CLAIMS

1. A layered dosage form comprising a first layer and a second layer, characterized in that each layer comprises one or more distinct probiotics together with one or more excipient formulation components; wherein the layers share one or more identical excipient formulation components; and wherein the formulation is provided as a compressed cohesive dosage form unit.

2. The layered dosage form of claim 1, wherein the cohesive dosage form unit is a compressed bi-layer tablet or caplet dosage form.

3. The layered dosage form of claim 1 or 2, wherein the one or more identical excipient formulation components are shared whereby the relative percentage (w/w) amount of each shared component in each layer is within about 20% of the other layer.

4. The layered dosage form of any one of claims 1-3, wherein the relative amounts of weights of the first layer and the second layer vary from approximately 60% : 40% to 70% : 30%.

5. The layered dosage form of any one of claims 1-4, wherein the one or more excipient formulation components are selected from an hydrophilic agent; an acid protectant; a release modifying agent; and an electrolyte.

6. The layered dosage form of claim 5, wherein one or more individual layers include 5-40% hydrophilic agent; 5-40% release modifying agent; and 1-40% electrolyte.

7. The layered dosage form of any preceding claim, wherein the formulation includes acid protection components selected from one or more of the following: sodium carbonate; sodium bicarbonate; and sodium phosphate.

8. The layered dosage form of any one of claims 5-7, wherein the hydrophilic agent is selected from one or more of: starches; hydrophilic gum; cellulose derivatives; polysaccharides; galactomannans; silica; aluminium silicate; magnesium silicate; aluminium magnesium silicate; sodium silicate; aluminium hydroxide; protein; polymers; hydrophilic polymers; hydroxypropyl methylcellulose; hydroxypropyl cellulose; or gums such as guar gum; optionally wherein the hydrophilic agent is also a binder selected from one or more of: hydroxypropyl methylcellulose (HPMC); microcrystalline cellulose (MCC); guar gum; and pectin.

9. The layered dosage form of any preceding claim, wherein the first layer includes one or more probiotics originating from the Lactobacillus, Enterococcus, Pediococcus, and Streptococcus genera and the second layer includes one or more probiotics originating from the Bacteroides, Bifidobacterium, and Eubacterium genera.

10. The layered dosage form of claim 1, wherein all of the probiotics in the first layer are different from all of the probiotics in the second layer.

11. The layered dosage form of any preceding claim, comprising a probiotic selected from a group comprising members of the genus Lactobacillus, Bifidobacterium, Lactococcus, Enterococcus, Streptococcus, Pediococcus, Bacteroides, and portions, fragments, components, proteins, or by-products thereof, optionally wherein the probiotic comprises superoxide dismutase (SodA).

12. A method for making the dosage form of any preceding claim comprising:

    including formulations comprising distinct probiotics in each of at least a first layer and a second layer;

    compressing the first layer and the second layer; and

    forming a single cohesive unit.

13. The method of claim 12, further comprising:

    pre-compression of one of the first layer and the second layer.

14. Use of probiotics in the manufacture of a medicament for providing targeted delivery of distinct probiotics in a human or animal in need thereof, wherein the medicament is the layered dosage form of claim 1.

15. Use of probiotics according to claim 14, wherein the layered dosage form provides for release of a first probiotic to an upper region of the gastrointestinal tract; and provides for release of a second probiotic to a lower region of the gastrointestinal tract.