

Survey Amount of Salt in Consumptional Bread of Sanandaj

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Abstract: Salt is the main source of sodium in the diet, which is essential for the body to function normally. However, the requirement for sodium in the body is much less than the amount usually eaten. Use of needed Excessive of salt is harmful to human health. Both salt and salt preserved foods are probably associated with an increased risk of stomach cancer, high blood pressure and increases the risk of stroke and mortality from cardiovascular disease. Most of the salt eaten comes from processed and packaged foods, such as sauces, processed meats, stock cubes and soups as well as breads and cereals. The importance of this study was to estimate the amount of salt used in consumption bread of Sanandaj in Iran that carried out in 2009. The number of samples included 25 from each four groups of bread, Sangak, Barbari, Lavash and Fantasy choice in Sanandaj. Total samples (i.e. 100 samples) were analysed by the national standards number of 2628 for determination of salt in bread. The results were analyzed with spss's software version 17 and T test for compare mean of society with constant number, analysis of variance and Tukey Kramer for compare means. The results of this research indicated that most of Salt was in Fantasy bread with 2.966gram/100gram dry bread (amount of standard is 2gram /100gram dry bread) and amount of salt in else breads were quantity of standard. The results of this research is concluded. Extraction at low like Fancy bread with salt is used than other bread.

Key words: Bread, determination, Salt, Sanandaj.

INTERODUCTION

Bread has a special significance as an essential commodity in the basket of consumer households, basic food makes up most of the people of the world. Much of the daily energy, protein, minerals and vitamins thiamin, riboflavin and niacin needed to provide the body. In Iran, about 60-65 percent protein and calories and about 2-3 grams of salt minerals and bulk requirements of daily bread comes from. So that the average daily consumption of 300 grams of bread About 50 percent protein, 60% thiamine and niacin, 40 percent calcium and about 80 percent of the body's iron requirements are provided for an adult(5)

Bread as aliment and its overall presence in the diet and regular consumption can be contributed to human health if the standard manner, shall be provided and consumed. Because the salt makes up one of its compounds(11,14), but its value should be enough time to provide our expectations in terms of what food to provide technological and nutritional Both the standard rate of between 1 to 2% of dry bread is not. Even with 25% salt reduction in bread will not be a problem And this reduces blood pressure and risk of cardiovascular disease(2), although many bakeries that do not comply(4,7,9). Increased too much salt in food is a health warning(32), because of its association with certain diseases has been proved. Gastric cancer and other diseases like high blood pressure and cardiovascular risks of these categories are(2,8,10,18,19,21).

European Society of Hypertension and European Society of Cardiology recommends that salt intake per day is less than 3/8 is hot(10,11,19) Normal amount of salt needed is 3 grams a day that this amount should not exceed 6 grams(21). Reports of excessive use of this material in other areas has been registered(3,11,13). So it should be noted that measuring and demonstrating the presence of this compound in foods such as bread, which provides 65 percent of human energy(5). Accelerate the awareness and community officials and those involved in the preparation of these products is of vital importance. The studies and research in this area should be done to determine how much importance in the preparation of food standards and consumer health are considered. In case of non-compliance issues and points of bodies involved in the control and monitoring units can operate according to the statistical results obtained with more confidence than the manufacturers to follow the rules and regulations that are in their possession.

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MATERIALS AND METHODS

Comparison is an analytical study of all research, because research hypotheses based on experimental observations from four independent groups breads of Sangak, Barbari, Lavash and Fantasy based as research subjects. randomly selected from each group and then tested at Sanandaj Azad University of Agriculture Department food laboratory analysis was performed and results of these four groups were compared with each other.

Materials and Equipment Needed:

Laboratory analysis of food supplies in the Faculty of Agriculture, Islamic Azad University of Sanandaj, was used and chemicals needed by the company with the German trademark sunrise Tolooa- e SHafaavar Sanandaj were prepared.

Measurement of Salt :

One gram of dried and ground sample was weighed exactly into a 250 ml Erlenmeyer flask was poured into 10 ml of silver nitrate solution 0/1 of normal and then add 10 ml concentrated nitric acid and the mixture heated to boil. When boiling, add 5 ml of saturated permanganate until the solution becomes colorless. Then cool it and 100 ml distilled water and 5 drops of ferric ammonium sulfate reagent and added to a solution of ammonium thiocyanate 0/1 to the normal red-brown appearance of the title, so that the color remains stable up to 15 seconds.

Calculation: $585/0 \times (\text{silver nitrate } 0/1 \text{ of normal- amount of ammonium thiocyanate used } 0/1 \text{ Normal}) = \text{percent salt (6)}$

Result:

The results were analyzed with spss's software version 17 and T test for compare mean of society with costant number, analysis of variance and Tukey Kramer for compare means.

Table 1: Average amount of salt and baking soda in breads of Sangak (S), Barbari (B), Lavash (L) Fantasy (F)

Report		
type		salt
S	Mean	1.6804
	N	25
	Std. Deviation	.38713
B	Mean	1.3528
	N	25
	Std. Deviation	.99509
L	Mean	.9188
	N	25
	Std. Deviation	.77794
F	Mean	2.9660
	N	25
	Std. Deviation	.94495
Total	Mean	1.7295
	N	100
	Std. Deviation	1.10818

In table 1 Average values from top to bottom, respectively, for salt in breads of Sangak, Barbari, Lavash and Fantasy are. Average salt levels in order to increase Lavash Barbari Sangak and Fantasy show Fantasy that its value over the standard 2/966 grams per 100 grams of dry bread, But the rest of the bread was the standard. So the amount of salt in a variety of breads is a significant difference.

Table 2: Analysis of Variance.

ANOVA						
		Sum of Squares	df	Mean Square	F	Sig.
salt	Between Groups	58.262	3	19.421	29.445	.000
	Within Groups	63.317	96	.660		
	Total	121.579	99			

The ANOVA test in Table 2 because the amounts of salt in the total sample is pvalue <.001, So the amount of salt and baking soda in a variety of bread. Tukey test for multiple comparisons is a significant difference. Compare the amount of salt in a variety of breads together. Compared Sangak salt and Barbari as well as Barbari and Lavash is pvalue >.05, so this difference is not significant test. In the t test with a fixed amount for total salt samples pvalue <.05 were, H0: μ≠2, H0: μ=2 and for the total sample, So H0 can be rejected, the total

amount of salt samples with the standard amount is significant. In the t test with a fixed amount for salt in bread Sangak, Lavash and Fantasy pvalue <.001 and for Barbari pvalue <.01 were, $H_0: \mu \neq 2$ $H_0: \mu = 2$ So H_0 can be rejected. the amount of salt in Sangak, Lavash, Fantasy and Barbari with standard amount is significant.

Discussion:

The result is that the maximum amount of salt in breads of Sangak, Barbari, Lavash and Fantasy is Fantasy and is the lowest in Lavash average salt levels, respectively, 1/6804, 1/3528, 0/9188 and 2/9660 in 100gram dry bread is.. So just how much higher the amount of salt in bread fantasy than the standard 2 g salt in 100 grams of bread and the bread is less than the standard value.

Dark flour and bran contain mostly due to having high levels of salts and strong gluten flour has less need to have salt. Basically, the amount of salt depends on the type of product is consumed, more flour extraction rate (flour recovery value of 100 kg of wheat flour are deleted from the class called \rightarrow) is greater than, less salt is used in bread.. In situations where for various reasons are not enough gluten strength by adding salt and water absorption of gluten more rigid and partially tearing the sheet of dough to prevent. Thus, tensile strength and resistance of gluten and dough strength increases and finally bread with good volume, texture and more delicate, more flexible and capable of cutting more consistency is obtained(15).

It is observed that sangak bread, lavash barbari and that have a higher degree of extraction (93.82 and 88% respectively), less salt is used and this is the standard.. but against the crumpets with low extraction rate (77 percent) of the more salt is used. The flour extraction rate is lower, the lower protein levels, with increasing degree of extraction of the protein quality of flour or other baking quality decreases. Of dark flour protein levels are higher than on the quality of flour and baking capabilities of flour on them is far lower.

Other research has been done in this field, The overall research and communication has not been tested to the type of bread and salt used in bread has been identified. Other studies of salt in the test measurements in city of Esfahan indicate that the average salt content was found in all samples of bread 2/62% and more than 85 percent of salt samples was higher than the standard and only about 15 percent less salt than the percentage or standard was(16). Evaluation results in about ten percent of bakery shops in the city of Mashhad, which four months were randomly shown that the total amount of sodium in breads (1/34g in 100 g of bread), about 57/5 percent by increasing salt and about 42/5 per cent of sodium bicarbonate to increase the supply of bread is(3).

Salt levels in another study in Shiraz bakery 17/9% over Standard and 82/1% less than the standard has been (11).

Between 2004 to 2007 in Sistan-Baluchestan province bakery in the rate of increase over the standard use of salt 2/1 percent to 3/4 percent increase.(4)

Average salt in 62 bakeries in 2006 in the city of Sabzevar 2/07 has been, But in summer than winter salt intake has been(9) .

Conclusion:

In the present study because fantasy bread and low degree of extraction is at least 77%, So the more salt is used in its preparation of. While the other breads extracted with high salt concentration range is standard. The flour extraction rate is low, more salt should be used.

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