

## **CAPÍTULO VIII**

### **SUMMARY**

This research involves a technical study for the production of sausage type Frankfurt using the potato of variety violet *Solanum Tuberosum* in form of pasta as alternate of the wheat starch. The general objective was to Elaborate potato's pasta for the substitution of the wheat starch in the preparation of sausage type Frankfurt.; the substitution was proven with two states of potato pasta: raw and precooked each one in four percentages of substitution 25%, 50%, 75% and 100%.

The experimental design proposed for this investigation is totally randomized with factorial arrangement  $A \times B + 1; (2 \times 4) + 1$ , the A factor corresponded to the state of potato's pasta that was the raw state (P1) and the precooked state (P2). The B factor on the other hand makes reference to the percentages of starch substitution for potato pasta.

He/she was carried out the functional analysis from Tukey to 5% for treatments, DMS to 5% and the test of Friedman for organoléptic variables.

The evaluated variables were: gain, pH, humidity, starch and organoléptics characteristics.

## **GAIN**

The gain was determined through the realization of the balance of materials of all the essays. It was highly significant differences for treatments and the test from Tukey to 5% it presented three ranges being the best the treatments T8 and T4

## **pH**

It was found that significant difference doesn't exist among the pH of the treatments, he/she allowed to know that the starch substitution for pasta of precooked potato and hang-over doesn't affect the pH of the product finished besides presenting a values inside the limit that the normative INEN demands, that which guarantees that this parameter of quality was completed.

## **HUMIDITY**

It was determined that significant difference exists among treatments in such a way that the diverse carried out treatments are different among if in what concerns to the humidity. There is not statistical significance among factors and highly significant significance was detected among witness vs. rest.

The analysis of the humidity allowed us to know that the use of pasta of raw or precooked potato also increases the percentage of this variable in the product that it allows us to infer that potato's starch has better qualities ligantes that the starch of wheat starch.

The treatment that bigger humidity had was P1R4 of 100 substitution% with pasta of raw potato continued by P2R3 of 75 substitution% with pasta of precooked potato.

### **ORGANOLÉPTIC CHARACTERISTICS**

The following organoléptic characteristic was evaluated through a panel of tasters: appearance, flavour, texture, bite, colour, scent and preference.

Making use of the method of sensorial analysis of Friedman was significant differences for each one of the evaluated characteristics.

The sausage elaborated with pasta of raw and precooked potato overcame the witness thoroughly in the individual evaluation of each characteristic and at general level the biggest preference had it the treatment P1R4 of 100 substitution% with pasta of raw potato.

The physical-chemical analyses and microbiológicos determined that the obtained product fulfills the standards of quality settled down by the INEN.

### **COSTS**

With the use of pasta of raw and precooked potato a product of smaller cost is obtained that the one only elaborated with wheat starch.

All the treatments had a smaller cost than the witness, however was the T4 of 100 substitution% with pasta of raw potato the most economic with the one that the product was reduced in 5 cents of dollar by kilogram.