

[54] **PREPARATION OF ENTERIC COATED DIGESTIVE ENZYME COMPOSITIONS**

[75] Inventor: **Tibor Sipos**, Lebanon, N.J.

[73] Assignee: **Johnson & Johnson**, New Brunswick, N.J.

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[58] Field of Search **424/94, 78, 80, 31, 424/32, 35**

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[57] **ABSTRACT**

Improved enteric coated digestive enzyme-containing compositions which are capable of withstanding hours of exposure to gastric fluids while protecting the biological activity of the enzymes and thereafter releasing the digestive enzymes in their biologically active state

within 5 to 30 minutes after being exposed to intestinal fluids, these compositions comprising (a) an enzyme concentrate in (b) a binder system comprising at least about 0.5 wt. %, preferably about 1 to about 10 wt. % (based on the weight of the binder system plus enzymes) of (i) a binder, preferably selected from the group consisting of polyvinylpyrrolidone, microcrystalline cellulose (Avicel), cellulose acetate phthalate, methylcellulose and alginic acid, and preferably (ii) from about 0.1 to about 10 wt. % of a stabilizer, preferably selected from the group consisting of calcium carbonate, polyvinylpyrrolidone, cellulose acetate phthalate, methylcellulose, alginic acid, starch and modified starches, e.g., carboxymethyl starch (Primojel); and (c) from about 0.1% to about 30 wt. %, based on the weight of the total composite (enzyme plus binder system plus disintegrant) of a disintegrant, preferably selected from the group consisting of citric acid, sodium carbonate, sodium bicarbonate, calcium carbonate and other suitable carbonates, alginic acid, starch and modified starches, e.g., carboxymethyl starch (Primojel) are prepared by a process in which the presence of water is avoided and which includes the step of blending enzyme, binder and disintegrant in the presence of a selected inert solvent as well as the subsequent coating of the resulting enzyme/-binder/disintegrant composite with from about 2.5% to about 10% by weight, based on the weight of the enzyme/binder/disintegrant composite, of a gastric juice insoluble, intestinal juice soluble, non-porous, pharmaceutically acceptable enteric coating polymer.

30 Claims, No Drawings