



STABLE SYNERGISTIC COMPOSITION WITH ANTIOXIDANT AND ANTI-INFLAMMATORY PROPERTIES BASED ON BIOACTIVE PHYTOEXTRACTS

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DESTINATION

The invention relates to a new synergistic composition, 100% natural, in the form of an emulsion, containing extracts of β -carotene from pumpkin, anthocyanins from red cabbage and inulin from parsnips, as well as the method of preparation and its bioactive properties. The invention is of practical importance both by valorization of local plants rich in bioactive compounds to obtain extracts with special biological properties, and by applying sustainable technologies for their preparation and for the final product.

PRINCIPLES USED

The process according to the invention consists in combining 50% and 25%, respectively, β -carotene oily extract from pumpkin, 25% and 15%, respectively, concentrated anthocyanin extract from red cabbage and 25% and 60%, respectively, aqueous fructan extract from parsnip, in the presence of 0.5% guar gum relative to the composition, resulting in a stable composition of phytoextracts with bioactive properties tested *in vitro*.

ADVANTAGES

- Obtaining synergistic natural compositions by combining 3 natural extracts of pumpkin rich in β -carotene, red cabbage rich in anthocyanins and parsnips rich in inulin, with beneficial effects on human health;
- The new compositions are advantageous in terms of costs, as it would reduce the costs of importing similar products;
- The new compositions allows creating a Romanian registered trademark product by exploiting the research in this area.

APPLICATIONS

- the invention is situated at the intersection of food science and health, useful for food supplements industry;
- the invention offers the possibility of combining phytoextracts with multifunctional properties;
- it is useful, in particular, for the development of nutraceutical products.

Bioactive content and antioxidant properties of the new synergistic developed compositions

Attributes	Composition 1	Composition 2
Saturated fatty acids	8.58	8.68
Monounsaturated fatty acids	23.11	27.71
Polyunsaturated fatty acids	68.30	63.61
Omega-3	0.04	0.05
Omega-6	68.26	63.56
FRAP (mg ascorbic acid/ 100 ml extract)	84.78	53.49
DPPH (% inhibition)	39.35	19.38

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