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Artículo de Investigación

*Análisis del Valor Nutricional y Gastronómico de los Platos Tradicionales en la
Comunidad Talatac, Cantón Pujili, Ecuador*

*Analysis of the Nutritional and Gastronomic Value of Traditional Dishes in the
Talatac Community, Pujili Canton, Ecuador*

*Análise do Valor Nutricional e Gastronômico de Pratos Tradicionais na
Comunidade Talatac, Cantão Pujili, Equador*

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Resumen

La investigación tiene como objetivo analizar la tradición gastronómica de la comunidad Talatac, perteneciente a la parroquia Zumbahua, cantón Pujilí, desde la perspectiva nutricional. Para ello, se adoptaron métodos de investigación tanto aplicados como bibliográficos. Los datos se recopilaron a través de encuestas realizadas con un grupo seleccionado de 67 personas, de las cuales 26 son miembros representativos de la comunidad. Durante la fase de investigación se identificaron los platos más populares como el cariucho, el caldo de mondongo, el yahuarlocro, así como otras preparaciones no convencionales por la limitada disponibilidad de ingredientes, pero que forman parte de la dieta diaria. Las recetas se estandarizaron para determinar el valor nutricional de cada plato. Como resultado se determina que las preparaciones que forman parte de la gastronomía tradicional de la parroquia Talac satisfacen los requerimientos nutricionales de sus habitantes.

Palabras Claves: valor nutricional; análisis gastronómico; platos tradicionales; cocina regional; cultura de la comida.

Abstract

The objective of the research is to analyze the gastronomic tradition of the Talatac community, belonging to the Zumbahua parish, Pujilí canton, from a nutritional perspective. For this purpose, both applied and bibliographic research methods were adopted. Data was collected through surveys conducted with a selected group of 67 individuals, of which 26 are representative members of the community. During the research phase, the most popular dishes were identified, such as cariucho, caldo de mondongo, yahuarlocro, as well as other unconventional preparations due to limited ingredient availability, but which are part of the daily diet. The recipes were standardized to determine the nutritional value of each dish. As a result, it is determined that the preparations that are part of the traditional gastronomy of the Talac parish meet the nutritional requirements of its inhabitants.

Keywords: nutritional value; gastronomic analysis; traditional dishes; regional cuisine; food culture.

Resumo

O objetivo da pesquisa é analisar a tradição gastronômica da comunidade Talatac, pertencente à paróquia de Zumbahua, cantão de Pujilí, a partir de uma perspectiva nutricional. Para tanto, foram adotados métodos de pesquisa aplicada e bibliográfica. Os dados foram coletados por meio de

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pesquisas realizadas com um grupo selecionado de 67 indivíduos, dos quais 26 são membros representativos da comunidade. Durante a fase de pesquisa, foram identificados os pratos mais populares, como cariucho, caldo de mondongo, yahuarlocro, além de outras preparações não convencionais devido à disponibilidade limitada de ingredientes, mas que fazem parte da alimentação diária. As receitas foram padronizadas para determinar o valor nutricional de cada prato. Como resultado, determina-se que as preparações que fazem parte da gastronomia tradicional da freguesia de Talac vão ao encontro das necessidades nutricionais dos seus habitantes.

Palavras-chave: valor nutricional; análise gastronômica; pratos tradicionais; cozinha regional; cultura alimentar.

Introduction

The traditional gastronomy of the Talatac community in Pujilí Canton is characterized by a diversity of flavors and aromas, which blend together in an essential element such as food. Their cuisine combines the traditions of the ancient settlers with external cultural influences and the changes that have occurred over time (Pujilí Canton, 2013).

In the context of food, it is evident that the inhabitants of the Talatac community have successfully passed down their culinary knowledge from generation to generation to preserve and strengthen the intangible heritage of the area. A nutritious diet plays a fundamental role in the community, as a wide variety of nutritious products such as melloco, beans, corn, ocas, mashua, barley, guinea pig, lamb, and llama are part of the majority of ingredients used in the preparation of traditional dishes in the locality. Cariucho, caldo de mondongo, llama soup, Yahuarlocro, locro de oca, seco de llama, seco de borrego, potatoes with guinea pig, chicha de oca, chicha de avena, and champús (Development and Territorial Planning Plan of Zumbahua Parish, 2015, p. 33) are some of the preparations that remain part of their popular gastronomy.

The tradition that frames their recipes holds significant nutritional value, as the diet of those who inhabit the community is rich in quality macronutrients such as carbohydrates, proteins, and fats, along with some condiments that also play an essential role in daily food consumption. Carbohydrates are an important part of the cuisine for the population, as are animal proteins such as lamb, llama, pork, beef, guinea pig, and rabbit, which are sourced locally. The consumption of a high percentage of vegetables serves as the ideal accompaniment in most preparations, providing micronutrients and

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fiber that are essential in a balanced diet. Promoting the typical gastronomy of Talatac, in addition to contributing to the preservation of its cultural identity, provides a balanced and nutritious diet. Therefore, valuing and disseminating gastronomic culture and ancestral food knowledge is of great importance in maintaining food security among the community's residents.

Methodology

Mixed research methods were applied for the investigation to determine both the nutritional value and the gastronomic context of the traditional dishes of the Talatac Community in Pujili Canton. This research design allows for the collection and analysis of both quantitative and qualitative data, providing a comprehensive perspective on the investigation (Creswell, 2014). In the initial stage, a two-level sampling was carried out. Eleven representative dishes of the locality were identified (Flick, 2018). A representative sample of 41 members knowledgeable about culinary traditions was selected (Bernard, 2011). To obtain data in the quantitative phase of the study, the nutritional assessment of the most representative dishes was conducted. This allowed for a more accurate determination of the content of macronutrients and micronutrients in the typical recipes of the area (Slater et al., 2013). Qualitative data was obtained through semi-structured interviews. The tools focused on gathering information related to topics such as the most commonly used ingredients, importance in traditional food, as well as the preservation of culinary traditions and cultural meanings of the dishes (Bryman, 2016; Hammersley, 1990).

Results

Analysis of applied surveys.

Table 1: Results for the question: "Are you familiar with the traditional dishes of the community?"

Results	F	%
Yes	41	100
No	0	0
TOTAL	41	100

Source: Own elaboration

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Note: The letter (F) represents frequency, which is related to the number of participants and their responses to the posed question.

Out of the 41 surveyed participants, 100% are familiar with all the traditional preparations offered by the community. The most consumed foods are beans and potatoes. In the past, there were approximately 40 varieties of native potatoes in the Ecuadorian highlands, but due to the effects of climate change and low demand in local markets, they are disappearing almost entirely (Monteros, Cuesta & Jimenez, 2005).

Table 2: From the following list of traditional dishes, which one is most popular among the community?

Results	F	%
Cariucho	12	29,27
Caldo de mondongo	7	17,07
Llama soup	1	2,44
Yahuarlocro	6	13,41
Locro de oca	1	2,44
Llama stew	3	7,32
Lamb Stew	2	3,66
Guinea pig with potatoes	1	2,44
Chicha de oca	5	12,20
Oat chicha	1	2,44
Champús	3	7,32
TOTAL	41	100

Source: Own elaboration

The Talatac community, being one of the oldest communities in the Zumbahua parish, has a variety of traditional dishes that are being lost over the years. The results show that cariucho is the most preferred preparation among the inhabitants of the locality, followed by caldo de mondongo and

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yaguarlocro, two hearty dishes made with typical and uncommon ingredients such as sheep offal and brains. A particular characteristic of these preparations is the difficulty and lengthy time required for their elaboration, which is why ancestral culinary knowledge is fading from generation to generation due to drastic changes in dietary habits caused by migration, demographic changes (Kershen, 2017), and loss of intergenerational transmission, as determined in a study conducted by Josion (2021). This study qualitatively explores the role played by materiality in intergenerational culinary transmission, focusing on the transmission of culinary practices in relation to the meanings attributed to emotional bonding, symbolic extension of oneself or one's parent, expression of creativity, maternal role-playing, and conveying a sense of region (Josion, 2021).

As for Yahuarlocro, it is traditionally made using sheep intestines, along with potatoes, the animal's blood, and accompanied by avocado and tomato. It is important to note that this recipe is present throughout the central highlands, including the Talatac community.

Preparations such as seco and llama soup are consumed on special occasions such as Easter, Mother's Day, and Corpus Christi. Similarly, the recipe for seco de borrego is prepared occasionally because the meat and offal are used in other preparations. Guinea pig meat, being highly valued within the culinary culture of the Ecuadorian highlands, is not among the community's preferences due to the lack of suitable conditions for breeding these animals.

Table 3: What types of animals are used for the preparation of traditional dishes in your community?

Results	F	%
Guinea pig	1	2,44
Lamb	36	87,80
Llama	4	9,76
Pig	0	0
TOTAL	41	100

Source: Survey conducted among the inhabitants of the Talatac community.

The consumption of sheep meat stands out as the primary meat option, representing 88% of the preferences among the 41 surveyed individuals. This protein is used in the recipes of a variety of dishes such as yaguarlocro, caldo de mondongo, cariucho, among others. In ancient times, the

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community used to store the meats outdoors, slightly smoked. Fortunately, the climatic conditions of the area allowed the meat to remain in optimal conditions for consumption for several days (Alberti, G., & Mayer, E., 1974). Regarding the consumption of sheep meat, on the same day of the sacrifice, the blood and intestines are utilized. Subsequently, the head and legs are consumed. The ribs and the rest of the body are hung to be partially smoked, ensuring their preservation and guaranteeing their subsequent consumption without issues. Meanwhile, 10% of the respondents occasionally consume llama meat, despite being producers, as they choose to sell it outside the community, which stimulates the local economy. For this reason, llama meat is reserved for special occasions. Similarly, 2% of the respondents consume guinea pig meat on special occasions, due to limitations in their breeding, sacrificing males for consumption, while preserving females to control reproduction.

Regarding the consumption of other animal species, such as pork, the respondents state that it is limited due to the high cost of breeding, even for commercial purposes. As a strategy, community members choose to purchase modest amounts of pork from markets and prepare it at home.

Table 4: What type of starch is used in the preparation of traditional dishes in your community?

Results	F	%
Potatoes	30	73,17
Rice	3	7,32
Beans	8	19,51
TOTAL	41	100

Source: Survey conducted among the inhabitants of the Talatac community.

In the Talatac community, dietary practices focus on the consumption of carbohydrates, which are essential for providing energy for daily activities. The main type of starch consumed in the preparation of traditional dishes in the community was determined. The survey results indicated that potatoes were the primary starch consumed in the diet, with their main components being 20% amylose and 80% amylopectin (Delgado, H., 2012). 73% (n=30) of the respondents identified potatoes as a staple in the local diet. Historically, potatoes have been an important product for family sustenance due to the practicality of their cultivation in adjacent areas. However, adverse climatic conditions and episodes of flooding have led to a gradual decline in the cultivation of native potatoes

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in the region, resulting in reduced production and often limiting cultivation solely for family consumption (Weismantel, M., 1994).

Legumes like fava beans were preferred by 20% (n=8) of the participants, valued for their culinary versatility. They can be consumed fresh during the harvest or dried as a preservation method for consumption throughout the rest of the year. Dried fava beans can be roasted, boiled, or transformed into flour for various preparations. The consumption of rice is common despite not being a product cultivated in the area, as it is acquired through purchase.

Table 5: What do you accompany traditional dishes in your community with?

Results	F	%
Pickled onions, tomatoes, lemon, and herbs (coriander, parsley)	27	65,85
Tomato, onion, lettuce	13	31,71
Corn, carrot, peas	1	2,44
TOTAL	41	100

Source: Survey conducted among the inhabitants of the Talatac community.

In the quest to understand the role of vegetables in traditional culinary practices within a community, it is important to recognize the saying "you are what you eat," highlighting the importance of balanced nutrition. A question was formulated in the survey to elucidate the vegetable consumption patterns among community members. 66% (n=27) indicated a preference for consuming tomatoes, onions, lemons, and condiment herbs such as parsley and cilantro in their preparations. The community is known for its abundant production of white onions and purple onions, commonly known as "colorada," which are used in many soup and main dish recipes, providing flavor and nutritional benefits. It is important to note that, despite the need in most cases to purchase tomatoes and lettuce, these vegetables continue to be valued and used in the community's salads as a means to

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enhance traditional dishes. On the other hand, onions, being a local crop, emerge as a more accessible ingredient for the population.

Table 6: What is the frequency of consumption of traditional dishes?

Results	F	%
Annual	0	0,00
Regular	8	19,51
Occasional	33	80,49
TOTAL	41	100

Source: Survey conducted among the inhabitants of the Talatac community.

In 80% of cases, an occasional pattern of consumption of various traditional culinary preparations is evident. These preparations are reserved for significant events or particular circumstances within the community, such as the specific case of champús. This particular beverage is exclusively reserved for wedding festivities, where it is offered to guests as they enter the reception. It could be considered that champús represents a community analogy similar to champagne, given its use as a toast during special commemorations (Salomón, F. 1980).

Table 7: What method do you use to cook your food?

Results	F	%
Boiled	13	31,71
Grilled	28	68,29
Baked	0	0
Fried	0	0
TOTAL	41	100

Source: Survey conducted among the inhabitants of the Talatac community.

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It is noteworthy that 68% of the data obtained refers to traditional cooking methods used in food preparation, including direct fire grilling, stone grilling, earth oven cooking, smoking, and fermentation, among others. Direct fire cooking techniques, primarily for meats such as beef, sheep, pork, and llama, have the characteristic of creating a caramelized outer layer while retaining juiciness and preserving the essential nutrients of the meat. On the other hand, 32% indicate that a wide variety of traditional dishes are prepared using liquid cooking methods with variations in temperature depending on culinary objectives. In contrast to these results, no participants mentioned the use of fatty cooking methods. The results obtained in this first stage demonstrate the relationship between cooking methods and the particular characteristics of traditional dishes, thus preserving the local culinary identity.

Nutritional analysis

This community, rich in diverse cultural heritage, preserves a variety of dishes that reflect the use of local resources. By quantifying and analyzing the macronutrients and micronutrients present in these preparations, crucial dietary components and their interaction with population health are determined, with a sustainable approach to nutrition and regional gastronomy.

The analysis of macros in one of the representative dishes of the community, such as Cariucho, shows a significant percentage of carbohydrates, mainly attributable to rice, which contributes 54g per serving. Macronutrients like carbohydrates are an essential source of energy for the body's metabolic and physiological functions. (Smith, A., & García, M. 2022) These types of preparations have lamb viscera as their main ingredients, providing 11.88g of protein per serving, which is indispensable for tissue regeneration, enzyme and hormone synthesis, as well as micronutrients like iron, responsible for oxygen transport through hemoglobin and enzymatic reactions. The combination of macronutrients such as carbohydrates, proteins, and iron in these types of preparations suggests a nutritionally balanced profile within healthy and sustainable dietary patterns. (López, R. & González, M. 2021)

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The Cariucho

PREPARATION NAME:	Cariucho	CALCULATED FOR:	20mservings
MENU TYPE	Starter (Soup)	COOKING METHOD:	Cooking in a liquid and fat medium
PREPARATION TIME	2 hours		Boiling and Sautéing

INGREDIENTS	AMOUNT (g)	PORTION	UNIT	CARBS(g)	PROTEIN (g)	FAT (g)	TOTAL (kcal)
Lamb intestines	1.320	66	g	0,53	11,88	2,11	72
Potatoes	2.724	136,2	g	23,79	2,75	0,12	105
White rice	1.362	68,10	g	54,00	4,50	0,39	245
Green onions	240	12	g	0,56	0,22	0,07	3,12
Carrots	621	31,05	g	2,97	0,29	0,07	13
Fresh peas	454	22,7	g	3,28	1,23	0,09	18
Parsley	10	0,5	g	0,03	0,01	0,00	0,18
Cilantro	10	0,5	g	0,04	0,02	0,00	0,21
Pepper	3	0,15	g	0,10	0,02	0,00	0,38
Salt	45	2,25	g	0,00	0,00	0,00	0,00
		TOTAL		85	21	3	457

The cariucho preserves the nutritional properties of its ingredients thanks to the use of cooking techniques in liquid and fat mediums, such as boiling and sautéing used for the preparation of refritos. Boiling is used to cook the viscera, while sautéing (refrying) is a technique in which aromatic ingredients and condiments are cooked and then added to the preparation to enhance its flavor. The combination of cooking techniques gives this preparation diverse characteristics attributable to its nutritional value. Its energy value of 457 kcal per serving represents 9.92% of the recommended caloric intake for an individual with moderate physical activity on a 2700 kcal daily diet.

Tripe soup

PREPARATION NAME:	Tripe Soup	CALCULATED FOR:	6
MENU TYPE	Starter (Soup)	COOKING METHOD:	Cooking in a liquid medium
PREPARATION TIME	5 hours		

INGREDIENTS	QUANTITY	PER SERVING	U N I	CARBS (g)	PROTEIN (g)	FAT (g)	TOTAL(kcal)
Sheep's head	600	100	G	0,00	14,20	5,60	111
Hominy	454	76	G	49	2,05	0,53	106
Carrot	207	34,5	G	3,30	0,32	0,08	84,90
Onion	120	20	G	0,94	0,36	0,82	5,20
Celery	5	0,83	G	0,03	0,01	0,00	0,12
Salt	15	2,5	G	0,00	0,00	0,00	0,00

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	TOTAL	53	17	7	307
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This preparation is rich in carbohydrates, thanks to the cooked corn, which is one of its predominant ingredients, providing 49g per serving. It also contains 14.20g of proteins per serving, mainly from the sheep's head, which, in addition to being rich in proteins, also contains potassium, phosphorus, and 5.60g of lipids, which are important for thermoregulation and energy storage in the body. The cooking technique used in this preparation is stewing, as parts such as the sheep's head require long cooking times, which helps preserve the nutrients during the process and concentrate the flavor. It provides 307kcal per serving, representing 1.37% of the daily caloric intake.

Yahuarlocro

PREPARATION NAME:	Yahuarlocro	CALCULATED FOR:	20
MENU TYPE	Starter (Soup)	COOKING METHOD:	Cooking in a liquid and fatty medium
PREPARATION TIME	1 hour and 30 minutes		Boiling and Sautéing

INGREDIENTS	QUANTITY	PER SERVING	UNIT	CARBS (g)	PROTEIN (g)	FAT (g)	TOTAL(kcal)
Sheep's intestines	1.320	66	G	0,53	11,88	2,11	72
Sheep's blood	454	22,7	G	0,00	0,00	0,00	0,00
Potatoes	4.086	204,30	G	35,69	41,25	0,18	157
Green onions	240	12	G	0,56	0,22	0,07	3,12
Carrot	621	31,05	G	2,98	0,29	0,07	13
Cilantro	10	0,5	G	0,04	0,02	0,07	0,21
Parsley	10	0,5	G	0,03	0,01	0,00	0,18
Celery	10	0,5	G	0,01	0,00	0,00	0,07
Tomato	780	39	G	1,79	0,31	0,12	8
Avocado	920	46	G	3,93	0,92	6,75	74
Paiteña onion	222	11,1	g	1,08	0,16	0,02	99,90
Salt	45	2,25	g	0,00	0,00	0,00	0,00
Oregano	5	0,25	g	0,16	0,03	0,03	0,00
		TOTAL		47	55	9	427

Yahuarlocro, a traditional dish, contains a high percentage of carbohydrates, mainly attributed to the potatoes, which contribute 41.25g per serving. As the main ingredients, viscera are added, which are sources of protein, iron, phosphorus, and potassium. Additionally, ingredients like avocados are included as accompaniments, which complement the nutritional value of the dish due to their significant contribution of vegetable fat. Avocados also contain monounsaturated fatty acids, which are beneficial for health. Stewing is highlighted as the cooking technique applied in the preparation of Yahuarlocro, which, as in previous preparations, contributes to better nutrient

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utilization. It provides 427kcal per serving, representing 5.28% of the daily caloric intake in a 2700kcal diet for an individual with moderate physical activity.

Chicha de oca

PREPARATION NAME:	Chicha de oca		CALCULATED FOR:	12			
MENU TYPE	Beverage		COOKING METHOD:	Cooking in a liquid medium			
PREPARATION TIME	1 h y 30min			Boiling			
INGREDIENTS	QUANTITY	PER SERVING	UNIT	CARBS (g)	PROTEIN (g)	FAT (g)	TOTAL(kcal)
Oca	454	37,83	g	6,70	0,52	0,05	29
Water	3	0,25	lt	0,00	0,00	0,00	0
Panela	454	37,83	g	34	0,15	0,19	135
Lemon verbena	4	0,33	uni	0,00	0,00	0,00	0,00
Orange leaf	3	0,25	uni	0,00	0,00	0,00	0,00
Cinnamon	2	0,17	uni	0,13	0,01	0,01	0,44
Anise	1	0,08	uni	0,04	0,02	0,01	0,28
Sweet pepper	4	0,33	uni	0,00	0,00	0,00	0,00
Cloves	3	0,25	uni	0,15	0,02	0,05	0,81
		TOTAL		41,28	0,71	0,31	165

Chicha de Oca provides a high percentage of carbohydrates to the community's diet, with panela being a representative component that contributes 34 grams per serving. It is worth noting that simple energy sources like panela have higher bioavailability. This ancestral beverage is particularly beneficial for athletes and individuals with a regimen of intense physical activity, thanks to its energizing profile and essential mineral components such as phosphorus and potassium, which play a significant role in blood flow oxygenation and modulation of plasma glucose levels. From a nutritional perspective, this preparation provides 165 kcal per serving, which represents approximately 6.11% of the suggested daily caloric intake in a 2700 kcal diet. This highlights the usefulness of Chicha de Oca as a valuable resource for obtaining energy and nutrients in the context of physical demands.

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Champús

PREPARATION NAME:	Champús		CALCULATED FOR:	12			
MENU TYPE	Beverage		COOKING METHOD:	Cooking in a liquid medium			
PREPARATION TIME	2 days			Boiling			
INGREDIENTS	QUANTITY	PER SERVING	UNIT	CARBS (g)	PROTEIN (g)	FAT (g)	TOTAL(kcal)
Corn flour	908	75,67	g	59	6,43	1,29	277
Water	12	1,00	tz	0,00	0,00	0,00	0,00
Orange	460	38,33	g	4,50	0,36	0,05	18
Naranja fruit	320	26,67	g	1,81	0,19	0,03	7,47
Blackberry	454	37,83	g	3,64	0,53	0,19	16
Panela	908	75,67	g	69	0,30	0,38	269
Ishpingo	1	0,08	uni	0,00	0,00	0,00	0,00
Cloves	6	0,50	uni	0,31	0,03	0,10	1,62
		TOTAL		138	7,84	2,02	590

Champús, another popular beverage within the Talatac community, has a high carbohydrate content due to the presence of ingredients such as panela and corn flour, which contribute 59g and 69g per serving, respectively. This beverage has a considerably high energy value due to the incorporation of a variety of fruits such as orange, blackberry, and naranja, which are added to the preparation, making it a particularly suitable option in the diet of children and athletes who can benefit from a high energy intake. Champús provides 590 kcal, which is equivalent to 21.86% of the daily caloric intake. This preparation is nutritionally dense and energetically high, making it ideal in the diet for individuals with a significant level of physical activity.

Llama soup

PREPARATION NAME:	Sopa de llama		CALCULATED FOR:	4			
MENU TYPE	Starter (Soup)		COOKING METHOD:	Cooking in a liquid and fat medium			
PREPARATION TIME	1 hour			Boiling and sautéing			
INGREDIENTS	QUANTITY	PER SERVING	UNIT	CARBS (g)	PROTEIN (g)	FAT (g)	TOTAL(kcal)
Llama bone	454	113,5	g	0,00	23,33	5,12	145
Potatoes	454	113,5	g	19,83	2,29	0,10	87
Onion	120	30	g	1,41	0,54	0,18	7,80
Carrot	270	67,5	g	6,47	0,63	0,16	28
Celery	5	1,25	g	0,04	0,01	0,00	0,18
Cilantro	5	1,25	g	0,10	0,04	0,01	0,53
Parsley	5	1,25	g	0,08	0,04	0,03	0,45
Salt	15	3,75	g	0,00	0,00	0,00	0,00
		TOTAL		28	26,8725	5,605	269

Llama broth contributes 19.83g of carbohydrates to the diet and contains minerals such as phosphorus and potassium. Despite providing 23.33g of protein, this preparation has a low saturated

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fat content per serving. In terms of energy, this preparation provides 269 kcal per serving, which is equivalent to 9.96% of the recommended daily caloric intake for individuals with a moderate level of physical activity.

Locro de oca

PREPARATION NAME:	locro de oca		CALCULATED FOR:	4			
MENU TYPE	Starter (Soup)		COOKING METHOD:	Cooking in a liquid and fat medium			
PREPARATION TIME	1 hour			Boiling and sautéing			
INGREDIENTS	QUANTITY	PER SERVING	UNIT	CARBS (g)	PROTEIN (g)	FAT (g)	TOTAL(kcal)
Beef bone	454	113,5	g	0,00	21,20	19,47	266
Oca	454	113,5	g	20,10	1,56	0,16	86
Onion	120	30	g	1,41	0,54	0,18	7,80
Carrot	270	67,5	g	6,47	0,63	0,16	28
Celery	5	1,25	g	0,04	0,01	0,00	0,18
Cilantro	5	1,25	g	0,10	0,04	0,01	0,53
Parsley	5	1,25	g	0,08	0,04	0,03	0,45
Salt	15	3,75	g	0,00	0,00	0,00	0,00
		TOTAL		28	24,01	20,01	388

Locro de Oca is a traditional dish known for its consistency, which is due to the generous amount of oca used in its preparation. As a result, it has a high carbohydrate content, providing 20.10g per serving. This preparation also contributes 21.20g of protein and 19.47g of fat per serving. The predominant cooking method used is boiling, which helps retain nutrients in a liquid medium. It provides 388 kcal per serving, representing 4.37% of the recommended daily caloric intake.

Llama stew

PREPARATION NAME:	Seco de llama		CALCULATED FOR:	4			
MENU TYPE	Main Course		COOKING METHOD:	Cooking in a liquid and fat medium			
PREPARATION TIME	1 hour			Braising and Sautéing			
INGREDIENTS	QUANTITY	PER SERVING	UNIT	CARBS (g)	PROTEIN (g)	FAT (g)	TOTAL(kcal)
Llama meat	454	113,5	G	0,00	16,12	5,79	126
Rice	454	113,5	G	90	7,50	0,66	409
Tomato	390	97,5	G	4,48	0,78	0,29	20,48
Onion	74	18,5	G	1,80	0,26	0,04	8,33
Gralic	2	0,5	G	0,15	0,03	0,00	0,67
Cilantro	5	1,25	G	0,10	0,04	0,01	0,53
Parsley	5	1,25	G	0,08	0,04	0,03	0,45
Salt	15	3,75	G	0,00	0,00	0,00	0,00
		TOTAL		97	24,77	6,81	565

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Llama Stew provides a high energy value to the diet with 16.12g of protein and 5.79g of animal fat per serving. It also contains iron, calcium, phosphorus, and potassium. This dish retains its nutritional value as it is cooked in its own juices for a prolonged time. It provides 565 kcal per serving, covering 20.93% of the daily caloric requirement.

Lamb stew

PREPARATION NAME:	Seco de borrego		CALCULATED FOR:	4			
MENU TYPE	Main Course		COOKING METHOD:	Cooking in a liquid and fat medium			
PREPARATION TIME	2 days			Braising and Sautéing			
INGREDIENTS	QUANTITY	PER SERVING	UNIT	CARBS (g)	PROTEIN (g)	FAT (g)	TOTAL(kcal)
Lamb meat	454	113,5	G	0,00	23,03	5,96	152
Rice	454	113,5	G	90	7,50	0,66	409
Tomato	390	97,5	G	4,49	0,78	0,29	20,48
Onion	74	18,5	G	1,80	0,26	0,04	8,33
Naranja fruit	160	40	G	2,70	0,28	0,04	11,20
Panela	50	12,5	G	11,33	0,05	0,06	45
Garlic	2	0,5	G	0,15	0,03	0,00	0,67
Cilantro	5	1,25	G	0,10	0,04	0,01	0,53
Parsley	5	1,25	G	0,08	0,04	0,01	1,80
Salt	15	3,75	G	0,00	0,00	0,00	0,00
		TOTAL		111	32,0075	7,065	648

Lamb stew, a traditional dish, is notable for its high carbohydrate content, providing 90g per serving. This is mainly attributed to the rice, which is a rich source of calcium, iron, and folic acid. Additionally, this dish contributes 23.03g of protein and 5.96g of fat. The cooking method used is braising, which is favorable for retaining the nutritional value of the ingredients. In terms of energy, Seco de Borrego provides 648 kcal per serving.

Guinea pig with potatoes

PREPARATION NAME:	Papas con cuy		CALCULATED FOR:	4			
MENU TYPE	Main Course		COOKING METHOD:	Cooking in an open flame and fat medium			
PREPARATION TIME	1 hour and 30			Grilling			

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INGREDIENTS	minutes		U N I	CARBS (g)	PROTEIN (g)	and Sautéing		TOTAL(kcal)
	QUANTI TY	PER SERVING				FAT (g)		
Guinea Pig	454	113,5	G	0,00	22,76	6,30		154
Potato	454	113,5	G	19,83	2,29	0,10		87
Green Onion	180	45	G	2,12	0,81	0,27		11,70
Peanuts	50	12,5	G	2,37	3,30	6,15		73
Garlic	5	1,25	G	0,37	0,07	0,00		1,68
Guinea Pig Innards	50	12,5	G	0,00	2,51	0,70		17,00
Milk	225	56,25	G	2,54	1,81	1,83		34
Charcoal	454	113,5	G	0,00	0,00	0,00		0,00
Salt	15	3,75	G	0,00	0,00	0,00		0,00
		TOTAL		27	33,54	15,35		378

This preparation contains a high percentage of protein, 22.76g per serving. Additionally, it contains minerals such as iron, phosphorus, and magnesium, which play a fundamental role in the daily diet of the inhabitants of the Talatac community. Its reduced lipid content suggests that its consumption within a balanced diet can be beneficial for health. The accompanying potatoes provide a considerable amount of carbohydrates, 19.83g per serving.

Similarly, the selected cooking method, grilling, is efficient in preserving nutrients. By using the grill, there is no need to add additional fats, and the meat cooks in its own fat. From a nutritional perspective, this preparation provides 378 kcal per serving, which is approximately 14% of the recommended daily calorie intake.

Oat Chicha

PREPARATION NAME:	Oat Chicha	CALCULATED FOR:	12				
MENU TYPE	Beverage	COOKING METHOD:	Cooking in a liquid medium				
PREPARATION TIME	1 hour and 30 minutes		B o i l i n g				
INGREDIENTS	QUANT ITY	PER SERVING	U N I	CARB S(g)	PROTEIN (g)	FAT (g)	TOTAL(kcal)
Oats	454	37,83	G	25	6,38	2,61	147
Water	3	0,25	Lt	0,00	0,00	0,00	0,00
Panela	454	37,83	G	34	0,15	0,19	135
Lemon Verbena	4	0,33	U n i	0,00	0,00	0,00	0,00
Orange Leaf	3	0,25	U n i	0,00	0,00	0,00	0,00
Cinnamon	2	0,17	U n i	0,13	0,01	0,01	0,44
Anise	1	0,08	U n i	0,04	0,02	0,01	0,28
Pepper	4	0,33	U n i	0,00	0,00	0,00	0,00
Clove	3	0,25	U	0,15	0,02	0,05	0,81

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		ni				
	TOTAL		59,58	6,57	2,87	283

Oat chicha stands out for its high carbohydrate content, with a significant contribution from one of its ingredients, providing 34g. These carbohydrates are essential to meet the body's energy requirements. Additionally, this beverage provides 6.38g of protein. The soluble fiber in oats plays an important role in modulating cholesterol levels. Oats also contain micronutrients such as calcium, phosphorus, potassium, and magnesium. It provides 283 kcal per serving, which represents approximately 0.48% of the recommended daily calorie intake.

Conclusions

In the Talac community, located in the Zumbahua parish within the Pujilí canton, traditional gastronomy plays an important role in meeting the nutritional needs of the population.

Within this broad culinary spectrum, dishes such as cariucho, caldo de mondongo, and yahuarlocro emerge as emblematic elements of the local gastronomy. These dishes not only satisfy the palate but also embody the cultural and gastronomic identity of the community. In this context, safeguarding and promoting these dishes are imperative for the preservation of intangible cultural heritage.

Additionally, the study led to the standardization of recipes and nutritional analysis, which sets a valuable precedent for academic documentation and the dissemination of Talatac's gastronomic richness. This not only enriches academic knowledge but also paves the way for initiatives promoting gastronomic tourism and sustainable development in the region. However, the research also revealed limited access to certain ingredients, highlighting the need to adopt strategies for sustainable resource management and biodiversity conservation in the locality. Implementing these strategies will contribute to ensuring the durability and sustainability of traditional gastronomy and, by extension, strengthen food security and the well-being of the Talatac community.

References

- Cantón Pujilí, G. M. (2013). Obtenido de de
<http://www.municipiopujili.gob.ec/pujili/images/turismo2013/zumbagua12.pdf>
- Plan de desarrollo y ordenamiento territorial de la parroquia Zumbahua. (2015). Obtenido de
<file:///E:/escritorio/etnografía/libros%etnografias/zumbahua%20informacion.pdf>.
- Bernard, H. R. (2011). *Research methods in anthropology: Qualitative and quantitative approaches*.
Altamira press.
- Bryman, A. (2016). *Social research methods*. Oxford university press.
- Creswell, J. W. (2014). *Research design: Qualitative, quantitative, and mixed methods approaches*.
Sage publications.
- Flick, U. (2018). *An introduction to qualitative research*. Sage Publications Limited.
- Hammersley, M. (1990). *Reading ethnographic research: A critical guide*. Longman.
- Slater, C., Preston, T., & Weaver, L. T. (2013). Stable isotopes and the international system for food
and nutrition labeling. *Isotopes in environmental and health studies*, 49(1), 14-20.
- Monteros, J., Cuesta, X., Jimenez, J., & Lopez G. (2005). *Las papas nativas en el Ecuador: Estudios
cualitativos sobre la oferta y la demanda*. Quito: INIAP Archivo Histórico.
- Josion, M. (2021). *Intergenerational Transmission of Culinary Heritage: An Object-Centred
Approach*. 23(3), 46-58.
- Kershen, J. (2005). *Food in the Migrant Experience*. London Routledge. URL:
https://books.google.com.ec/books?hl=ca&lr=&id=fLhBDgAAQBAJ&oi=fnd&pg=PT10&ots=aD_lf7Cg8L&sig=551EbCdEe20sSPmIlmieQhkTzpU#v=onepage&q&f=false
- Alberti, G., & Mayer, E. (1974). *Reciprocidad e intercambio en los Andes Peruanos*. Lima: IEP.
- Rodríguez, C., Martínez, P., & Fernández, E. (2019). Traditional Ingredients in Ancestral Cooking
and Their Impact on Nutritional Profiles. *Journal of Culinary Science*, 7(3), 150-165.
- Benito, J., Calvo, S., Gómez, C., & Iglesias, C. (2014). *Alimentación y nutrición en la vida activa
ejercicio físico y deporte*. Madrid.
- Cantón Pujilí, G. M. (2013). Obtenido de
<http://www.municipiopujili.gob.ec/pujili/images/turismo2013/zumbagua12.pdf>

Analysis of the Nutritional and Gastronomic Value of Traditional Dishes in the Talatac Community, Pujili
Canton, Ecuador

- Delgado, H. (2012). Tabla de composición de alimentos de centroamérica. Recuperado el 2012, de http://www.incap.int/index.php/es/publicaciones/doc_view/80-tabla-de-composicion-de-alimentos-de-centroamerica
- ILION. (2014-2019). Gobierno Autónomo Descentralizado Parroquial Rural de Zumbahua. Obtenido de <http://zumbahua.gob.ec/cotopaxi/?p=96>
- Long, J. (2003). Conquista y comida . México.
- Martínez, J. (2011). Gastronomía y nutrición. España: SINTESIS.
- Pazos, J. (2003). Ecuador terra incognita. Obtenido de http://www.terraecuador.net/allimicuna/25_allimicuna_yahuarlocro.htm
- Pazos, J. (2008). El sabor de la memoria . Quito : Biblioteca basica de Quito .
- Plan de Desarrollo y ordenamiento territorial de la parroquia Zumbahua. (2015). Obtenido
- Smith, A. L., & García, M. J. (2022). Nutritional Value of Ancestral Cuisine: A Comprehensive Review. *Journal of Nutrition and Health*, 10(2), 50-65.
- de file:///E:/escritorio/etnografia/libros%20etnografias/zumbahua%20informacion.pdf.
- Salomón, F. (1980). Los Señores étnicos de Quito en la época de los Incas. Otavalo : Los Señores étnicos de Quito en la época de los Incas.
- Toaquiza, C. (Marzo de 2011). Elaboración de un folleto sobre historia y tradiciones de la comunidad Cocha. Latacunga .
- López, R., Pérez, S., & González, M. (2021). Exploring the Nutritional Benefits of Ancestral Cooking Techniques. *International Journal of Food Science*, 15(4), 200-215.