

Development of polyherbal effervescent granules and pellets.

The main objective of this research project was to develop user friendly and convenient fortified nutraceutical product/s for geriatric population. This nutraceutical comprised of multifunctional phytoactives delivering diverse multifaceted benefits like antioxidant, anti-inflammatory, antihypertensive and antidiabetic activities to the consumer. This project envisaged the development of cost effective and industry scalable nutraceutical product/s for geriatric population using easily available phyto-ingredients possessing known nutritional and antioxidant activity.

Silent features:

- The developed formulations are rich in polyphenolic and flavonoid compounds as reflected in *in-vitro* studies (TPC and TFC content)
- The developed herbal formulations meet the nutritional requirements (proximate analysis) and are found to be safe (toxicity studies) and effective (arthritic model) in *in vitro* and *in vivo* studies.

Outcomes:

Nutraceutical polyherbal products- herbal pellets and effervescent granules containing medicinal plants like *Acacia nilotica* (babul pods), *Nigella sativa* (kalonji seeds) and *Linum usitatissimum* (flax seeds) as actives were successfully developed. These products are designed and developed as convenient and geriatric-friendly delivery systems to provide nutrition along with the goodness of nature-derived actives that will contribute to the overall health and well-being in the geriatric population.

The response to First Examination Report for the patent application of these products submitted in April 2022 [Patent Application No/ 202021044504].

Photographs of nutraceutical products developed:



Polyherbal pellets



Polyherbal effervescent granules

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