

CLAIMS:

1. A protection insert comprising a discrete substrate-forming material holding a nutrient composition, the nutrient composition comprising a combination of nutrients for supporting selective growth of one or more bacteriocin-producing bacterium on said substrate and being essentially free of externally added microorganisms.
2. The protection insert of claim 1, in a solid or semi solid form, suitable for placement in vicinity of a goods product that is in predisposition of becoming spoiled.
3. The protection insert of claim 1 or 2, wherein said substrate forming material is selected from agar, guar gum, xanthan gum, gellan gum, carrageenan, gelatin, dextrin and starch.
4. The protection insert of any one of claims 1 to 3, wherein said nutrient composition comprises one or more of nitrogen containing compounds, carbohydrates, inorganic minerals and salts, fatty acids and vitamins.
5. The protection insert of any one of claims 1 to 4, wherein the nutrient composition comprises at least nitrogen containing compounds.
6. The protection insert of claim 5, wherein said nitrogen containing compounds comprise one or more of amino acids, peptides, polypeptides and protein hydrolysates.
7. The protection insert of claim 5 or 6, wherein a source of said nitrogen containing compounds is any one or combination of animal extract, microorganism extract and plant extract.
8. The protection insert of any one of claims 1 to 7, wherein the nutrient composition comprises one or more carbohydrate.
9. The protection insert of claim 8, wherein said carbohydrates comprise any one of monosaccharides, disaccharides, oligosaccharides and combination of same.
10. The protection insert of claim 9, wherein the carbohydrates are selected from the group consisting of mannitol, arabinose, xylose, glucose, galactose, maltose, raffinose, sucrose, lactose, fructo-oligosaccharide (FOS), sorbitol and combinations of same.
11. The protection insert of any one of claims 1 to 10, wherein said nutrient composition comprising inorganic minerals and salts.

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12. The protection insert of claim 11, wherein said inorganic minerals and salts comprises any one or combination of salts of phosphate, potassium, calcium, zinc, magnesium, manganese and iron.
13. The protection insert of any one of claims 1 to 12, wherein said nutrient composition comprises fatty acids.
14. The protection insert of claim 12, wherein said fatty acids comprises any one or combination of caprylic acid, capric acid, lauric acid, myristic acid, palmitic acid, stearic acid, arachidic acid, behenic acid, oleic acid, linoleic acid, polysorbate 20, polysorbate 40, polysorbate 60 and polysorbate 80.
15. The protection insert of any one of claims 1 to 14, wherein said nutrient composition comprises at least one vitamin.
16. The protection insert of claim 15, wherein said at least one vitamin comprises any one or combination of niacin (Vitamin B13), Calcium Pantothenate (calcium salt of vitamin B5), Pyroxidine (Vitamin B6) and Vitamin B12.
17. The protection insert of any one of claims 1 to 16, wherein said nutrient composition comprises a buffering agent.
18. The protection insert of claim 17, wherein said buffering agent comprises any one or combination of phosphoric acid, citric acid, lactic acid and glycine.
19. The protection insert of any one of claims 1 to 18, having a pH in a range of 5.5 and 7.
20. The protection insert of any one of claims 1 to 19, comprising a solid carrier device for holding the discrete substrate-forming material at least partially exposed to the goods surroundings.
21. A consumer goods package comprising goods to be preserved and a protection insert as defined in any one of claims 1 to 20.
22. The consumer goods package of claim 21, wherein said goods comprises vegetables or fruits.

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- 23.** The consumer goods package of claim 21 or 22, having a shelf life that is extended by at least 10% as compared to the same goods, when the goods are packed and stored under the same conditions, without the protection insert.
- 24.** The consumer goods package comprising a planter holding soil, and a protection insert according to any one of claims 1 to 20 within the soil.
- 25.** A method of preserving consumer goods, the method comprising holding said goods in vicinity with said protection insert according to any one of claims 1 to 20.
- 26.** The method of claim 25, wherein said goods are growing plants and said protection insert is placed within soil in which said growing plant grows.