MARKED-UP COPY

CLAIMS

What is claimed is:

1. A modified-release dietary supplement formulation comprising:

a standardized source of plant-derived minerals, wherein the standardized source of plant-derived minerals is standardized for calcium and [[one]] five or more of the minerals selected from ~~calcium,~~ magnesium, iron, zinc, selenium, chromium, vanadium, copper, manganese, molybdenum, boron, iodine, and strontium, ~~and combinations thereof,~~ wherein the mineral is in or about cellular structures, wherein the plant-derived minerals are selected from the group consisting of seedlings of Brassica napus, Brassica rapa, Brassica juncea, Medicago sativa, and Oryzae sativa seeds;

one or more natural vitamins or provitamins, wherein the one or more natural vitamins are selected from vitamin A, beta-carotene alone, carotenoids, lycopene, lutein, zeaxanthin, cryptoxanthin, thiamine (vitamin B_1), riboflavin (vitamin B_2), niacin (vitamin B_3), pantothenic acid (vitamin B_5), pyridoxine (vitamin [[B_1]] B_6), folate (vitamin B_9), cyanocobalamin (vitamin B_{12}), vitamin C-complex, vitamin D, vitamin E, tocopherols, tocotrieneols, and combinations thereof;

one or more standardized plant extracts comprising plant phenolic compounds, polyphenolics, flavonoids, apigenin, rutin, quercetin, chrysin, hesperidin, bioflavonoids, isoflavones, anthocyanins, chlorogenic acid, ECGC, ellagic acid, catechins, aescin, resveratrol, curcumin, lignins, tannins, tannic acid, gingerol, and oleuropein or combinations thereof; and

one or more standardized phytochemicals comprising, sulforaphanes, isothiocyanates, glucosinolates, glucoraphanin, gluconasturtiin, glucobrassicin, glucoerucin, S-methyl cysteine sulfoxide, indole-3-carbinol, erucin, xanthophylls, carotenoids, lycopene, lutein, cryptoxanthin, beta-carotene, polyphenolics, flavonoids, apigenin, rutin, quercetin, chrysin, hesperidin, bioflavonoids, isoflavones, anthocyanins, chlorogenic acid, ECGC, ellagic acid, catechins, aescin, resveratrol, curcumin, lignins, carnosic acid, rosemarinic acid, ginerol, oleuropein, silymarin, sinigrin, quinic acid, or combinations thereof

wherein the dietary supplement formulation is characterized in that it is modified release, wherein at least 80 percent of the nutrients are released after 60 minutes.

2. The supplement of claim 1, further comprising a natural polysaccharide ingredient comprising a plant polysaccharide, an algal polysaccharide, a fungal polysaccharide, a bacterial polysaccharide, a plant gum, aloe polysaccharide, and combinations thereof.

3. The supplement of claim 1, wherein the supplement is placed inside an external capsule, a vegetable capsule or a hard gelatin capsule.

4. The supplement of claim 1, wherein the supplement is compressed at a pressure greater than 2,000 psi.

5. The supplement of claim 1, wherein about 85% of the nutritional supplements are released from between about 1 to about 8 hours.

6. The supplement of claim 1, wherein the nutritional supplements are in liquid, semi-solid, solid, gummy, gum, encapsulated or tablet form.

7. The supplement of claim 1, wherein the supplement further comprises one or more excipients.

8. A modified-release dietary supplement formulation to support bone health comprising:

a standardized source of plant-derived zinc, wherein the zinc is in or about cellular structures, wherein the plant-derived zinc is selected from the group consisting of seedlings of Brassica napus, Brassica rapa, Brassica juncea, Medicago sativa, and Oryzae sativa seeds;

a standardized plant extract comprising vitamin A, beta-carotene, carotenoids, lycopene, lutein, zeaxanthin, cryptoxanthin, thiamine (vitamin B_1), riboflavin (vitamin B_2), niacin (vitamin B_3), pantothenic acid (vitamin B_5), pyridoxine (vitamin [[B_1]] $\underline{B_6}$), folate (vitamin B_9), cyanocobalamin (vitamin B_{12}), vitamin C-complex, vitamin D, vitamin E, tocopherols, tocotrieneols, and one or more additional nutrients comprising vitamin D, vitamin C, calcium, magnesium, strontium, and boron, wherein the dietary supplement formulation is characterized in that it is modified release, wherein at least 80 percent of the nutrients are released after 60 minutes; and

one or more standardized phytochemicals comprising, sulforaphanes, isothiocyanates, glucosinolates, glucoraphanin, gluconasturtiin, glucobrassicin, glucoerucin, S-methyl cysteine sulfoxide, indole-3-carbinol, erucin, xanthophylls, carotenoids, lycopene, lutein, cryptoxanthin, beta-carotene, polyphenolics, flavonoids, apigenin, rutin, quercetin, chrysin, hesperidin, bioflavonoids, isoflavones, anthocyanins, chlorogenic acid, ECGC, ellagic acid, catechins, aescin, resveratrol, curcumin, lignins, carnosic acid, rosemarinic acid, gingerol, oleuropein, silymarin, sinigrin, quinic acid, or and, combinations thereof.

9. The supplement of claim 8, further comprising a natural polysaccharide ingredient comprising a plant polysaccharide, an algal polysaccharide, a fungal polysaccharide, a bacterial polysaccharide, a plant gum, aloe polysaccharide, and combinations thereof.

10. The supplement of claim 8, wherein the plant-derived minerals further comprises one or more of the minerals selected from iron, selenium, chromium, vanadium, copper, manganese, molybdenum, iodine, boron, zinc, and combinations thereof.

11. The supplement of claim 8, wherein the one or more natural vitamins are selected from vitamin A, carotenoids, thiamine (vitamin B_1), riboflavin (vitamin B_2), niacin (vitamin B_3), pantothenic acid (vitamin B_5), pyridoxine (vitamin [[B_1]] B_6), folate (vitamin B_9), cyanocobalamin (vitamin B_{12}), vitamin C, vitamin D, vitamin E, tocopherols, tocotrieneols, and combinations thereof.

12. The supplement of claim 8, wherein the composition comprises a bulk powder, a chewable form or is adapted for use by children.

13. The supplement of claim 8, wherein the supplement is placed inside an external capsule, a vegetable capsule or a hard gelatin capsule.

14. The supplement of claim 8, wherein the supplement is compressed at a pressure greater than 2,000 psi.

15. The supplement of claim 8, wherein about 85% of the nutritional supplements are released from between about 1 to about 8 hours.

16. The supplement of claim 8, wherein the nutritional supplements are in liquid, semi-solid, solid, gummy, gum, encapsulated or tablet form.

17. The supplement of claim 8, wherein the supplement further comprises one or more excipients.

18. A modified-release dietary supplement formulation for enhanced vitamin absorption by suppression of intestinal glucuronidation comprising:

a standardized source of plant-derived minerals, wherein the standardized source of plant-derived minerals is standardized for calcium and five or more of the minerals selected from [[,]] magnesium, iron, zinc, selenium, chromium, vanadium, copper, manganese, molybdenum, boron, iodine, and strontium; wherein the mineral is in or about cellular structures, wherein the plant-derived minerals are selected from the group consisting of seedlings of Brassica napus, Brassica rapa, Brassica juncea, Medicago sativa, and Oryzae sativa seeds;

one or more natural vitamins or provitamins comprising, vitamin A, carotenoids, lycopene, lutein, zeaxanthin, cryptoxanthin, thiamine (vitamin B_1), riboflavin (vitamin B_2), niacin (vitamin B_3), pantothenic acid (vitamin B_5), pyridoxine (vitamin [[B_1]] $\underline{B_6}$), folate (vitamin B_9), cyanocobalamin (vitamin B_{12}), vitamin C, vitamin D, vitamin E, tocopherols, tocotrieneols; and one or more standardized plant extracts comprising plant phenolic compounds, polyphenolics, flavonoids, apigenin, rutin, quercetin, chrysin, hesperidin, bioflavonoids, isoflavones, anthocyanins, chlorogenic acid, ECGC, ellagic acid, catechins, aescin, resveratrol, curcumin, lignins, tannins, tannic acid, gingerol, and oleuropein; and

one or more standardized phytochemicals comprising, sulforaphanes, isothiocyanates, glucosinolates, glucoraphanin, gluconasturtiin, glucobrassicin, glucoerucin, S-methyl cysteine sulfoxide, indole-3-carbinol, erucin, xanthophylls, carotenoids, lycopene, lutein, cryptoxanthin, beta-carotene, polyphenolics, flavonoids, apigenin, rutin, quercetin, chrysin, hesperidin, bioflavonoids, isoflavones, anthocyanins, chlorogenic acid, ECGC, ellagic acid, catechins, aescin, resveratrol, curcumin, lignins, carnosic acid, rosemarinic acid, gingerol, oleuropein, silymarin, sinigrin, quinic acid, or and, combinations thereof, wherein the dietary supplement formulation is characterized in that it is modified release, wherein at least 80 percent of the nutrients are released after 60 minutes.

19. The supplement of claim 18, further comprising a natural polysaccharide ingredient comprising a plant polysaccharide, an algal polysaccharide, a fungal polysaccharide, a bacterial polysaccharide, a plant gum, aloe polysaccharide, and combinations thereof.

20. The supplement of claim 18, wherein the supplement is placed inside an external capsule, a vegetable capsule or a hard gelatin capsule.

21. The supplement of claim 18, where the supplement is compressed at a pressure greater than 2,000 psi.

22. The supplement of claim 18, where about 85% of the nutritional supplements are released from between about 1 hour to about 8 hours.

23. The supplement of claim 18, wherein the nutritional supplements are in liquid, semi-solid, solid, gummy, gum, encapsulated or tablet form.

24. The supplement of claim 18, wherein the supplement further comprises one or more excipients.

25. A modified-release dietary supplement formulation for modulated mineral adsorption containing a standardized source of plant-derived minerals, wherein the standardized source of plant-derived minerals is standardized for calcium and five or more of the minerals selected from [[,]] magnesium, iron, zinc, selenium, chromium, vanadium, copper, manganese, molybdenum,

boron, iodine, and strontium; wherein the mineral is in or about cellular structures, wherein the plant-derived minerals are selected from the group consisting of seedlings of Brassica napus, Brassica rapa, Brassica juncea, Medicago sativa, and Oryzae sativa seeds;

one or more natural vitamins or provitamins comprising, vitamin A, carotenoids, lycopene, lutein, zeaxanthin, cryptoxanthin, thiamine, riboflavin, niacin, vitamin B-6, folate, vitamin B-12, vitamin C, vitamin D, vitamin E, tocopherols, tocotrieneols; and one or more standardized plant extracts comprising plant phenolic compounds, polyphenolics, flavonoids, apigenin, rutin, quercetin, chrysin, hesperidin, bioflavonoids, isoflavones, anthocyanins, chlorogenic acid, ECGC, ellagic acid, catechins, aescin, resveratrol, curcumin, lignins, tannins, tannic acid, gingerol, and oleuropein, wherein the dietary supplement is characterized in that it is modified release; and

one or more standardized phytochemicals comprising, sulforaphanes, isothiocyanates, glucosinolates, glucoraphanin, gluconasturtiin, glucobrassicin, glucoerucin, S-methyl cysteine sulfoxide, indole-3-carbinol, erucin, xanthophylls, carotenoids, lycopene, lutein, cryptoxanthin, beta-carotene, polyphenolics, flavonoids, apigenin, rutin, quercetin, chrysin, hesperidin, bioflavonoids, isoflavones, anthocyanins, chlorogenic acid, ECGC, ellagic acid, catechins, aescin, resveratrol, curcumin, lignins, carnosic acid, rosemarinic acid, gingerol, oleuropein, silymarin, sinigrin, quinic acid, or and, combinations thereof, wherein at least 80 percent of the nutrients are released after 60 minutes.

26. The supplement of claim 25, further comprising a natural polysaccharide ingredient comprising a plant polysaccharide, an algal polysaccharide, a fungal polysaccharide, a bacterial polysaccharide, a plant gum, aloe polysaccharide, and combinations thereof.

27. The supplement of claim 25, wherein the supplement is placed inside an external capsule, a vegetable capsule or a hard gelatin capsule.

28. The supplement of claim 25, wherein the supplement is compressed at a pressure greater than 2,000 psi.

29. The supplement of claim 25, wherein about 85% of the nutritional supplements are released from between about 1 hour to about 8 hours.

30. The supplement of claim 25, wherein the nutritional supplements are in liquid, semi-solid, solid, gummy, gum, encapsulated or tablet form.

31. The supplement of claim 25, wherein the supplement further comprises one or more excipients.

32. A modified-release dietary supplement formulation for overcoming suppression of glutathione transferase by vitamins A or E containing a standardized source of plant-derived minerals standardized for calcium and five or more of the minerals selected from [[,]] magnesium, iron, zinc, selenium, chromium, vanadium, copper, manganese, molybdenum, boron, iodine, and strontium; wherein the mineral is in or about cellular structures, wherein the plant-derived minerals are selected from the group consisting of seedlings of Brassica napus, Brassica rapa, Brassica juncea, Medicago sativa, and Oryzae sativa seeds;

one or more natural vitamins or provitamins comprising, vitamin A, carotenoids, lycopene, lutein, zeaxanthin, cryptoxanthin, thiamine, riboflavin, thiamine (vitamin B_1), riboflavin (vitamin B_2), niacin (vitamin B_3), pantothenic acid (vitamin B_5), pyridoxine (vitamin [[B_1]] B_6), folate (vitamin B_9), cyanocobalamin (vitamin B_{12}), vitamin C, vitamin D, vitamin E, tocopherols, tocotrieneols; and one or more standardized plant extracts comprising one or more of the following, sulforaphanes, isothiocyanates, glucosinolates, glucoraphanin, gluconasturtiin, glucobrassicin, glucoerucin, sinigrin, S-methyl cysteine sulfoxide, indole-3-carbinol, erucin, and combinations thereof; and

one or more standardized phytochemicals comprising, sulforaphanes, isothiocyanates, glucosinolates, glucoraphanin, gluconasturtiin, glucobrassicin, glucoerucin, S-methyl cysteine sulfoxide, indole-3-carbinol, erucin, xanthophylls, carotenoids, lycopene, lutein, cryptoxanthin, beta-carotene, polyphenolics, flavonoids, apigenin, rutin, quercetin, chrysin, hesperidin, bioflavonoids, isoflavones, anthocyanins, chlorogenic acid, ECGC, ellagic acid, catechins, aescin, resveratrol, curcumin, lignins, carnosic acid, rosemarinic acid, gingerol, oleuropein, silymarin, sinigrin, quinic acid, or and, combinations thereof, wherein the dietary supplement formulation is characterized in that it is modified release, wherein at least 80 percent of the nutrients are released after 60 minutes.

33. The supplement of claim 32, further comprising a natural polysaccharide ingredient comprising a plant polysaccharide, an algal polysaccharide, a fungal polysaccharide, a bacterial polysaccharide, a plant gum, aloe polysaccharide, and combinations thereof.

34. The supplement of claim 32, wherein the supplement is placed inside an external capsule, a vegetable capsule or a hard gelatin capsule.

35. The supplement of claim 32, wherein the supplement is compressed at a pressure greater than 2,000 psi.

36. The supplement of claim [[34] 32, wherein about 85% of the nutritional supplements are released from between 1 hour to about 8 hours.

37. The supplement of claim 32, wherein the nutritional supplements are in liquid, semi-solid, solid, gummy, gum, encapsulated or tablet form.

38. The supplement of claim 32, wherein the supplement further comprises one or more excipients.

39. A method of providing a balanced nutritional supplement comprising the steps of selecting one or more standardized sources of plant-derived minerals, wherein the mineral is in or about cellular structures, wherein the plant-derived minerals are selected from the group consisting of seedlings of Brassica napus, Brassica rapa, Brassica juncea, Medicago sativa, and Oryzae sativa seeds;

one or more natural vitamins or provitamins and one or more plant extracts; and

one or more standardized phytochemicals comprising, sulforaphanes, isothiocyanates, glucosinolates, glucoraphanin, gluconasturtiin, glucobrassicin, glucoerucin, S-methyl cysteine sulfoxide, indole-3-carbinol, erucin, xanthophylls, carotenoids, lycopene, lutein, cryptoxanthin, beta-carotene, polyphenolics, flavonoids, apigenin, rutin, quercetin, chrysin, hesperidin, bioflavonoids, isoflavones, anthocyanins, chlorogenic acid, ECGC, ellagic acid, catechins, aescin, resveratrol, curcumin, lignins, carnosic acid, rosemarinic acid, gingerol, oleuropein, silymarin, sinigrin, quinic acid, or and, combinations thereof, wherein the one or more components of the supplement are synergistic as measured by bioavailability, modifying the release, so more than 80 percent of the nutrients are released after 60 minutes.

40. The method of claim 39, wherein the composition comprises a standardized source of plant-derived minerals comprising [[,]] calcium and five or more of the minerals selected from [[,]] magnesium, iron, zinc, selenium, chromium, vanadium, copper, manganese, molybdenum, boron, iodine, and strontium; one or more natural vitamins or provitamins comprising, vitamin A, carotenoids, lycopene, lutein, zeaxanthin, cryptoxanthin, thiamine (vitamin B_1), riboflavin (vitamin B_2), niacin (vitamin B_3), pantothenic acid (vitamin B_5), pyridoxine (vitamin [[B_1]] B_6), folate (vitamin B_9), cyanocobalamin (vitamin B_{12}), vitamin C, vitamin D, vitamin E, tocopherols, tocotrieneols; and one or more standardized plant extracts comprising plant phenolic compounds, polyphenolics, flavonoids, apigenin, rutin, quercetin, chrysin, hesperidin, bioflavonoids, isoflavones, anthocyanins, chlorogenicpantothenic acid, ECGC, ellagic acid, catechins, aescin, resveratrol, curcumin, lignins, tannins, tannic acid, gingerol, oleuropein, and combinations thereof.

41. The method of claim 39, wherein the supplement is placed inside an external capsule, a vegetable capsule or a hard gelatin capsule.

42. The method of claim 39, wherein the supplement is compressed at a pressure greater than 2,000 psi.

43. The method of claim 39, wherein about 85% of the nutritional supplements are released from between about 1 hour to about 8 hours.

44. The method of claim 39, wherein the nutritional supplements are in liquid, semi-solid, solid, gummy, gum, encapsulated or tablet form.

45. The method of claim 39, wherein the supplement further comprises one or more excipients.

What is claimed is:

1. A modified-release dietary supplement formulation comprising:

a standardized source of plant-derived minerals, wherein the standardized source of plant-derived minerals is standardized for one or more of the minerals selected from calcium, magnesium, iron, zinc, selenium, chromium, vanadium, copper, manganese, molybdenum, boron, iodine, strontium, and combinations thereof, wherein the mineral is in or about cellular structures, wherein the plant-derived minerals are selected from the group consisting of seedlings of Brassica napus, Brassica rapa, Brassica juncea, Medicago sativa, and Oryzae sativa seeds;

one or more natural vitamins or provitamins, wherein the one or more natural vitamins are selected from vitamin A, beta-carotene alone, carotenoids, lycopene, lutein, zeaxanthin, cryptoxanthin, thiamine (vitamin B_1), riboflavin (vitamin B_2), niacin (vitamin B_3), pantothenic acid (vitamin B_5), pyridoxine (vitamin B_1), folate (vitamin B_9), cyanocobalamin (vitamin B_{12}) , vitamin C-complex, vitamin D, vitamin E, tocopherols, tocotrieneols, and combinations thereof;

one or more standardized plant extracts comprising plant phenolic compounds, polyphenolics, flavonoids, apigenin, rutin, quercetin, chrysin, hesperidin, bioflavonoids, isoflavones, anthocyanins, chlorogenic acid, ECGC, ellagic acid, catechins, aescin, resveratrol, curcumin, lignins, tannins, tannic acid, gingerol, and oleuropein or combinations thereof; and

one or more standardized phytochemicals comprising, sulforaphanes, isothiocyanates, glucosinolates, glucoraphanin, gluconasturtiin, glucobrassicin, glucoerucin, S-methyl cysteine sulfoxide, indole-3-carbinol, erucin, xanthophylls, carotenoids, lycopene, lutein, cryptoxanthin, beta-carotene, polyphenolics, flavonoids, apigenin, rutin, quercetin, chrysin, hesperidin, bioflavonoids, isoflavones, anthocyanins, chlorogenic acid, ECGC, ellagic acid, catechins, aescin, resveratrol, curcumin, lignins, carnosic acid, rosemarinic acid, gingerol, oleuropein, silymarin, sinigrin, quinic acid, or combinations thereof

wherein the dietary supplement formulation is characterized in that it is modified release, wherein at least 80 percent of the nutrients are released after 60 minutes.

2. The supplement of claim 1, further comprising a natural polysaccharide ingredient comprising a plant polysaccharide, an algal polysaccharide, a fungal polysaccharide, a bacterial polysaccharide, a plant gum, aloe polysaccharide, and combinations thereof.

3. The supplement of claim 1, wherein the supplement is placed inside an external capsule, a vegetable capsule or a hard gelatin capsule.

4. The supplement of claim 1, wherein supplement is compressed at a pressure greater than 2,000 psi.

5. The supplement of claim 1, wherein about 85% of the nutritional supplements are released from between about 1 to about 8 hours.

6. The supplement of claim 1, wherein the nutritional supplements are in liquid, semi-solid, solid, gummy, gum, encapsulated or tablet form.

7. The supplement of claim 1, wherein the supplement further comprises one or more excipients.

8. A modified-release dietary supplement formulation to support bone health comprising

a standardized source of plant-derived zinc, wherein the zinc is in or about cellular structures, wherein the plant-derived zinc is selected from the group consisting of seedlings of Brassica napus, Brassica rapa, Brassica juncea, Medicago sativa, and Oryzae sativa seeds;

a standardized plant extract comprising vitamin A, beta-carotene, carotenoids, lycopene, lutein, zeaxanthin, cryptoxanthin, thiamine (vitamin B_1), riboflavin (vitamin B_2), niacin (vitamin B_3), pantothenic acid (vitamin B_5), pyridoxine (vitamin B_1), folate (vitamin B_9), cyanocobalamin (vitamin B_{12}), vitamin C-complex, vitamin D, vitamin E, tocopherols, tocotrieneols, and one or more additional nutrients comprising vitamin D, vitamin C, calcium, magnesium, strontium, and boron, wherein the dietary supplement formulation is characterized in that it is modified release, wherein at least 80 percent of the nutrients are released after 60 minutes; and

one or more standardized phytochemicals comprising, sulforaphanes, isothiocyanates, glucosinolates, glucoraphanin, gluconasturtiin, glucobrassicin, glucoerucin, S-methyl cysteine sulfoxide, indole-3-carbinol, erucin, xanthophylls, carotenoids, lycopene, lutein, cryptoxanthin, beta-carotene, polyphenolics, flavonoids, apigenin, rutin, quercetin, chrysin, hesperidin, bioflavonoids, isoflavones, anthocyanins, chlorogenic acid, ECGC, ellagic acid, catechins,

aescin, resveratrol, curcumin, lignins, carnosic acid, rosemarinic acid, gingerol, oleuropein, silymarin, sinigrin, quinic acid, or and, combinations thereof.

9. The supplement of claim 8, further comprising a natural polysaccharide ingredient comprising a plant polysaccharide, an algal polysaccharide, a fungal polysaccharide, a bacterial polysaccharide, a plant gum, aloe polysaccharide, and combinations thereof.

10. The supplement of claim 8, wherein the plant-derived minerals further comprises one or more of the minerals selected from iron, selenium, chromium, vanadium, copper, manganese, molybdenum, iodine, boron, zinc, and combinations thereof.

11. The supplement of claim 8, wherein the one or more natural vitamins are selected from vitamin A, carotenoids, thiamine (vitamin B_1), riboflavin (vitamin B_2), niacin (vitamin B_3), pantothenic acid (vitamin B_5), pyridoxine (vitamin B_1) , folate (vitamin B_9), cyanocobalamin (vitamin B_{12}), vitamin C, vitamin D, vitamin E, tocopherols, tocotrieneols, and combinations thereof.

12. The supplement of claim 8, wherein the composition comprises a bulk powder, a chewable form or is adapted for use by children.

13. The supplement of claim 8, wherein the supplement is placed inside an external capsule, a vegetable capsule or a hard gelatin capsule.

14. The supplement of claim 8, wherein supplement is compressed at a pressure greater than 2,000 psi.

15. The supplement of claim 8, wherein about 85% of the nutritional supplements are released from between about 1 to about 8 hours.

16. The supplement of claim 8, wherein the nutritional supplements are in liquid, semi-solid, solid, gummy, gum, encapsulated or tablet form.

17. The supplement of claim 8, wherein the supplement further comprises one or more excipients.

18. A modified-release dietary supplement formulation for enhanced vitamin absorption by suppression of intestinal glucuronidation comprising

a standardized source of plant-derived minerals, wherein the standardized source of plant derived minerals is standardized for calcium, magnesium, iron, zinc, selenium, chromium, vanadium, copper, manganese, molybdenum, boron, iodine, and strontium; wherein the mineral is in or about cellular structures, wherein the plant-derived minerals are selected from the group consisting of seedlings of Brassica napus, Brassica rapa, Brassica juncea, Medicago sativa, and Oryzae sativa seeds;

one or more natural vitamins or provitamins comprising, vitamin A, carotenoids, lycopene, lutein, zeaxanthin, cryptoxanthin, thiamine (vitamin B_1), riboflavin (vitamin B_2), niacin (vitamin B_3), pantothenic acid (vitamin B_5), pyridoxine (vitamin B_1) , folate (vitamin B_9), cyanocobalamin (vitamin B_{12}), vitamin C, vitamin D, vitamin E, tocopherols, tocotrieneols; and one or more standardized plant extracts comprising plant phenolic compounds, polyphenolics, flavonoids, apigenin, rutin, quercetin, chrysin, hesperidin, bioflavonoids, isoflavones, anthocyanins, chlorogenic acid, ECGC, ellagic acid, catechins, aescin, resveratrol, curcumin, lignins, tannins, tannic acid, gingerol, and oleuropein; and

one or more standardized phytochemicals comprising, sulforaphanes, isothiocyanates, glucosinolates, glucoraphanin, gluconasturtiin, glucobrassicin, glucoerucin, S-methyl cysteine sulfoxide, indole-3-carbinol, erucin, xanthophylls, carotenoids, lycopene, lutein, cryptoxanthin, beta-carotene, polyphenolics, flavonoids, apigenin, rutin, quercetin, chrysin, hesperidin, bioflavonoids, isoflavones, anthocyanins, chlorogenic acid, ECGC, ellagic acid, catechins, aescin, resveratrol, curcumin, lignins, carnosic acid, rosemarinic acid, gingerol, oleuropein, silymarin, sinigrin, quinic acid, or and, combinations thereof, wherein the dietary supplement formulation is characterized in that it is modified release, wherein at least 80 percent of the nutrients are released after 60 minutes.

19. The supplement of claim 18, further comprising a natural polysaccharide ingredient comprising a plant polysaccharide, an algal polysaccharide, a fungal polysaccharide, a bacterial polysaccharide, a plant gum, aloe polysaccharide, and combinations thereof.

20. The supplement of claim 18, wherein the supplement is placed inside an external capsule, a vegetable capsule or a hard gelatin capsule.

21. The supplement of claim 18, wherein supplement is compressed at a pressure greater than 2,000 psi.

22. The supplement of claim 18, wherein about 85% of the nutritional supplements are released from between about 1 to about 8 hours.

23. The supplement of claim 18, wherein the nutritional supplements are in liquid, semi-solid, solid, gummy, gum, encapsulated or table form.

24. The supplement of claim 18, wherein the supplement further comprises one or more excipients.

25. A modified-release dietary supplement formulation for modulated mineral absorption containing a standardized source of plant-derived minerals, wherein the standardized source of plant-derived minerals is standardized for calcium, magnesium, iron, zinc, selenium, chromium, vanadium, copper, manganese, molybdenum, boron, iodine, and strontium; wherein the mineral is in or about cellular structures, wherein the plant-derived minerals are selected from the group consisting of seedlings of Brassica napus, Brassica rapa, Brassica juncea, Medicago sativa, and Oryzae sativa seeds;

one or more natural vitamins or provitamins comprising, vitamin A, carotenoids, lycopene, lutein, zeaxanthin, cryptoxanthin, thiamine, riboflavin, niacin, vitamin B-6, folate, vitamin B-12, vitamin C, vitamin D, vitamin E, tocopherols, tocotrieneols; and one or more standardized plant extracts comprising plant phenolic compounds, polyphenolics, flavonoids, apigenin, rutin, quercetin, chrysin, hesperidin, bioflavonoids, isoflavones, anthocyanins, chlorogenic acid, ECGC, ellagic acid, catechins, aescin, resveratrol, curcumin, lignins, tannins, tannic acid, gingerol, and oleuropein, wherein the dietary supplement formulation is characterized in that it is modified release; and

one or more standardized phytochemicals comprising, sulforaphanes, isothiocyanates, glucosinolates, glucoraphanin, gluconasturtiin, glucobrassicin, glucoerucin, S-methyl cysteine sulfoxide, indole-3-carbinol, erucin, xanthophylls, carotenoids, lycopene, lutein, cryptoxanthin, beta-carotene, polyphenolics, flavonoids, apigenin, rutin, quercetin, chrysin, hesperidin, bioflavonoids, isoflavones, anthocyanins, chlorogenic acid, ECGC, ellagic acid, catechins, aescin, resveratrol, curcumin, lignins, carnosic acid, rosemarinic acid, gingerol, oleuropein, silymarin, sinigrin, quinic acid, or and, combinations thereof, wherein at least 80 percent of the nutrient are released after 60 minutes.

26. The supplement of claim 25, further comprising a natural polysaccharide ingredient comprising a plant polysaccharide, an algal polysaccharide, a fungal polysaccharide, a bacterial polysaccharide, a plant gum, aloe polysaccharide, and combinations thereof.

27. The supplement of claim 25, wherein the supplement is placed inside an external capsule, a vegetable capsule or a hard gelatin capsule.

28. The supplement of claim 25, wherein supplement is compressed at a pressure greater than 2,000 psi.

29. The supplement of claim 25, wherein about 85% of the nutritional supplements are released from between about 1 to about 8 hours.

30. The supplement of claim 25, wherein the nutritional supplements are in liquid, semi-solid, solid, gummy, gum, encapsulated or tablet form.

31. The supplement of claim 25, wherein the supplement further comprises one or more excipients.

32. A modified-release dietary supplement formulation for overcoming suppression of glutathione transferase by vitamins A or E containing a standardized source of plant-derived minerals standardized for calcium, magnesium, iron, zinc, selenium, chromium, vanadium, copper, manganese, molybdenum, boron, iodine, and strontium; wherein the mineral is in or about cellular structures, wherein the plant-derived minerals are selected from the group consisting of seedlings of Brassica napus, Brassica rapa, Brassica juncea, Medicago sativa, and Oryzae sativa seeds;

and one or more natural vitamins or provitamins comprising, vitamin A, carotenoids, lycopene, lutein, zeaxanthin, cryptoxanthin, thiamine, riboflavin, thiamine (vitamin B_1), riboflavin (vitamin B_2), niacin (vitamin B_3), pantothenic acid (vitamin B_5), pyridoxine (vitamin B_1) , folate (vitamin B_9), cyanocobalamin (vitamin B_{12}), vitamin C, vitamin D, vitamin E, tocopherols, tocotrieneols; and one or more standardized plant extracts comprising one or more of the following, sulforaphanes, isothiocyanates, glucosinolates, glucoraphanin, gluconasturtiin, glucobrassicin, glucoerucin, sinigrin, S-methyl cysteine sulfoxide, indole-3-carbinol, erucin, and combinations thereof; and

one or more standardized phytochemicals comprising, sulforaphanes, isothiocyanates, glucosinolates, glucoraphanin, gluconasturtiin, glucobrassicin, glucoerucin, S-methyl cysteine sulfoxide, indole-3-carbinol, erucin, xanthophylls, carotenoids, lycopene, lutein, cryptoxanthin, beta-carotene, polyphenolics, flavonoids, apigenin, rutin, quercetin, chrysin, hesperidin, bioflavonoids, isoflavones, anthocyanins, chlorogenic acid, ECGC, ellagic acid, catechins, aescin, resveratrol, curcumin, lignins, carnosic acid, rosemarinic acid, gingerol, oleuropein, silymarin, sinigrin, quinic acid, or and, combinations thereof, wherein the dietary supplement formulation is characterized in that it is modified release, wherein at least 80 percent of the nutrient are released after 60 minutes.

33. The supplement of claim 32, further comprising a natural polysaccharide ingredient comprising a plant polysaccharide, an algal polysaccharide, a fungal polysaccharide, a bacterial polysaccharide, a plant gum, aloe polysaccharide, and combinations thereof.

34. The supplement of claim 32, wherein the supplement is placed inside an external capsule, a vegetable capsule or a hard gelatin capsule.

35. The supplement of claim 32, wherein supplement is compressed at a pressure greater than 2,000 psi.

36. The supplement of claim 34, wherein about 85% of the nutritional supplements are released from between about 1 to about 8 hours.

37. The supplement of claim 32, wherein the nutritional supplements are in liquid, semi-solid, solid, gummy, gum, encapsulated or tablet form.

38. The supplement of claim 32, wherein the supplement further comprises one or more excipients.

39. A method of providing a balanced nutritional supplement comprising the steps of selecting one or more standardized source of plant-derived minerals, wherein the mineral is in or about cellular structures, wherein the plant-derived minerals are selected from the group consisting of seedlings of Brassica napus, Brassica rapa, Brassica juncea, Medicago sativa, and Oryzae sativa seeds;

one or more natural vitamins or provitamins and one or more plant extracts; and

one or more standardized phytochemicals comprising, sulforaphanes, isothiocyanates, glucosinolates, glucoraphanin, gluconasturtiin, glucobrassicin, glucoerucin, S-methyl cysteine sulfoxide, indole-3-carbinol, erucin, xanthophylls, carotenoids, lycopene, lutein, cryptoxanthin, beta-carotene, polyphenolics, flavonoids, apigenin, rutin, quercetin, chrysin, hesperidin, bioflavonoids, isoflavones, anthocyanins, chlorogenic acid, ECGC, ellagic acid, catechins, aescin, resveratrol, curcumin, lignins, carnosic acid, rosemarinic acid, gingerol, oleuropein, silymarin, sinigrin, quinic acid, or and, combinations thereof, wherein the one or more components of the supplement are synergistic as measured by bioavailability, modifying the release, so more than 80 percent of the nutrients are released after 60 minutes.

40. The method of claim 39, wherein the composition comprises a standardized source of plant-derived minerals comprising, calcium, magnesium, iron, zinc, selenium, chromium, vanadium, copper, manganese, molybdenum, boron, iodine, and strontium; one or more natural vitamins or provitamins comprising, vitamin A, carotenoids, lycopene, lutein, zeaxanthin, cryptoxanthin, thiamine (vitamin B_1), riboflavin (vitamin B_2), niacin (vitamin B_3), pantothenic acid (vitamin B_5), pyridoxine (vitamin B_1), folate (vitamin B_9), cyanocobalamin (vitamin B_{12}), vitamin C, vitamin D, vitamin E, tocopherols, tocotrieneols; and one or more standardized plant extracts comprising plant phenolic compounds, polyphenolics, flavonoids, apigenin, rutin, quercetin, chrysin, hesperidin, bioflavonoids, isoflavones, anthocyanins, chlorogenicpantothenic acid, ECGC, ellagic acid, catechins, aescin, resveratrol, curcumin, lignins, tannins, tannic acid, gingerol, oleuropein, and combinations thereof.

41. The method of claim 39, wherein the supplement is placed inside an external capsule, a vegetable capsule or a hard gelatin capsule.

42. The method of claim 39, wherein supplement is compressed at a pressure greater than 2,000 psi.

43. The method of claim 39, wherein about 85% of the nutritional supplements are released from between about 1 to about 8 hours.

44. The method of claim 39, wherein the nutritional supplements are in liquid, semi-solid, solid, gummy, gum, encapsulated or tablet form.

45. The method of claim 39, wherein the supplement further comprises one or more excipients.

CLAIMS

What is claimed is:

1. A modified-release dietary supplement formulation comprising:

a standardized source of plant-derived minerals, wherein the standardized source of plant-derived minerals is standardized for calcium and five or more of the minerals selected from magnesium, iron, zinc, selenium, chromium, vanadium, copper, manganese, molybdenum, boron, iodine, and strontium, wherein the mineral is in or about cellular structures, wherein the plant-derived minerals are selected from the group consisting of seedlings of Brassica napus, Brassica rapa, Brassica juncea, Medicago sativa, and Oryzae sativa seeds;

one or more natural vitamins or provitamins, wherein the one or more natural vitamins are selected from vitamin A, beta-carotene alone, carotenoids, lycopene, lutein, zeaxanthin, cryptoxanthin, thiamine (vitamin B_1), riboflavin (vitamin B_2), niacin (vitamin B_3), pantothenic acid (vitamin B_5), pyridoxine (vitamin B_6), folate (vitamin B_9), cyanocobalamin (vitamin B_{12}), vitamin C-complex, vitamin D, vitamin E, tocopherols, tocotrieneols, and combinations thereof;

one or more standardized plant extracts comprising plant phenolic compounds, polyphenolics, flavonoids, apigenin, rutin, quercetin, chrysin, hesperidin, bioflavonoids, isoflavones, anthocyanins, chlorogenic acid, ECGC, ellagic acid, catechins, aescin, resveratrol, curcumin, lignins, tannins, tannic acid, gingerol, and oleuropein or combinations thereof; and

one or more standardized phytochemicals comprising, sulforaphanes, isothiocyanates, glucosinolates, glucoraphanin, gluconasturtiin, glucobrassicin, glucoerucin, S-methyl cysteine sulfoxide, indole-3-carbinol, erucin, xanthophylls, carotenoids, lycopene, lutein, cryptoxanthin, beta-carotene, polyphenolics, flavonoids, apigenin, rutin, quercetin, chrysin, hesperidin, bioflavonoids, isoflavones, anthocyanins, chlorogenic acid, ECGC, ellagic acid, catechins, aescin, resveratrol, curcumin, lignins, carnosic acid, rosemarinic acid, gingerol, oleuropein, silymarin, sinigrin, quinic acid, or combinations thereof

wherein the dietary supplement formulation is characterized in that it is modified release, wherein at least 80 percent of the nutrients are released after 60 minutes.

2. The supplement of claim 1, further comprising a natural polysaccharide ingredient comprising a plant polysaccharide, an algal polysaccharide, a fungal polysaccharide, a bacterial polysaccharide, a plant gum, aloe polysaccharide, and combinations thereof.

3. The supplement of claim 1, wherein the supplement is placed inside an external capsule, a vegetable capsule or a hard gelatin capsule.

4. The supplement of claim 1, wherein the supplement is compressed at a pressure greater than 2,000 psi.

5. The supplement of claim 1, wherein about 85% of the nutritional supplements are released from between about 1 to about 8 hours.

6. The supplement of claim 1, wherein the nutritional supplements are in liquid, semi-solid, solid, gummy, gum, encapsulated or tablet form.

7. The supplement of claim 1, wherein the supplement further comprises one or more excipients.

8. A modified-release dietary supplement formulation to support bone health comprising:

a standardized source of plant-derived zinc, wherein the zinc is in or about cellular structures, wherein the plant-derived zinc is selected from the group consisting of seedlings of Brassica napus, Brassica rapa, Brassica juncea, Medicago sativa, and Oryzae sativa seeds;

a standardized plant extract comprising vitamin A, beta-carotene, carotenoids, lycopene, lutein, zeaxanthin, cryptoxanthin, thiamine (vitamin B_1), riboflavin (vitamin B_2), niacin (vitamin B_3), pantothenic acid (vitamin B_5), pyridoxine (vitamin B_6), folate (vitamin B_9), cyanocobalamin (vitamin B_{12}), vitamin C-complex, vitamin D, vitamin E, tocopherols, tocotrieneols, and one or more additional nutrients comprising vitamin D, vitamin C, calcium, magnesium, strontium, and boron, wherein the dietary supplement formulation is characterized in that it is modified release, wherein at least 80 percent of the nutrients are released after 60 minutes; and

one or more standardized phytochemicals comprising, sulforaphanes, isothiocyanates, glucosinolates, glucoraphanin, gluconasturtiin, glucobrassicin, glucoerucin, S-methyl cysteine sulfoxide, indole-3-carbinol, erucin, xanthophylls, carotenoids, lycopene, lutein, cryptoxanthin, beta-carotene, polyphenolics, flavonoids, apigenin, rutin, quercetin, chrysin, hesperidin, bioflavonoids, isoflavones, anthocyanins, chlorogenic acid, ECGC, ellagic acid, catechins, aescin, resveratrol, curcumin, lignins, carnosic acid, rosemarinic acid, gingerol, oleuropein, silymarin, sinigrin, quinic acid, or and, combinations thereof.

9. The supplement of claim 8, further comprising a natural polysaccharide ingredient comprising a plant polysaccharide, an algal polysaccharide, a fungal polysaccharide, a bacterial polysaccharide, a plant gum, aloe polysaccharide, and combinations thereof.

10. The supplement of claim 8, wherein the plant-derived minerals further comprises one or more of the minerals selected from iron, selenium, chromium, vanadium, copper, manganese, molybdenum, iodine, boron, zinc, and combinations thereof.

11. The supplement of claim 8, wherein the one or more natural vitamins are selected from vitamin A, carotenoids, thiamine (vitamin B_1), riboflavin (vitamin B_2), niacin (vitamin B_3), pantothenic acid (vitamin B_5), pyridoxine (vitamin B_6), folate (vitamin B_9), cyanocobalamin (vitamin B_{12}), vitamin C, vitamin D, vitamin E, tocopherols, tocotrieneols, and combinations thereof.

12. The supplement of claim 8, wherein the composition comprises a bulk powder, a chewable form or is adapted for use by children.

13. The supplement of claim 8, wherein the supplement is placed inside an external capsule, a vegetable capsule or a hard gelatin capsule.

14. The supplement of claim 8, wherein the supplement is compressed at a pressure greater than 2,000 psi.

15. The supplement of claim 8, wherein about 85% of the nutritional supplements are released from between about 1 to about 8 hours.

16. The supplement of claim 8, wherein the nutritional supplements are in liquid, semi-solid, solid, gummy, gum, encapsulated or tablet form.

17. The supplement of claim 8, wherein the supplement further comprises one or more excipients.

18. A modified-release dietary supplement formulation for enhanced vitamin absorption by suppression of intestinal glucuronidation comprising:

a standardized source of plant-derived minerals, wherein the standardized source of plant-derived minerals is standardized for calcium and five or more of the minerals selected from magnesium, iron, zinc, selenium, chromium, vanadium, copper, manganese, molybdenum, boron, iodine, and strontium; wherein the mineral is in or about cellular structures, wherein the

plant-derived minerals are selected from the group consisting of seedlings of Brassica napus, Brassica rapa, Brassica juncea, Medicago sativa, and Oryzae sativa seeds;

one or more natural vitamins or provitamins comprising, vitamin A, carotenoids, lycopene, lutein, zeaxanthin, cryptoxanthin, thiamine (vitamin B_1), riboflavin (vitamin B_2), niacin (vitamin B_3), pantothenic acid (vitamin B_5), pyridoxine (vitamin B_6), folate (vitamin B_9), cyanocobalamin (vitamin B_{12}), vitamin C, vitamin D, vitamin E, tocopherols, tocotrieneols; and one or more standardized plant extracts comprising plant phenolic compounds, polyphenolics, flavenoids, apigenin, rutin, quercetin, chrysin, hesperidin, bioflavonoids, isoflavones, anthocyanins, chlorogenic acid, ECGC, ellagic acid, catechins, aescin, resveratrol, curcumin, lignins, tannins, tannic acid, gingerol, and oleuropein; and

one or more standardized phytochemicals comprising, sulforaphanes, isothiocyanates, glucosinolates, glucoraphanin, gluconasturtiin, glucobrassicin, glucoerucin, S-methyl cysteine sulfoxide, indole-3-carbinol, erucin, xanthophylls, carotenoids, lycopene, lutein, cryptoxanthin, beta-carotene, polyphenolics, flavonoids, apigenin, rutin, quercetin, chrysin, hesperidin, bioflavonoids, isoflavones, anthocyanins, chlorogenic acid, ECGC, ellagic acid, catechins, aescin, resveratrol, curcumin, lignins, carnosic acid, rosemarinic acid, gingerol, oleuropein, silymarin, sinigrin, quinic acid, or and, combinations thereof, wherein the dietary supplement formulation is characterized in that it is modified release, wherein at least 80 percent of the nutrients are released after 60 minutes.

19. The supplement of claim 18, further comprising a natural polysaccharide ingredient comprising a plant polysaccharide, an algal polysaccharide, a fungal polysaccharide, a bacterial polysaccharide, a plant gum, aloe polysaccharide, and combinations thereof.

20. The supplement of claim 18, wherein the supplement is placed inside an external capsule, a vegetable capsule or a hard gelatin capsule.

21. The supplement of claim 18, where the supplement is compressed at a pressure greater than 2,000 psi.

22. The supplement of claim 18, where about 85% of the nutritional supplements are released from between about 1 hour to about 8 hours.

23. The supplement of claim 18, wherein the nutritional supplements are in liquid, semi-solid, solid, gummy, gum, encapsulated or tablet form.

24. The supplement of claim 18, wherein the supplement further comprises one or more excipients.

25. A modified-release dietary supplement formulation for modulated mineral adsorption containing a standardized source of plant-derived minerals, wherein the standardized source of plant-derived minerals is standardized for calcium and five or more of the minerals selected from magnesium, iron, zinc, selenium, chromium, vanadium, copper, manganese, molybdenum, boron, iodine, and strontium; wherein the mineral is in or about cellular structures, wherein the plant-derived minerals are selected from the group consisting of seedlings of Brassica napus, Brassica rapa, Brassica juncea, Medicago sativa, and Oryzae sativa seeds;

one or more natural vitamins or provitamins comprising, vitamin A, carotenoids, lycopene, lutein, zeaxanthin, cryptoxanthin, thiamine, riboflavin, niacin, vitamin B-6, folate, vitamin B-12, vitamin C, vitamin D, vitamin E, tocopherols, tocotrieneols; and one or more standardized plant extracts comprising plant phenolic compounds, polyphenolics, flavonoids, apigenin, rutin, quercetin, chrysin, hesperidin, bioflavonoids, isoflavones, anthocyanins, chlorogenic acid, ECGC, ellagic acid, catechins, aescin, resveratrol, curcumin, lignins, tannins, tannic acid, gingerol, and oleuropein, wherein the dietary supplement formulation is characterized in that it is modified release; and

one or more standardized phytochemicals comprising, sulforaphanes, isothiocyanates, glucosinolates, glucoraphanin, gluconasturtiin, glucobrassicin, glucoerucin, S-methyl cysteine sulfoxide, indole-3-carbinol, erucin, xanthophylls, carotenoids, lycopene, lutein, cryptoxanthin, beta-carotene, polyphenolics, flavonoids, apigenin, rutin, quercetin, chrysin, hesperidin, bioflavonoids, isoflavones, anthocyanins, chlorogenic acid, ECGC, ellagic acid, catechins, aescin, resveratrol, curcumin, lignins, carnosic acid, rosemarinic acid, gingerol, oleuropein, silymarin, sinigrin, quinic acid, or and, combinations thereof, wherein at least 80 percent of the nutrients are released after 60 minutes.

26. The supplement of claim 25, further comprising a natural polysaccharide ingredient comprising a plant polysaccharide, an algal polysaccharide, a fungal polysaccharide, a bacterial polysaccharide, a plant gum, aloe polysaccharide, and combinations thereof.

27. The supplement of claim 25, wherein the supplement is placed inside an external capsule, a vegetable capsule or a hard gelatin capsule.

28. The supplement of claim 25, wherein the supplement is compressed at a pressure greater than 2,000 psi.

29. The supplement of claim 25, wherein about 85% of the nutritional supplements are released from between about 1 hour to about 8 hours.

30. The supplement of claim 25, wherein the nutritional supplements are in liquid, semi-solid, solid, gummy, gum, encapsulated or tablet form.

31. The supplement of claim 25, wherein the supplement further comprises one or more excipients.

32. A modified-release dietary supplement formulation for overcoming suppression of glutathione transferase by vitamins A or E containing a standardized source of plant-derived minerals standardized for calcium and five or more of the minerals selected from magnesium, iron, zinc, selenium, chromium, vanadium, copper, manganese, molybdenum, boron, iodine, and strontium; wherein the mineral is in or about cellular structures, wherein the plant-derived minerals are selected from the group consisting of seedlings of Brassica napus, Brassica rapa, Brassica juncea, Medicago sativa, and Oryzae sativa seeds;

one or more natural vitamins or provitamins comprising, vitamin A, carotenoids, lycopene, lutein, zeaxanthin, cryptoxanthin, thiamine, riboflavin, thiamine (vitamin B_1), riboflavin (vitamin B_2), niacin (vitamin B_3), pantothenic acid (vitamin B_5), pyridoxine (vitamin B_6), folate (vitamin B_9), cyanocobalamin (vitamin B_{12}), vitamin C, vitamin D, vitamin E, tocopherols, tocotrieneols; and one or more standardized plant extracts comprising one or more of the following, sulforaphanes, isothiocyanates, glucosinolates, glucoraphanin, gluconasturtiin, glucobrassicin, glucoerucin, sinigrin, S-methyl cysteine sulfoxide, indole-3-carbinol, erucin, and combinations thereof; and

one or more standardized phytochemicals comprising, sulforaphanes, isothiocyanates, glucosinolates, glucoraphanin, gluconasturtiin, glucobrassicin, glucoerucin, S-methyl cysteine sulfoxide, indole-3-carbinol, erucin, xanthophylls, carotenoids, lycopene, lutein, cryptoxanthin, beta-carotene, polyphenolics, flavonoids, apigenin, rutin, quercetin, chrysin, hesperidin, bioflavonoids, isoflavones, anthocyanins, chlorogenic acid, ECGC, ellagic acid, catechins, aescin, resveratrol, curcumin, lignins, carnosic acid, rosemarinic acid, gingerol, oleuropein, silymarin, sinigrin, quinic acid, or and, combinations thereof, wherein the dietary supplement formulation is characterized in that it is modified release, wherein at least 80 percent of the nutrients are released after 60 minutes.

33. The supplement of claim 32, further comprising a natural polysaccharide ingredient comprising a plant polysaccharide, an algal polysaccharide, a fungal polysaccharide, a bacterial polysaccharide, a plant gum, aloe polysaccharide, and combinations thereof.

34. The supplement of claim 32, wherein the supplement is placed inside an external capsule, a vegetable capsule or a hard gelatin capsule.

35. The supplement of claim 32, wherein the supplement is compressed at a pressure greater than 2,000 psi.

36. The supplement of claim 32, wherein about 85% of the nutritional supplements are released from between 1 hour to about 8 hours.

37. The supplement of claim 32, wherein the nutritional supplements are in liquid, semi-solid, solid, gummy, gum, encapsulated or tablet form.

38. The supplement of claim 32, wherein the supplement further comprises one or more excipients.

39. A method of providing a balanced nutritional supplement comprising the steps of selecting one or more standardized sources of plant-derived minerals, wherein the mineral is in or about cellular structures, wherein the plant-derived minerals are selected from the group consisting of seedlings of Brassica napus, Brassica rapa, Brassica juncea, Medicago sativa, and Oryzae sativa seeds;

one or more natural vitamins or provitamins and one or more plant extracts; and

one or more standardized phytochemicals comprising, sulforaphanes, isothiocyanates, glucosinolates, glucoraphanin, gluconasturtiin, glucobrassicin, glucoerucin, S-methyl cysteine sulfoxide, indole-3-carbinol, erucin, xanthophylls, carotenoids, lycopene, lutein, cryptoxanthin, beta-carotene, polyphenolics, flavonoids, apigenin, rutin, quercetin, chrysin, hesperidin, bioflavonoids, isoflavones, anthocyanins, chlorogenic acid, ECGC, ellagic acid, catechins, aescin, resveratrol, curcumin, lignins, carnosic acid, rosemarinic acid, gingerol, oleuropein, silymarin, sinigrin, quinic acid, or and, combinations thereof, wherein the one or more components of the supplement are synergistic as measured by bioavailability, modifying the release, so more than 80 percent of the nutrients are released after 60 minutes.

40. The method of claim 39, wherein the composition comprises a standardized source of plant-derived minerals comprising calcium and five or more of the minerals selected from magnesium, iron, zinc, selenium, chromium, vanadium, copper, manganese, molybdenum, boron, iodine, and strontium; one or more natural vitamins or provitamins comprising, vitamin A, carotenoids, lycopene, lutein, zeaxanthin, cryptoxanthin, thiamine (vitamin B_1), riboflavin (vitamin B_2), niacin (vitamin B_3), pantothenic acid (vitamin B_5), pyridoxine (vitamin B_6), folate (vitamin B_9), cyanocobalamin (vitamin B_{12}), vitamin C, vitamin D, vitamin E, tocopherols, tocotrieneols; and one or more standardized plant extracts comprising plant phenolic compounds, polyphenolics, flavonoids, apigenin, rutin, quercetin, chrysin, hesperidin, bioflavonoids, isoflavones, anthocyanins, chlorogenicpantothenic acid, ECGC, ellagic acid, catechins, aescin, resveratrol, curcumin, lignins, tannins, tannic acid, gingerol, oleuropein, and combinations thereof.

41. The method of claim 39, wherein the supplement is placed inside an external capsule, a vegetable capsule or a hard gelatin capsule.

42. The method of claim 39, wherein the supplement is compressed at a pressure greater than 2,000 psi.

43. The method of claim 39, wherein about 85% of the nutritional supplements are released from between about 1 hour to about 8 hours.

44. The method of claim 39, wherein the nutritional supplements are in liquid, semi-solid, solid, gummy, gum, encapsulated or tablet form.

45. The method of claim 39, wherein the supplement further comprises one or more excipients.