



Universidad
Peruana de
Ciencias Aplicadas

"NUTRITIONAL CHARACTERIZATION AND CAFFEINE CONTENT OF A FOOD BAR MADE WITH PAULLINIA CUPANA (GUARANA) POWDER"

Escalante Moreno, Rodrigo Alonso; Armstrong Batanero, Jean Pierre; Universidad Peruana de Ciencias Aplicadas, Lima-Perú

INTRODUCTION

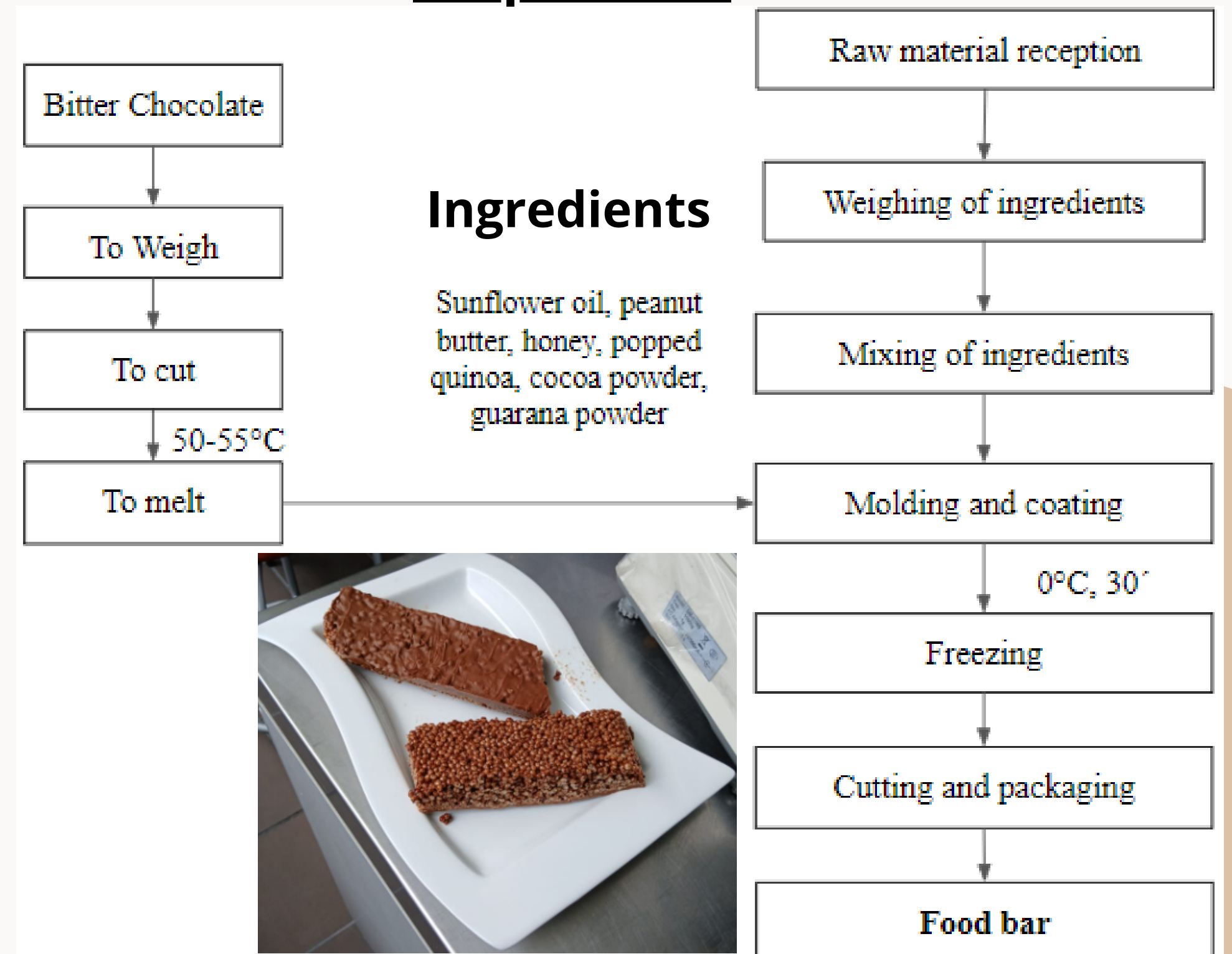
The popularity of energy drinks has increased significantly in recent years, largely due to the extensive promotional campaigns conducted by the most prominent brands in this market.

It is important to note that excessive consumption of these drinks can potentially lead to adverse effects on multiple systems within the body, including the neurological, cardiovascular, and stress response systems. Furthermore, excessive energy drink consumption can contribute to the development of psychological disorders such as anxiety and depression. Additionally, the quality of sleep may be negatively affected. The composition of these drinks typically includes caffeine, taurine and glucuronolactone.

As an alternative to these energy drinks, different food presentations have been developed that can provide a similar effect. One such presentation is the food bar, which is simple to prepare and contains a more nutritionally balanced composition.

METHODOLOGY

Preparation



Examinations

- **Proteins:** AOAC 920.152
- **Carbohydrates:** by difference MS-INN
- **Fats:** AOAC 922.06
- **Caffeine:** By theoretical calculation of guarana powder
- **SENSORY EVALUATION:** 5-point hedonic scale with 30 panelists
- **MICROBIOLOGICAL TEST:** Mold and yeast count by plate counting

RESULTS

PROXIMAL TEST RESULTS

VARIABLES	FOOD BAR 1	FOOD BAR 2	VALUE "P"
Energy (Kcal/100 g of bar)	471.11±0.08	480.52±0.05	0.24
Fats (g/100 g of bar)	19.25±0	21.6±0	0.19
Carbohydrates (g/100 g of bar)	69.94±0.14	66.01±0.04	0.24
Protein (g/100 g of bar)	4.52±0.12	5.52±0.03	0.008
Caffeine(mg/70 g of bar)	175.0±0	131.0±0	0.19
SENSORY EVALUATION		MICROBIOLOGICAL TEST	
Food Bar 1	4,1	Food Bar 1	<10 UFC/g
Food Bar 2	4.4	Food Bar 2	<10 UFC/g

CONCLUSIONS

In this study, an energy bar was developed using guarana powder to provide a healthy alternative to energy drinks while maintaining a comparable level of caffeine. The results showed that the bar contains more caffeine than energy drinks but does not exceed the EFSA's recommended limit. The macronutrient profile is suitable for athletes and active individuals. The microbiological analysis revealed mold levels within the permitted standards, indicating good manufacturing practices. Additionally, the bar received high acceptance with a rating of 4 out of 5. This product offers a natural energy source through honey and quinoa and has a pleasant taste.

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