, coconut water, one or more amino acids, one or more vitamins and magnesium Aspartate. The product is presented as ice cubes or ice blocks so that it has both a hydrating and a cooling effect for its consumer.

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COMPLETE SPECIFICATION
INNOVATION PATENT

AN IMPROVED HYDRATION PRODUCT

The following statement is a description of the invention:

AN IMPROVED HYDRATION PRODUCT

TECHNICAL FIELD

5 The present invention concerns products for hydrating and refreshing humans. The invention may find application where there is a need to hydrate an athlete for example or a worker in harsh outdoor conditions.

BACKGROUND ART

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Any references to methods, apparatus or documents of the prior art are not to be taken as constituting any evidence or admission that they formed, or form part of the common general knowledge.

15 Human bodies have developed mechanisms to keep electrolytes within specific ranges. If the body loses large amounts of fluids quickly, e.g. via excessive binge drinking or drug taking or through physical activity, its electrolytes may become unbalanced. This imbalance of electrolytes can occur through; vomiting, diarrhea, excessive sweating, serious burns,
20 sunstroke or wounds. In order for the body to recover effectively from unbalanced electrolytes, an individual must replenish hydration of vitamins and electrolytes through consumption of water, vitamins or a sports drink.

Dehydration is a potential threat to all athletes and recreational exercisers, especially those who are not acclimatized for strenuous activity in hot
25 environments.

Apart from occurring in the context of athletic competition or outdoors work in hot conditions, dehydration may also occur in bars and night clubs. For example, it is known that excessive alcohol intake may result in dehydration.
30 Furthermore, the consumption of illicit "party drugs" may also cause dehydration. The consequences of dehydration in this context can add to the intensity of a subsequent hangover and cause the recovery period to be extended which is undesirable.

Another health problem that may accompany dehydration is that of overheating or hyperthermia, for example heat stroke. Heat stroke occurs when the body is exposed to excessive heat and humidity for a prolonged period of time so that its ability to cope is overwhelmed and the core body temperature rises. Untreated, hyperthermia is potentially life threatening. One treatment for heat stroke is immersion of the body in cool water however this is not always practical and may be unnecessary for mild cases where the body is only a little overheated.

It is an object of the present invention to provide a product that addresses one or more of the above identified problems.

Furthermore, it would be desirable if in at least one embodiment of the invention there was provided a product that both cools and hydrates an individual and which might be readily dispensed and used in hospitality venues such as bars, night clubs and restaurants for example.

SUMMARY OF THE INVENTION

According to a first aspect of the present invention there is provided a frozen hydration product comprising:

a mixture of water, coconut water, one or more amino acids and one or more vitamins presented as an ice.

Preferably the product also includes magnesium spartate.

In one embodiment of the invention the one or more amino acids comprise beta-alanine, glutamine and tyrosine.

Preferably the one or more vitamins include vitamins from the vitamin B group of vitamins.

Preferably the percentages by weight of solids that are added to water are as follows:

Coconut water powder	87.7% to 96.9%
Beta-alanine	1.9% to 2.1%
Glutamine	1.9% to 2.1%
Tyrosine	1.9% to 2.1%
Vitamin Blend	1.42% to 1.56%
Magnesium Aspartate	0.19% to 0.21%

- 5 In a preferred embodiment of the invention the percentages by weight of the solids that are added to water are:

Coconut water powder	92.3%
Beta-alanine	2.0%
Glutamine	2.0%
Tyrosine	2.0%
Vitamin Blend	1.5%
Magnesium Aspartate	0.2%

- 10 Preferably the product also includes electrolytes such as sodium, potassium, calcium and magnesium for assisting the body to reach balanced electrolyte levels.

According to a further aspect of the present invention there is provided a method of producing a hydration product including:

- 15 mixing powdered coconut water with water to produce a mixture;
 applying the resulting mixture to an ice cube making apparatus; and
 bagging ice cubes produced by the apparatus for distribution.

BRIEF DESCRIPTION OF THE DRAWINGS

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Preferred features, embodiments and variations of the invention may be discerned from the following Detailed Description which provides sufficient

information for those skilled in the art to perform the invention. The Detailed Description is not to be regarded as limiting the scope of the preceding Summary of the Invention in any way. The Detailed Description will make reference to a number of drawings as follows:

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Figure 1. Depicts steps in the production and use of a hydration product according to a preferred embodiment of the present invention.

DETAILED DESCRIPTION OF PREFERRED EMBODIMENTS

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After considerable research the inventors have conceived of a hydration product based upon two fundamental principles, firstly the product is frozen so that imparts cooling which assists in treating the hyperthermia that may accompany dehydration. Secondly, the inventors have realized that the water of the coconut may be employed to assist in recovery from and prevention of dehydration. Accordingly, a preferred embodiment of the invention comprises a frozen product including water mixed with coconut water and other compounds as will be described.

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Coconut water is an isotonic solution, which replaces the fluids and minerals that the body loses during physical activities. It is high in the five essential electrolytes: Potassium, Calcium, Sodium, Manganese and Magnesium.

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Furthermore, coconut water is a 100% naturally occurring product. There has been research indicating that persons that consume the essence of coconut water on a regular basis are able to reduce urinary problems. People who suffer from strangury, polyutra and other urinary ailments are relieved by drinking coconut water. People who have kidney problems and are plagued by kidney stones are encouraged to use Coconut water.

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Additionally, it has been found that Coconut water is similar to blood plasma in some regards to the extent that it has been used to assist as a blood volume replacement in emergencies. For example, coconut water has been used as an intravenous hydration fluid instead of the standard IV fluid. During World War 2 many wounded soldiers were saved in the Pacific because of

emergency transfusion using this natural alternative. Coconut water contains monolaurin, an antiviral, antibacterial and antiprozoal monoglyceride that is used to kill lipid-coated viruses such as HIV, Herpes, cytomegalovirus, flu and various pathogenic bacteria. Coconut water reduces vomiting, and settles the fluid in the stomach. People who have typhoid, malaria, fevers or other ailments that are known to induce vomiting drinking coconut water will settle the stomach. Coconut water is used as a hangover cure and reduces the side effects of alcohol.

In addition to coconut water supporting ingredients are also added to the product. In a preferred exemplary embodiment the powdered products that are mixed together by weight are as shown in table 1:

Coconut Water Powder	92.3%
Beta-alanine	2.0%
Glutamine	2.0%
Tyrosine	2.0%
Vitamin Blend	1.5%
Magnesium Aspartate	0.2%

Table 1

Preferably the product includes further electrolytes in addition to magnesium aspartate such as sodium, potassium, calcium and magnesium, to ensure that the amount of water in the body is balanced. It is desirable to include some electrolytes because, as is known, electrolytes carry impulses along the nerves to cause muscles to contract and relax and keep the body from becoming too acidic or alkaline. Electrolytes also assist in the regulation of blood pressure and heartbeat.

As previously mentioned, the product is frozen and is preferably presented as bagged ice cubes.

Referring now to Figure 1, in a preferred method of product, at Step A the powdered components 1, listed above are mixed together with water until dissolved. The mixture 2 is then provided to the input port 4 of a conventional ice-cube machine 3 which then produces ice cubes 5 of the mixture in the usual way. The percentage of water per ice cube by weight is typically in the range of 94-99%. The ice cubes are put into bags 6 for distribution and sale.

Alternatively, on a smaller scale of production the water mixture 2 may be poured into ice-cube trays and refrigerated for ice cube formation. In use the ice cubes 5 may be added to water or another beverage in a drinking vessel 7 for consumption.

The product's market includes female and male sporting enthusiasts that are aged from children to the elderly. The target market is fairly broad, as within western society there are many sports that cater to many different individuals needs. For all these physical athletes the product would cater in maintaining ones hydration during their particular physical activity, maximizing alertness and hydration. The product aids in the replenishment of this market, leaving the consumer with its cocktail of hydration; electrolytes and vitamins and cooling characteristics. Dehydration is a potential threat to all athletes and recreational exercisers, especially those who are not acclimatized for strenuous activity in hot environments.

Professional athletes are no different to the sports target market, in that professional athletes still suffer from dehydration when performing physical exercise.

The fast food industry has undergone a healthier trend during the past five years. This shift towards healthy eating has been driven by a rapid increase in consumer awareness about the nutritional content of fast food, a conscious effort by consumers to eat a balanced diet and an influx of healthier options by the industry's heavyweights.

The product may aid in furthering this trend for the fast food industry by partnering with these chains and offering the product as an added beverage option for consumers.

5 For example, a beverage containing ice-cubes of the product may be provided by these fast food chains.

Similarly, bars, hotels and nightclubs may offer the product to their customers along with soft drinks or even alcoholic beverages.

10 In compliance with the statute, the invention has been described in language more or less specific to structural or methodical features. The term "comprises" and its variations, such as "comprising" and "comprised of" is used throughout in an inclusive sense and not to the exclusion of any additional features. It is to be understood that the invention is not limited to specific features shown or described since the means herein described comprises preferred forms of putting the invention into effect. The invention is,
15 therefore, claimed in any of its forms or modifications within the proper scope of the appended claims appropriately interpreted by those skilled in the art.

Throughout the specification and claims, unless the context requires otherwise, the term "substantially" or "about" will be understood to not be
20 limited to the value for the range qualified by the terms.

Any embodiment of the invention is meant to be illustrative only and is not meant to be limiting to the invention. Therefore, it should be appreciated that various other changes and modifications can be made to any embodiment
25 described without departing from the spirit and scope of the invention.

The claims defining the invention are as follows:

1. A frozen hydration product comprising:
a mixture of water, coconut water, one or more amino acids and one or more vitamins presented as an ice.
2. A product according to claim 1, further including magnesium aspartate.
3. A product according to any one of the preceding claims wherein the one or more amino acids comprises one or more of beta-alanine, glutamine and tyrosine.
4. A product according to any one of the preceding claims, wherein the one or more vitamins include vitamins from the vitamin B group of vitamins.
5. A product according to any one of the preceding claims wherein the percentages by weight of solids that are added to water are as follows:

Coconut water powder	87.7% to 96.9%
Beta-alanine	1.9% to 2.1%
Glutamine	1.9% to 2.1%
Tyrosine	1.9% to 2.1%
Vitamin Blend	1.42% to 1.56%
Magnesium Aspartate	0.19% to 0.21%

6. A product according to any one of claims 1 to 4, wherein the percentages by weight of the solids that are added to water are:

Coconut water powder	92.3%
Beta-alanine	2.0%
Glutamine	2.0%
Tyrosine	2.0%
Vitamin Blend	1.5%
Magnesium Aspartate	0.2%

7. A product according to any one of the preceding claims further including electrolytes.
8. A product according to any one of the preceding claims, wherein the electrolytes include sodium, potassium, calcium and magnesium for assisting the body to reach balanced electrolyte levels.
9. A method of producing a hydration product including:
 - mixing powdered coconut water with water to produce a mixture;
 - applying the resulting mixture to an ice cube making apparatus; and
 - bagging ice cubes produced by the apparatus for distribution.
10. A frozen hydration product substantially as described herein with reference to the preferred example.

