

Corn Protein in Slab-Extruded Nougat Bar



Dry, powder protein ingredients can be added to “nutrition” bars for protein fortification.

Corn protein was produced by Cargill with at least 85 wt% corn protein (dry basis) and less than about 1.5 wt% oil (dry basis), as described in patent application WO20161544CPI. The formula could be adapted to use corn protein with a minimum of 65 wt% protein and less than 3 wt% oil (dry basis) and anticipate the same finding.

An example involves a protein nougat bar. Ingredients in the formula were pre-weighed, then combined according to the processing procedure.

FORMULA

Ingredients	(%)
Corn Protein	20.0
Rolled Oats	2.5
Erythritol	10.0
Dried Apple Slices	3.0
Cinnamon	1.0
Salt	0.2
Nutmeg	0.2
Sweetener, TRUVIA® Stevia Leaf Extract	0.03
Inulin/Oligofructose Syrup	32.0
Almond Butter	26.6
Glycerin	2.0
Lecithin	0.5
Natural Apple Flavor Cinnamon & Pie Notes	0.5
Baby Oats	0.5
Dried Apple Slices, Trader Joe's, New Zealand Apples	1.0

PROCESSING PROCEDURE

1. Weigh all dry ingredients into a plastic bag. Combine ingredients by shaking the bag vigorously
2. If necessary, size apples into ¼” pieces
3. Add the liquids to a small KitchenAid bowl and blend on level 1 for 1 minute
4. Add the dry blend to large Hobart mixer bowl and blend for additional 3 minutes on level 1
5. Add liquid ingredients to dry ingredients, and mix on level 1 for 1-3 minutes until completely incorporated
6. Line bar pan with parchment paper and fill with approximately 800g of dough
7. Use roller to flatten and achieve uniform height
8. Score into bars with bar cutter
9. Top with remaining apple slices and oats
10. Cover with parchment paper and use the roller to press pieces into dough
11. Test Aw of sample
12. Allow to rest for at least 2 hours before cutting and packaging
13. Store at room temperature

RESULTS

The treated and untreated samples were comparable in both processing and final appearance. The height, moisture and Aw of the untreated and treated samples were also similar.

Aw and % moisture of slab-nougat bar with 20% corn protein

Aw	0.61
Moisture (%)	6.3



Slab nougat bar with 20% corn protein

CONCLUSION

Corn protein can be used in a formula to create a slab nougat protein bar.