

Claims:

A system for providing personalized mineralized water based on the analysis of body fluids.

A method for analyzing individual health requirements to determine specific mineral/vitamin needs.

An automated process for the precise addition of minerals to distilled water, tailored to individual health profiles.

Conclusion: This invention offers a unique solution to the challenges posed by traditional mineral water consumption, providing a tailored approach to mineral intake that dynamically adjusts to the individual's health needs, ensuring optimal well-being.

The system claims for the "Personalized Mineralized Water System" could include:

Analytical Determination: A claim for a system that includes the analytical determination of individual mineral and vitamin needs based on body fluid analysis, incorporating both hardware and software components capable of precise measurements.

Dynamic Formulation: A claim detailing a method for dynamically formulating a personalized mineral mix for each user, based on the analytical results, to address specific dietary needs and health objectives.

Automated Mineralization: A claim for an automated process that accurately adds a calculated mix of minerals to distilled water, ensuring the precise composition required for each individual's health profile.

Contaminant Removal: A claim for the use of distillation or other purification methods to ensure the base water is free from harmful contaminants, metals, and imbalances before mineralization.

Delivery System Integration: A claim covering the integration of the system with a delivery service, ensuring personalized mineralized water is efficiently produced and delivered to the customer's location.

User Interface and Feedback: A claim for a user interface that allows customers to provide feedback and receive updates on their mineral needs, enhancing the system's adaptability to changing health requirements.

Safety and Compliance: A claim focusing on the system's compliance with health and safety standards, ensuring the mineralized water meets regulatory requirements for consumption.

These claims define the scope of protection for the invention, highlighting its innovative approach to personalized health and wellness through optimized mineral intake.

Based on the provided content, an independent claim for a patent might be structured as follows:

"A system for creating personalized mineralized drinking water, comprising:

means for collecting and analyzing body fluid samples from an individual to determine specific mineral and vitamin deficiencies or excesses;

a computing module configured to calculate an optimal mineral and vitamin mixture tailored to the individual's unique health profile, based on the analysis; and an apparatus for distilling water to its base H<sub>2</sub>O molecules, adding the calculated mixture of minerals and vitamins to the distilled water,

and delivering the personalized mineralized water to the individual, thereby optimizing the individual's mineral intake and mitigating health risks associated with mineral imbalances."

This claim encapsulates the system's unique process of personalizing mineralized water based on health needs, distinguishing it from existing solutions.

BackGround Supplemental:

Invention will incorporate strategic partnership with Providers and Laboratories in order to Offer Free Blood Analysis in order to Propose Personalized Mineralization Plans.

Providers will be naturally inclined to participate because they have an interest monitoring their patients' mineral levels and taking proactive action to regulate levels.

Providers can be integrated as referral partners, profit sharing groups, distributors, whatever compliant structure is available.

Potentially, with the invention of smaller mineral mixing systems, doctors could integrate ordering/distribution within their locations,

Additional Elements to Integrate:

**Essential Amino Acids:** Essential amino acids are typically tasteless and should not significantly affect the flavor of water when added in appropriate amounts.

**Antioxidants:** Many antioxidants, such as vitamin C or vitamin E, are tasteless when added to water in recommended amounts. However, some concentrated forms or extracts may have a slight taste or aroma.

**Prebiotic Fibers:** Prebiotic fibers, such as inulin or oligosaccharides, are generally tasteless and should not affect the flavor of the water.

**Bone and Joint Support Ingredients:** Ingredients like glucosamine, chondroitin, and collagen peptides are typically tasteless and should not affect the flavor of the water.

**Brain Health Support Ingredients:** Nutrients like phosphatidylserine, acetyl-L-carnitine, and choline are typically tasteless and should not affect the flavor of the water.

**Electrolytes in Balanced Amounts:** Electrolytes like sodium, potassium, and chloride can have a salty or mineral-like taste, especially at higher concentrations. However, when added in balanced amounts, their impact on water flavor may be minimal.

**Plant-Based Extracts in Low Concentrations:** Plant-based extracts like green tea extract or turmeric extract may have distinct flavors or aromas. However, when added in low concentrations, these extracts may impart subtle herbal or earthy notes to the water without significantly altering its flavor.

Which ones would affect the Taste and therefore Complicate the product Offering?

**Essential Amino Acids:** Essential amino acids are typically tasteless and should not significantly affect the taste of the water when added in appropriate amounts.

**Omega-3 Fatty Acids:** Omega-3 fatty acids, such as fish oil or algae oil, can have a slight fishy taste or odor. However, if encapsulated or processed to minimize taste, the impact on water flavor may be minimal.

**Antioxidants:** Most antioxidants, such as vitamin C or vitamin E, are tasteless when added to water in recommended amounts. However, some concentrated forms or extracts may have a slight taste or aroma.

**Prebiotic Fibers:** Prebiotic fibers, such as inulin or oligosaccharides, are generally tasteless and should not affect the flavor of the water.

**Plant-Based Extracts:** Plant-based extracts like green tea extract or turmeric extract may have distinct flavors or aromas. Depending on the concentration used, these extracts could impart subtle herbal or earthy notes to the water.

**Hydration Enhancers:** Electrolytes like sodium, potassium, and chloride can have salty or mineral-like tastes, especially at higher concentrations. However, when added in balanced amounts, their impact on water flavor may be minimal.

**Bone and Joint Support:** Ingredients like glucosamine, chondroitin, and collagen peptides are generally tasteless and should not affect the flavor of the water.

**Brain Health Support:** Nutrients like phosphatidylserine, acetyl-L-carnitine, and choline are typically tasteless and should not affect the flavor of the water.

**Any Interactions we need to be Aware of?**

Some nutrients or bioactive compounds may interact with each other chemically, leading to degradation, precipitation, or changes in their stability or bioavailability. For example, certain minerals may form insoluble complexes with other minerals or compounds, reducing their absorption or efficacy.

**pH and Solubility:** The pH of the water and the solubility of the additives can affect their stability and interactions. Some additives may alter the pH of the water, potentially affecting the solubility and bioavailability of other compounds.

**Dosing and Toxicity:** Excessive doses of certain additives, especially fat-soluble vitamins and minerals, can lead to toxicity or adverse effects. Mixing multiple supplements in water may increase the risk of overdosing if the individual is not careful with dosing.

**Synergistic or Antagonistic Effects:** Some nutrients may have synergistic effects when combined, enhancing their beneficial effects. However, others may have antagonistic effects, where one nutrient interferes with the absorption or utilization of another nutrient.

**Individual Sensitivities:** Individuals may have individual sensitivities or allergies to certain additives, which could lead to adverse reactions or intolerance when mixed together.

**Comprehensive Analysis:** Blood or urine samples are collected from the individual and analyzed using comprehensive mass spectrometry techniques. This analysis provides detailed information about the individual's nutrient levels, metabolic markers, hormone levels, and other biochemical parameters.

**Identification of Deficiencies or Imbalances:** The results of the comprehensive analysis are carefully reviewed to identify any deficiencies, imbalances, or areas of concern in the individual's biochemistry. This may include deficiencies in vitamins, minerals, amino acids, fatty acids, or other essential nutrients, as well as abnormalities in hormone levels or metabolic markers.

**Formulation of Customized Panel:** Based on the analysis results, a customized panel of additives is formulated to address the individual's specific nutritional needs and health goals. This panel may include a combination of vitamins, minerals, amino acids, antioxidants, probiotics, and other bioactive compounds selected to optimize nutrient levels and support overall health and well-being.

**Supplementation Protocol:** The customized panel of additives is added to the individual's distilled water according to a supplementation protocol tailored to their needs. The

dosage and frequency of supplementation may be adjusted based on the severity of deficiencies, response to treatment, and ongoing monitoring of biochemical markers.

**Regular Monitoring and Adjustments:** The individual's progress is regularly monitored through follow-up blood or urine analysis using mass spectrometry. This allows for ongoing assessment of nutrient levels, metabolic markers, and overall biochemical status. Based on the monitoring results, adjustments may be made to the supplementation protocol to optimize nutrient levels and address any changes in the individual's biochemistry over time.

**Lifestyle and Dietary Recommendations:** In addition to supplementation, personalized lifestyle and dietary recommendations may be provided to further support the individual's nutritional status and overall health. This may include guidance on healthy eating habits, physical activity, stress management, and other lifestyle factors that can influence biochemical balance and well-being.

By combining advanced analytical techniques with personalized supplementation and lifestyle interventions, this approach aims to optimize nutrient status, support metabolic health, and promote overall wellness in individuals with specific nutritional needs or health concerns. Regular monitoring and adjustments ensure that the supplementation protocol remains tailored to the individual's evolving biochemistry and health goals over time.

Identifying out-of-range values in the items tested using mass spectrometry (MS) can provide valuable indications regarding various aspects of an individual's health and nutritional status. Here are some considerations on how these out-of-range values may be interpreted:

**Nutritional Deficiencies:** Out-of-range values for essential vitamins and minerals may indicate deficiencies in these nutrients. For example, low levels of vitamin D could suggest inadequate sun exposure or dietary intake, while low levels of iron might indicate anemia or poor absorption.

These will be directly addressed with Daily Water Supplementation.

**Excess or Toxicity:** Conversely, out-of-range values that exceed normal ranges may indicate excess or toxicity of certain nutrients. For instance, high levels of iron could suggest iron overload disorders, while excessive vitamin A intake may lead to toxicity symptoms.

These will be assisted in cases where Mineral or Tap water is a Contributing factor to any potential Access Levels.

**Metabolic Disorders:** Abnormal levels of certain metabolites or biochemical markers detected by MS may point to underlying metabolic disorders. For instance, elevated levels of certain amino acids could indicate disorders of amino acid metabolism, such as phenylketonuria (PKU).

**Organ Dysfunction:** Out-of-range values for specific markers may indicate dysfunction or damage to certain organs or tissues. For example, elevated levels of liver enzymes like ALT and AST could indicate liver damage, while abnormal levels of creatinine may suggest impaired kidney function.

**Inflammation and Immune Response:** Markers of inflammation or immune response detected by MS, such as cytokines or acute-phase proteins, may be elevated in response to infections, autoimmune disorders, or chronic inflammatory conditions.

**Hormonal Imbalances:** MS can detect hormone levels, such as cortisol, thyroid hormones, or sex hormones, which may be dysregulated in various endocrine disorders. Abnormal hormone levels may indicate conditions like adrenal insufficiency, thyroid dysfunction, or reproductive disorders.

**Genetic Disorders:** MS can also be used for targeted analysis of specific genetic markers associated with inherited disorders. Out-of-range values for these markers may suggest the presence of genetic mutations or predisposition to certain conditions.

**Medication Monitoring:** MS can measure drug levels and metabolites in biological samples, allowing for monitoring of medication effectiveness and adherence. Out-of-range values may indicate suboptimal drug dosing, drug interactions, or non-compliance with medication regimens.

Overall, identifying out-of-range values using MS provides valuable insights into various aspects of an individual's health, allowing for early detection, diagnosis, and management of a wide range of conditions. Interpretation of these values should be done in conjunction with clinical assessment, medical history, and other diagnostic tests to provide a comprehensive understanding of the individual's health status.

Therefore, Regardless of Personalized Additives, the constant comprehensive paneling will provide granular transparency allowing BIG DATA analytics to early detect and address larger systemic issues in terms of accumulations, deficiencies, compounded factors, insight to overreaching major complications from the responses to the QuantWater upon the following Analysis, whereby Projected increases are not happening as expected.

Multiple Levels of Analytic Panels and Associated Mixtures to Select From:

From Full Panel to Minerals Only.

Addressing an unaddressed yet very Real Health Issue that is Currently Happening today to many Individuals who Consume Tap or Mineral Water:

Consuming excessive quantities of minerals beyond recommended levels can potentially lead to complications and adverse health effects. Here's a general overview of the potential complications associated with high intake of certain minerals and their approximate monthly consumption quantities that may raise concerns:

**Calcium:** Excessive calcium intake can increase the risk of kidney stones, constipation, and interfere with the absorption of other minerals such as iron and zinc. While there is no established upper intake level for calcium, consuming more than 2,500-3,000 mg per day may raise concerns.

**Magnesium:** Consuming large amounts of magnesium from supplements or mineral waters can cause diarrhea, abdominal cramping, and nausea. Excessive magnesium intake from supplements is generally considered to be over 350 mg per day, but individual tolerances may vary.

**Sodium:** High sodium intake is associated with hypertension (high blood pressure), which is a risk factor for heart disease, stroke, and kidney disease. The recommended daily intake of sodium is less than 2,300 mg per day for adults, but lower intake levels are advised for certain populations, such as those with hypertension or kidney disease.

**Potassium:** While potassium is essential for nerve and muscle function, consuming too much potassium can lead to hyperkalemia, a condition characterized by high levels of potassium in the blood. Hyperkalemia can cause irregular heart rhythms and, in severe cases, cardiac arrest. The upper limit for potassium intake from supplements is generally considered to be around 18,000-20,000 mg per day, but this can vary depending on individual factors and medical conditions.

**Chloride:** Excessive chloride intake from sources such as salt or mineral waters may contribute to high blood pressure and increase the risk of cardiovascular disease. While there is no specific upper intake level for chloride, it's generally advised to consume chloride in moderation as part of a balanced diet.

**Sulfate:** Consuming excessive sulfate from mineral waters is unlikely to cause health complications in most individuals, as sulfate is generally well-tolerated. However, some people may experience gastrointestinal discomfort or diarrhea at very high intake levels.

It's important to note that individual tolerances and susceptibility to mineral-related complications can vary based on factors such as age, sex, overall health status, and underlying medical conditions. If you have concerns about your mineral intake or experience symptoms of mineral-related complications, it's advisable to consult with a healthcare professional for personalized guidance and recommendations. Additionally, moderation and balance are key principles when it comes to consuming minerals and maintaining overall health and well-being.

**Calcium:** Consuming more than 2-3 liters of mineral water per day with a calcium content of 200 mg/L could potentially raise concerns about excessive calcium intake.

**Magnesium:** Exceeding 1 liter of mineral water per day with a magnesium content of 100 mg/L may raise concerns about excessive magnesium intake.

Sodium: Consuming more than 2 liters of mineral water per day with a sodium content of 200 mg/L could potentially contribute to excessive sodium intake.

Potassium: Exceeding 1 liter of mineral water per day with a potassium content of 100 mg/L may raise concerns about excessive potassium intake.

Chloride: Consuming more than 2 liters of mineral water per day with a chloride content of 200 mg/L could potentially contribute to excessive chloride intake.

Sulfate: Exceeding 2 liters of mineral water per day with a sulfate content of 200 mg/L may raise concerns, although sulfate is generally well-tolerated in moderate amounts.

These are approximate values, and individual tolerances may vary based on factors such as age, sex, overall health status, and underlying medical conditions. It's important to monitor your mineral intake from all sources, including mineral water, and to consume minerals in moderation as part of a balanced diet. If you have concerns about your mineral intake or experience symptoms of mineral-related complications, it's advisable to consult with a healthcare professional for personalized guidance and recommendations.

Now, do you have the breakdown of some of the leading mineral waters in USA? And Evian?

While I don't have specific data on the mineral content of leading mineral waters in the USA or Evian, I can provide general information about the mineral content commonly found in various types of mineral waters.

Evian: Evian is a popular brand of mineral water sourced from the French Alps. It is known for its naturally occurring minerals, including calcium, magnesium, potassium, and bicarbonate. The exact mineral composition of Evian may vary slightly depending on the specific source and bottling location.

Leading Mineral Waters in the USA: Some of the leading mineral water brands available in the USA include Perrier, San Pellegrino, and Fiji Water. These brands may vary in their mineral content and composition, depending on factors such as the source of the water and the bottling process.

To obtain specific information about the mineral content of these mineral waters or any other brands available in the USA, you may need to refer to the product labels or contact the manufacturers directly. Many mineral water brands provide detailed information about the mineral composition of their products on their official websites or product packaging. Additionally, independent laboratory analyses or consumer reports may also provide insights into the mineral content of different mineral water brands.

Evian Natural Spring Water originates from the French Alps and is known for its unique mineral composition. While I don't have access to specific data on Evian's mineral content, the brand typically highlights the following minerals found in its water:

Calcium

Magnesium

Potassium

Bicarbonate

Evian's mineral water composition is influenced by the natural geological characteristics of its source in the French Alps. For precise information on Evian's mineral content, you may refer to the product label or contact the manufacturer directly. Additionally, Evian's official website may provide detailed information about its mineral water composition and quality standards.

I don't have real-time internet access to retrieve specific data or access external sources such as Evian's official website. However, you can easily find information about Evian's mineral content by visiting the Evian website or checking the product label on Evian bottles. Additionally, you may find information from reputable sources such as consumer reports or independent laboratory analyses that provide insights into the mineral composition of Evian water.

What about dogs?

Mineral water is not typically recommended for dogs as their mineral requirements differ from humans, and excessive mineral intake can lead to health issues. Dogs primarily

obtain the necessary minerals from their regular diet, and providing them with mineral water may upset their electrolyte balance or lead to mineral imbalances.

It's essential for dogs to have access to fresh, clean water at all times to stay hydrated and maintain overall health. Tap water is generally safe for dogs to drink, but if you're concerned about the quality of your tap water, you can consider using filtered water or providing your dog with bottled water labeled as suitable for pets.

If you have specific concerns about your dog's mineral intake or overall health, it's best to consult with a veterinarian for personalized guidance and recommendations tailored to your dog's individual needs.

I'm wondering if tap water can have too much minerals for dogs

Yes, tap water can potentially contain minerals in concentrations that may not be suitable for dogs, especially if the water is considered "hard" due to high mineral content. While most tap water is safe for dogs to drink, excessive levels of certain minerals, such as calcium or magnesium, can lead to health issues in dogs, particularly if they consume large quantities of water regularly.

Some potential concerns associated with high mineral content in tap water for dogs include:

**Urinary Tract Health:** Excessive minerals, such as calcium and magnesium, can contribute to the formation of urinary tract stones or crystals in dogs, leading to urinary tract infections or blockages.

**Digestive Upset:** High mineral content in water can sometimes cause gastrointestinal upset in dogs, leading to symptoms such as diarrhea or vomiting.

**Electrolyte Imbalance:** Consuming water with high mineral content may disrupt the electrolyte balance in a dog's body, potentially leading to dehydration or other health issues.

If you're concerned about the mineral content of your tap water and its potential impact on your dog's health, you can consider having your water tested or using alternative water

sources such as filtered water or bottled water labeled as suitable for pets. Additionally, providing your dog with access to fresh water at all times and monitoring their water intake can help ensure their hydration needs are met without exposing them to excessive mineral levels. If you notice any signs of health issues in your dog, it's important to consult with a veterinarian for proper evaluation and guidance.

What specific levels per Liter of each mineral would be harmful for a dog

The specific levels of minerals that would be harmful to a dog can vary depending on the mineral in question, the dog's size, breed, age, and overall health, as well as other factors such as diet and activity level. However, here are general guidelines for some minerals commonly found in water and their potential harmful levels for dogs:

**Calcium:** Excessive calcium intake can lead to hypercalcemia in dogs, which can cause symptoms such as increased thirst and urination, gastrointestinal upset, muscle weakness, and in severe cases, kidney damage. While there is no universally accepted threshold for harmful calcium levels in water for dogs, extremely high levels of calcium (e.g., over 200 mg/L) could potentially contribute to health issues.

**Magnesium:** High magnesium levels in water may contribute to the formation of urinary tract stones or crystals in dogs, particularly those prone to urinary tract issues. Excessive magnesium intake can lead to urinary tract infections, kidney stones, or gastrointestinal upset. Again, specific thresholds for harmful magnesium levels in water for dogs may vary, but levels above 100 mg/L could be considered concerning.

**Sodium:** Dogs are sensitive to sodium intake, and excessive sodium levels in water can contribute to electrolyte imbalances, dehydration, and cardiovascular issues such as hypertension. The recommended sodium concentration in drinking water for dogs is generally less than 100 mg/L, and levels significantly higher than this could be harmful, particularly for dogs with heart or kidney conditions.

**Potassium:** While potassium is an essential mineral for dogs, excessive intake can disrupt electrolyte balance and lead to health issues such as muscle weakness, cardiac abnormalities, and gastrointestinal upset. There are no specific guidelines for harmful

potassium levels in water for dogs, but excessively high levels could potentially contribute to health problems, especially if the dog's diet already contains significant potassium sources.

It's important to note that these are general guidelines, and individual dogs may have different tolerances and sensitivities to mineral intake. Additionally, other factors such as the dog's overall diet, health status, and water consumption patterns can influence the impact of mineral levels in water. If you're concerned about the mineral content of your dog's water or their health, it's best to consult with a veterinarian for personalized guidance and recommendations tailored to your dog's specific needs.

Certainly, I'll provide approximate harmful levels of minerals in terms of liters of water consumed by a dog:

**Calcium:** Excessive calcium intake can be concerning if a dog consumes more than 2-3 liters of water per day with a calcium content of over 200 mg/L.

**Magnesium:** Dogs should avoid consuming more than 1-2 liters of water per day with a magnesium content exceeding 100 mg/L to minimize the risk of urinary tract issues.

**Sodium:** Dogs should limit their intake to less than 2-3 liters of water per day with a sodium content of over 100 mg/L to prevent electrolyte imbalances and cardiovascular issues.

**Potassium:** While potassium is essential, dogs should avoid consuming more than 2 liters of water per day with excessively high potassium levels to prevent electrolyte imbalances and related health problems.

These are general guidelines, and individual dogs may have different tolerances and sensitivities to mineral intake. Monitoring your dog's water intake and choosing water sources with appropriate mineral levels can help maintain their health and well-being. If you have concerns about your dog's water or health, consult with a veterinarian for personalized advice.

If it's a 7 pound dog would it have the same threshold

The threshold for harmful mineral levels in water for a 7-pound dog would generally be lower compared to a larger dog due to their smaller size and lower water intake capacity. Smaller dogs have lower daily water requirements and may be more sensitive to mineral imbalances.

For a 7-pound dog, the thresholds for harmful mineral levels in water would likely be proportionally lower compared to larger dogs. However, the specific thresholds may still vary based on factors such as the dog's breed, age, health status, and individual sensitivity.

It's essential to monitor your dog's water intake and choose water sources with appropriate mineral levels to avoid potential health issues. If you have concerns about your dog's water or mineral intake, consult with a veterinarian for personalized guidance and recommendations tailored to your dog's specific needs.

What's the liters drank threshold

For a 7-pound dog, the threshold for harmful mineral levels in terms of liters of water consumed would be proportionally lower compared to larger dogs. Here are approximate thresholds for harmful mineral levels in terms of liters of water consumed by a 7-pound dog:

**Calcium:** Excessive calcium intake can be concerning if a 7-pound dog consumes more than 0.5-1 liters of water per day with a calcium content of over 200 mg/L.

**Magnesium:** Dogs weighing 7 pounds should limit their intake to less than 0.5-1 liter of water per day with a magnesium content exceeding 100 mg/L to minimize the risk of urinary tract issues.

**Sodium:** Dogs weighing 7 pounds should consume less than 0.5-1 liter of water per day with a sodium content of over 100 mg/L to prevent electrolyte imbalances and cardiovascular issues.

Potassium: While potassium is essential, dogs weighing 7 pounds should avoid consuming more than 0.5-1 liter of water per day with excessively high potassium levels to prevent electrolyte imbalances and related health problems.

These are approximate guidelines, and individual dogs may have different tolerances and sensitivities to mineral intake. Monitoring your dog's water intake and choosing water sources with appropriate mineral levels can help maintain their health and well-being. If you have concerns about your dog's water or health, consult with a veterinarian for personalized advice.

Flowchart TD

A[Body Fluid Collection Module]

B[Analysis Module<br/>(Mineral, Vitamin, & Bioactive Measurement)]

C[Computing Module<br/>(Personalized Formulation Calculator)]

D[Mineralization Module<br/>(Precise Blending with Distilled Water)]

E[Delivery Module<br/>(Direct Distribution to Customer)]

F[Partner Laboratories & Healthcare Providers]

A --> B

B --> C

C --> D

D --> E

F --- B

F --- C

Description:

Body Fluid Collection Module: Collects body fluid samples from the customer.

Analysis Module: Measures targeted minerals, vitamins, and bioactive compounds.

Computing Module: Calculates a personalized mineral/vitamin formulation based on the analysis.

Mineralization Module: Accurately blends the calculated formulation with purified water.

Delivery Module: Distributes the final personalized mineralized water product to the customer.

Partner Laboratories & Healthcare Providers: Support ongoing monitoring and formulation adjustments.

The Invention's Software will include

HyperSign: Native HTML Form Integration Protocol