

IN THE CLAIMS

The following shall replace all previous versions of the claims. Please amend the claims to read as follows:

1 - 247. (Canceled)

248. (New) A multifunctional composition including *cannabis* and a microorganism, the composition includes:

- (a) a cannabidiol content ranging from 0.00005 weight percent to 15 weight percent;
- (b) a tetrahydrocannabinol ranging from 5 weight percent to 63 weight percent;
- (c) an energy content ranging from between 2,500 British Thermal Units per pound to 65,000 British Thermal Units per pound;
- (d) a carbon content ranging from between 20 weight percent to 65 weight percent;
- (e) an oxygen content ranging from between 12 weight percent to 55 weight percent;
- (f) a hydrogen content ranging from between 2 weight percent to 20 weight percent;
- (g) an ash content ranging from between 2.5 weight percent to 30 weight percent;
- (h) volatiles content ranging from between 30 weight percent to 90 weight percent;
- (i) a nitrogen content ranging from between 1 weight percent to 10 weight percent;
- (j) a sulfur content ranging from between 0.01 weight percent to 8 weight percent;
- (k) a chlorine content ranging from 0.05 weight percent to 5 weight percent;
- (l) a sodium content ranging from 0.02 weight percent to 15 weight percent;
- (m) a potassium content ranging from 0.05 weight percent to 15 weight percent;
- (n) an iron content ranging from 0.01 weight percent to 13 weight percent;
- (o) a magnesium content ranging from 0.02 weight percent to 10 weight percent;
- (p) a phosphorous content ranging from 0.05 weight percent to 12 weight percent;
- (q) a calcium content ranging from 0.03 weight percent to 10 weight percent;
- (r) a zinc content ranging from 0.01 weight percent to 5 weight percent;
- (s) a cellulose content ranging from 25 weight percent to 75 weight percent;
- (t) a lignin content ranging from 3 weight percent to 35 weight percent;
- (u) a hemicellulose content ranging from 3 weight percent to 30 weight percent;

- (v) a fat content ranging from 5 weight percent to 35 weight percent;
- (w) a fiber content ranging from 5 weight percent to 75 weight percent; and
- (x) a protein content ranging from 5 weight percent to 35 weight percent.

249. (New) The multifunctional composition according to claim 248, further comprising:
a *Cannabis sativa L. ssp. Sativa* content ranges from 3 weight percent to 90 weight percent; and
a *Cannabis sativa L. ssp. Indica* (Lam.) content ranges from 8 weight percent to 80 weight percent.

250. (New) The multifunctional composition according to claim 248, wherein:
the microorganism includes a fungus or bacteria.

251. (New) The multifunctional composition according to claim 248, wherein:
the composition is essentially free of *cannabis* leaves and *cannabis* stems.

252. (New) A method to produce the composition according to claim 251, the method includes:

- (a) providing the composition according to claim 251, the composition further includes *cannabis* buds, leaves and stems; and
- (b) after step (a), introducing the mixture of *cannabis* buds, leaves and stems to a *cannabis* trimmer, the *cannabis* trimmer is configured to trim the leaves and stems from the buds to produce a composition comprised of trimmed *cannabis* buds which are essentially free of *cannabis* leaves and *cannabis* stems by applying a rotational motion to the buds, leaves, and stems to pass the buds, leaves, and stems across a blade.

253. (New) The multifunctional composition according to claim 248, further comprising:
treated water, the treated water is treated with one or more water treatment units selected from the group consisting of an adsorbent, an ion-exchange resin, a catalyst, activated carbon, a membrane, and combinations thereof.

254. (New) The multifunctional composition according to claim 253, further comprising:
an enzyme.
255. (New) The multifunctional composition according to claim 253, further comprising:
bacteria and/or fungus.
256. (New) The multifunctional composition according to claim 248, further comprising:
hormones including one or more hormones selected from the group consisting of auxins,
cytokinins gibberellins, abscic acid, brassinosteroids, salicylic acid, jasmonates, plant peptide
hormones, polyamines, nitric oxide, strigolactones, and triacontanol.
257. (New) The multifunctional composition according to claim 248, wherein:
the *cannabis* includes ground *cannabis*.
258. (New) The multifunctional composition according to claim 248, wherein:
the *cannabis* includes decarboxylated ground *cannabis*.
259. (New) The multifunctional composition according to claim 248, wherein:
the *cannabis* does not include decarboxylated *cannabis*.
260. (New) The multifunctional composition according to claim 248, wherein:
the *cannabis* includes decarboxylated *cannabis*.
261. (New) A foodstuff derived from the composition according to claim 248, the foodstuff
includes:
one or more selected from the group consisting of ada, bagels, baked goods, biscuits,
bitterballen, bonda, breads, cakes, candies, cereals, chips, chocolate bars, chocolate,
coffee, cokodok, confectionery, cookies, cooking batter, corn starch mixtures, crackers,
crêpes, croissants, croquettes, croutons, dolma, dough, doughnuts, energy bars, flapjacks,
french fries, frozen custard, frozen desserts, frying cakes, fudge, gelatin mixes, granola

bars, gulha, hardtack, ice cream, khandvi, khanom buang, krumpets, meze, mixed flours, muffins, multi-grain snacks, nachos, nian gao, noodles, nougat, onion rings, pakora, pancakes, panforte, pastas, pastries, pie crust, pita chips, pizza, poffertjes, pretzels, protein powders, pudding, rice krispie treats, sesame sticks, smoothies, snacks, specialty milk, tele-bhaja, tempura, toffee, tortillas, totopo, turkish delights, waffles, and combinations thereof.

262. (New) The foodstuff according to claim 261, further comprising:
one or more ingredients selected from the group consisting of:

- a fiber-starch material;
- a binding agent;
- a density improving textural supplement; and
- a moisture improving textural supplement;

wherein:

the fiber-starch material includes one or more from the group consisting of cereal-grain-based materials, grass-based materials, nut-based materials, powdered fruit materials, root-based materials, tuber-based materials, vegetable-based materials, and combinations thereof;

the binding agent includes one or more from the group consisting of agar, agave, alginin, arrowroot, carrageenan, collagen, cornstarch, egg whites, finely ground seeds, furcellaran, gelatin, guar gum, honey, katakuri starch, locust bean gum, pectin, potato starch, proteins, psyllium husks, sago, sugars, syrups, tapioca, vegetable gums, xanthan gum, and combinations thereof;

the density improving textural supplement includes one or more from the group consisting of extracted arrowroot starch, extracted corn starch, extracted lentil starch, extracted potato starch, extracted tapioca starch, and combinations thereof;

the moisture improving textural supplement includes one or more from the group consisting of almonds, brazil nuts, cacao, cashews, chestnuts, coconut, filberts, hazelnuts, Indian nuts, macadamia nuts, nut butters, nut oils, nut powders, peanuts, pecans, pili nuts, pine nuts, pinon nuts, pistachios, soy nuts, sunflower seeds, tiger nuts, walnuts, and combinations thereof.

263. (New) A foodstuff derived from the composition according to claim 262, the foodstuff includes:

candy.

264. (New) A foodstuff derived from the composition according to claim 262, the foodstuff includes:

energy bars.

265. (New) A foodstuff derived from the composition according to claim 262, the foodstuff includes:

gelatin mixes.

266. (New) A foodstuff derived from the composition according to claim 262, the foodstuff includes:

baked goods.

267. (New) A foodstuff derived from the composition according to claim 262, the foodstuff includes:

confectionary.

268. (New) A multifunctional composition including ground *cannabis*, bacteria, and fungus, the composition includes:

- (a) a cannabidiol content ranging from 0.00005 weight percent to 15 weight percent;
- (b) a tetrahydrocannabinol ranging from 5 weight percent to 63 weight percent;
- (c) an energy content ranging from between 2,500 British Thermal Units per pound to 65,000 British Thermal Units per pound;
- (d) a carbon content ranging from between 20 weight percent to 65 weight percent;
- (e) an oxygen content ranging from between 12 weight percent to 55 weight percent;
- (f) a hydrogen content ranging from between 2 weight percent to 20 weight percent;
- (g) an ash content ranging from between 2.5 weight percent to 30 weight percent;

- (h) volatiles content ranging from between 30 weight percent to 90 weight percent;
- (i) a nitrogen content ranging from between 1 weight percent to 10 weight percent;
- (j) a sulfur content ranging from between 0.01 weight percent to 8 weight percent;
- (k) a chlorine content ranging from 0.05 weight percent to 5 weight percent;
- (l) a sodium content ranging from 0.02 weight percent to 15 weight percent;
- (m) a potassium content ranging from 0.05 weight percent to 15 weight percent;
- (n) an iron content ranging from 0.01 weight percent to 13 weight percent;
- (o) a magnesium content ranging from 0.02 weight percent to 10 weight percent;
- (p) a phosphorous content ranging from 0.05 weight percent to 12 weight percent;
- (q) a calcium content ranging from 0.03 weight percent to 10 weight percent;
- (r) a zinc content ranging from 0.01 weight percent to 5 weight percent;
- (s) a cellulose content ranging from 25 weight percent to 75 weight percent;
- (t) a lignin content ranging from 3 weight percent to 35 weight percent;
- (u) a hemicellulose content ranging from 3 weight percent to 30 weight percent;
- (v) a fat content ranging from 5 weight percent to 35 weight percent;
- (w) a fiber content ranging from 5 weight percent to 75 weight percent; and
- (x) a protein content ranging from 5 weight percent to 35 weight percent.

269. (New) The multifunctional composition according to claim 268, further comprising:
a *Cannabis sativa L. ssp. Sativa* content ranges from 3 weight percent to 90 weight percent; and
a *Cannabis sativa L. ssp. Indica* (Lam.) content ranges from 8 weight percent to 80 weight percent.

270. (New) The multifunctional composition according to claim 268, wherein:
the *cannabis* includes decarboxylated ground *cannabis*.

271. (New) A foodstuff derived from the composition according to claim 270, the foodstuff includes:

one or more selected from the group consisting of ada, bagels, baked goods, biscuits, bitterballen, bonda, breads, cakes, candies, cereals, chips, chocolate bars, chocolate,

coffee, cokodok, confectionery, cookies, cooking batter, corn starch mixtures, crackers, crêpes, croissants, croquettes, croutons, dolma, dough, doughnuts, energy bars, flapjacks, french fries, frozen custard, frozen desserts, frying cakes, fudge, gelatin mixes, granola bars, gulha, hardtack, ice cream, khandvi, khanom buang, krumpets, meze, mixed flours, muffins, multi-grain snacks, nachos, nian gao, noodles, nougat, onion rings, pakora, pancakes, panforte, pastas, pastries, pie crust, pita chips, pizza, poffertjes, pretzels, protein powders, pudding, rice krispie treats, sesame sticks, smoothies, snacks, specialty milk, tele-bhaja, tempura, toffee, tortillas, totopo, turkish delights, waffles, and combinations thereof.

272. (New) The foodstuff according to claim 271, further comprising:

two or more ingredients selected from the group consisting of:

- a fiber-starch material;
- a binding agent;
- a density improving textural supplement; and
- a moisture improving textural supplement;

wherein:

the fiber-starch material includes one or more from the group consisting of cereal-grain-based materials, grass-based materials, nut-based materials, powdered fruit materials, root-based materials, tuber-based materials, vegetable-based materials, and combinations thereof;

the binding agent includes one or more from the group consisting of agar, agave, alginin, arrowroot, carrageenan, collagen, cornstarch, egg whites, finely ground seeds, furcellaran, gelatin, guar gum, honey, katakuri starch, locust bean gum, pectin, potato starch, proteins, psyllium husks, sago, sugars, syrups, tapioca, vegetable gums, xanthan gum, and combinations thereof;

the density improving textural supplement includes one or more from the group consisting of extracted arrowroot starch, extracted corn starch, extracted lentil starch, extracted potato starch, extracted tapioca starch, and combinations thereof;

the moisture improving textural supplement includes one or more from the group consisting of almonds, brazil nuts, cacao, cashews, chestnuts, coconut, filberts, hazelnuts, Indian

nuts, macadamia nuts, nut butters, nut oils, nut powders, peanuts, pecans, pili nuts, pine nuts, pinon nuts, pistachios, soy nuts, sunflower seeds, tiger nuts, walnuts, and combinations thereof.

273. (New) The multifunctional composition according to claim 268, wherein:
the composition is essentially free of *cannabis* leaves and *cannabis* stems.

274. (New) A method to produce the composition according to claim 273, the method includes:

- (a) providing the composition according to claim 273, the composition further includes *cannabis* buds, leaves and stems; and
- (b) after step (a), introducing the mixture of *cannabis* buds, leaves and stems to a *cannabis* trimmer, the *cannabis* trimmer is configured to trim the leaves and stems from the buds to produce a composition comprised of trimmed *cannabis* buds which are essentially free of *cannabis* leaves and *cannabis* stems by applying a rotational motion to the buds, leaves, and stems to pass the buds, leaves, and stems across a blade.

275. (New) A composition comprised of trimmed *cannabis* buds and bacteria, the trimmed *cannabis* buds are essentially free of *cannabis* leaves and *cannabis* stems, the composition includes:

- (a) a cannabidiol content ranging from 0.00005 weight percent to 15 weight percent;
- (b) a tetrahydrocannabinol ranging from 5 weight percent to 63 weight percent;
- (c) an energy content ranging from between 2,500 British Thermal Units per pound to 65,000 British Thermal Units per pound;
- (d) a carbon content ranging from between 20 weight percent to 65 weight percent;
- (e) an oxygen content ranging from between 12 weight percent to 55 weight percent;
- (f) a hydrogen content ranging from between 2 weight percent to 20 weight percent;
- (g) an ash content ranging from between 2.5 weight percent to 30 weight percent;
- (h) volatiles content ranging from between 30 weight percent to 90 weight percent;
- (i) a nitrogen content ranging from between 1 weight percent to 10 weight percent;
- (j) a sulfur content ranging from between (j) 0.01 weight percent to 8 weight percent;

- (k) a chlorine content ranging from 0.05 weight percent to 5 weight percent;
- (l) a sodium content ranging from 0.02 weight percent to 15 weight percent;
- (m) a potassium content ranging from 0.05 weight percent to 15 weight percent;
- (n) an iron content ranging from 0.01 weight percent to 13 weight percent;
- (o) a magnesium content ranging from 0.02 weight percent to 10 weight percent;
- (p) a phosphorous content ranging from 0.05 weight percent to 12 weight percent;
- (q) a calcium content ranging from 0.03 weight percent to 10 weight percent;
- (r) a zinc content ranging from 0.01 weight percent to 5 weight percent;
- (s) a cellulose content ranging from 25 weight percent to 75 weight percent;
- (t) a lignin content ranging from 3 weight percent to 35 weight percent;
- (u) a hemicellulose content ranging from 3 weight percent to 30 weight percent;
- (v) a fat content ranging from 5 weight percent to 35 weight percent;
- (w) a fiber content ranging from 5 weight percent to 75 weight percent; and
- (x) a protein content ranging from 5 weight percent to 35 weight percent.

276. (New) A method to produce the composition according to claim 275, the method includes:

- (a) providing a source of *cannabis* leaves, *cannabis* stems, *cannabis* buds, and bacteria; and
- (b) after step (a), introducing the source of *cannabis* leaves, *cannabis* stems, *cannabis* buds, and bacteria to a *cannabis* trimmer, the *cannabis* trimmer is configured to trim the leaves and stems from the buds to produce a composition comprised of trimmed *cannabis* buds and bacteria according to claim 275 by applying a rotational motion to the *cannabis* leaves, *cannabis* stems, *cannabis* buds, and bacteria across a blade.

277. (New) The multifunctional composition according to claim 275, wherein:
the trimmed *cannabis* buds are decarboxylated.

278. (New) The multifunctional composition according to claim 275, wherein:
the trimmed *cannabis* buds are not decarboxylated.

279. (New) The multifunctional composition according to claim 275, further comprising:
a *Cannabis sativa L. ssp. Sativa* content ranges from 3 weight percent to 90 weight percent; and
a *Cannabis sativa L. ssp. Indica* (Lam.) content ranges from 8 weight percent to 80 weight percent.