14. Vitamin D_3 fortified, low glycemic index buckwheat-rice based extruded snacks

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Name of Inventor

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Description of Technology

Optimum processing conditions:

- **Buckwheat flour to rice flour ratio:** 75:25
- **Feed moisture**: 12%
- **Barrel temperature**: 142°C
- **Screw speed**: 360 rpm

Proximate composition of the final product:

Moisture: 3.56%
Crude fat: 0.91%
Crude protein: 10.13%
Crude fiber: 1.96±0.18^c
Ash: 2.20%
Carbohydrates: 81.64%
Shelf life: 6 months

Vitamin D_3 fortified, low glycemic index (GI) buckwheat-rice based extrudates

Impact

In India, there is a widespread prevalence of vitamin D deficiency (VDD) among children and adolescents and cereals fortified with vitamin D would prove to be a desirable approach to combat VDD. At the same time, extruded products such as ready to eat cereal based snacks are considered high GI foods. Keeping these into consideration buckwheat flour was incorporated with an aim to minimize the GI value of the developed extruded product. As far as we could possibly know, no or a very few studies have been carried out wherein the vitamin D has been added to buckwheat incorporated rice based extruded snacks. Such extrudes with significantly lower GI values will serve as a suitable alternative for diabetic people along with the population suffering from vitamin D deficiencies.

Commercial applicability

In view of prevailing Vitamin-D deficiency, consumption of such type of food on regular basis can help reduce the burden of Vitamin-D deficiency.