

Towards Innovative Standardisation for Traditional Cuisine in Zimbabwe

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Abstract

There is a growing demand in Zimbabwe for the local cuisine, constituting traditional dishes prepared using locally available ingredients. The aim of the study was to produce accurate measurements to standardise the quantities of ingredients making these dishes and to develop a recipe book for Zimbabwean gastronomy. The study was necessitated by the observation that, although many Zimbabwean caterers are able to prepare traditional dishes, they apparently lack skills and knowledge in standardising recipes. In the hospitality industry, to meet customer needs and expectations, it is necessary to establish production standards hence the need for standard recipes of local dishes which use standardised measurements. Lack of documentation on standardised measurements in traditional cuisine prompted the researchers to carry out this study with innovations on traditional recipes, producing a selection of standard prototypes of dishes in a kitchen laboratory. A qualitative study design was employed, where semi-structured interviews were used to gather data from a target population of elderly people who were 60 years and above in the ten provinces in Zimbabwe. The age group was chosen because they are among the most knowledgeable people on Zimbabwe cuisine. A sample size of 30 participants, three from each province was used to collect data.

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Purposive sampling was used to select the research participants. The findings revealed that there is lack of documented standard traditional recipes in all the provinces in Zimbabwe. The researchers noted that the preparation of traditional dishes using standardised measurements of ingredients results in consistency of products. Ultimately, all traditional dishes in the study will be developed into standard recipes and compiled into a traditional cuisine recipe book, which will be used in the tourism and hospitality industry, academia and communities. The study recommends standardising indigenous dishes into a formal recipe book and strategically integrating it into culinary curricula, hospitality operations, and community initiatives to foster cultural preservation and economic development.

Keywords: *local ingredients, standard recipes, accurate measurements, traditional cooking methods.*

INTRODUCTION

There is lack of standardisation of Zimbabwean traditional cuisine which has led to operational inconsistencies, unpredictable yields, and a loss of gastronomic identity in commercial markets despite the rich cultural value of traditional Zimbabwean cuisine, its integration into academic curricula, community practice, and commercial hospitality operations remains severely restricted due to a lack of precise standardised standardisation. Traditional preparation methods rely on intuitive, non-quantifiable culinary metrics rather than uniform, replicable formulations. Consequently, without documented, standardised recipes, indigenous culinary knowledge faces acute risk of degradation, limiting its potential to drive regional gastronomy tourism, support modern dietary nutrition, and fulfil national education mandates. Traditional diet can be used as an identity of a group of people which they can be recognized with and it is part of a culture that infers the collaboration of the individuals operating in a territory (Pugra *et al.*, 2025). From a sociological perspective, it is worth noting that to be authentic, food products must be connected to a region. Traditional food must be part of a set of ethnicities which will essential to ensure its continuity over time Rocillo-Aquino *et al.*, 2021). A national traditional cuisine constitutes traditional food which is frequently built by adopting and collecting a variety of ethnic recipes (Civitello, 2026). It

habitually mirrors long and complex culinary backgrounds and internal philosophies (Pagano, 2023). In conjunction with national anthems and flags, food gradually forms an important part of national culture sections publicized on official national web-sites (Alunni, 2020). When productivity standards are in place, it makes the commercialisation of the Zimbabwean cuisine easier as the dishes can be reproduced bringing same level of satisfaction to guests.

Food gradually forms an integral part of national and regional culture, operating as a distinct element of gastronomic identity that highlights a nation's cultural narrative and heritage within global tourism frameworks (Kalenjuk Pivarski *et al.*, 2024; Kizilgeçit 2025). Innovation in this study refers to standardising the measurements of ingredients using scales and measuring cylinders in the preparation of traditional dishes. Implementing digital or structured standardised recipes is essential for parameterising culinary quality, managing operational costs, and establishing accurate nutritional profiles (Silvestre *et al.*, 2022). Consequently, there is a clear imperative to study traditional foods to augment and modernise a nation's diet while actively protecting and perpetuating essential elements of indigenous cultural heritage (Alqurashi 2025). Therefore, there is need to study traditional foods with a view to augment and improve a nation's diet while perpetuating essential elements of cultural heritage (Ghosh *et al.*, 2023; Kennedy *et al.*, 2022). Cuisine tourism is now trendy in the highly competitive tourism and hospitality industry which is connected to history, tradition, lifestyles, values and gastronomy of a destination. Generally, cuisine tourism is used interchangeably with the terms 'culinary tourism', 'food tourism, or 'gastronomy tourism' which have a global popularity among the tourists. Cuisine tourism gives tourists direct, and authentic culinary experiences within the destinations visited (Oguntoyinbo *et al.*, 2021). In this regard, for a destination to remain competitive, local cuisine is now considered as a significant promotional tool to attract tourists.

Traditional dishes are recommendable as compared to fast food menus which have highly processed foods often including unhealthy levels of added sugar, sodium and saturated fats, a lot more than what is found in less processed alternatives (Adams, 2020; Moyo *et al.*, 2020). These ingredients make the food taste better, but too much of them lead to serious health problems such as obesity, heart disease, high blood pressure and diabetes (Marti, 2019). World

over, health specialists recommend a healthy diet to be adopted. Dietary patterns that support health have benefits that include prevention of cardiovascular diseases, cancer, diabetes and obesity. These dietary patterns are supported by strong evidence that promotes a primary focus on unprocessed foods such as fruits, vegetables, plant-based fats such as sunflower oil, proteins from legumes, whole grains, and nuts (Locke *et al.*, 2018). Traditional cuisine in Zimbabwe has the advantage of being constituted by these unprocessed foods. No additives such as food colours, preservatives and sugar are added to the ingredients, making a diet recommended to support good health.

When traditional dishes are being prepared in Zimbabwean homes, restaurants, cultural villages and hotels, there is no documented evidence on standardised measurements of ingredients using calibrated tools such as measuring jugs and scales. As a result, counterfeit Zimbabwean dishes internationally have been produced which fall way below the standard of local dishes (Ndlovu and Mapara, 2021). With such an anomaly, it is not possible to establish the accurate nutritive value of a dish. Portioning of dishes for individuals is not standardised and so the establishment of energy provisions for each family member or customer is difficult to ascertain the exact nutritional value. An example is of a person good at preparing cow peas sauce (rupiza) measuring quantities using the palm of the hand. The major challenge of such a standard is that palm sizes vary from one person to another and this leads to differences in the taste, texture, consistency and even the nutritional value of a specific dish. As such, measuring procedures using estimates may be inaccurate and unreliable, particularly when one has to pass on the culinary skills to another person who wishes to learn and produce a similar dish. No known study has been done to question the quantification of ingredients, ascertain cooking duration of dishes and method of cooking with a view to standardise traditional recipes in Zimbabwe. It is against this background on the Zimbabwean traditional cuisine is at its infancy hence there is need to investigate the different types of dishes consumed in Zimbabwe.

LITERATURE REVIEW

Traditional dishes are an expression of culture, history and lifestyle. The study of traditional dishes offers an important insight into dietary patterns and how these have been shaped through time. Traditional foods and patterns may have

potential health properties which have been tested over time. (Kamgain and Kesa, 2025; Kewuyemi *et al.*, 2023). Traditional foods reflect cultural inheritance and have left their imprints on the respective dietary patterns despite the contemporary lifestyles which do not encourage their preservation in our daily lives and customs. Traditional dishes are central to household diets and local economies (Gumbo *et al.*, 2016; Ncube and Sibanda, 2018). Improving productivity in these foodstuffs requires both technical interventions and institutional support (Mlambo and Chaka, 2019).

Standardising recipes is one of the main pillars of cost control which gives constant and valid information for the dish served Dag and Merdol (2020). Zhang, Chen and Hub (2019) observed that authenticity of food served includes recipes and quantities of ingredients used during cooking. A recipe is standardised when tried, tested, evaluated and adapted for use by a food service under controlled conditions. Thus, standardised recipes produce consistent quality and yield when the exact procedures, equipment and ingredients are used (Naumov, 2023; Saçkes, 2023). Standardised recipes allow the exact labor requirements for meal preparation to be predictable and the duration of cooking time and serving to be ascertained. Dag and Merdol (2020) emphasise the need for use of standard recipes in cooking, arguing that the nutritional value of meals served are accurately established and cost determination substantiated through use of standard recipes. The quantities of ingredients are estimated hence they vary from one cook to the other and the end product depends to a great extent on one's experience and flair in culinary arts. Traditional recipes and ancestral cooking methods are primarily preserved through informal word-of-mouth transmission across generations, leaving them vulnerable to cultural erosion due to a lack of systematic documentation (Dordai, 2025). Accordingly, it is increasingly becoming imperative to standardise recipes making them easy to follow, thus enabling any literate cook to successfully produce accurate results. Limited standardisation processing and quality controls limits productivity, market access and value addition (Moyo *et al.*, 2019). This study sought to formulate standardised Zimbabwean tradition recipes which are yet to be published.

Traditional cuisine is an essential component of the tangible and the intangible attributes of a group or society that are passed from the past generations and are

maintained in the present time to benefit the future generations. Food therefore, at any given time plays an important role in cultural identity and the preservation of cultural heritage in the multicultural environment (Brulotte & Giovine, 2016). However, the authenticity of heritage foods is being threatened as the world has become a global village. There is an on-going process of acculturation affecting food choices, including aspects of food sourcing, ingredient selection, preparation methods, recipes, and the broader context of table presentation and service to diners (Intorre *et al.*, 2023). In many developing economies, the younger generation increasingly lacks the requisite knowledge and skills required to source ingredients, prepare, and cook indigenous meals. The structural way traditional food is sourced, handled, and cooked relies completely on intangible knowledge and technical skills inherited from past generations, solidifying its classification as heritage food (Newton, 2022). Accordingly, it is imperative that localised knowledge of traditional foods, preservation techniques, standard recipes, cooking, and presentation be treated as critical assets of heritage cuisine that must be systematically transferred to upcoming generations. However, the cooking, production, and consumption of authentic traditional cuisine remain heavily threatened in many tourist destinations because modern cooks frequently fail to comply with the rigid culinary rules, skills, and ancestral knowledge intended to be passed down through generations (Kizilgeçit, 2025).

There is also scarcity of traditional ingredients items in towns and cities where the greatest part of the population is concentrated due to rural- urban migration. It is important to note that once people have migrated from rural to urban areas, their income levels increase and their eating habits change as they become exposed to global urban eating patterns. There is an escalating global preference for energy-dense, highly processed Western diets, which has gradually side lined traditional cuisines and complicated efforts to safeguard local food cultures (Dordai, 2025).

The preparation procedure of ingredients, measurement of ingredients and culinary techniques constitute what is referred to as a standard recipe (Durazzo *et al.*, 2018). Food innovation is the development and commoditisation of new food products processes and services also involving ways to make healthy, nutritious offerings that are not only enticing, accessible, exciting and unique

but also sustainable. Guiné *et al.* (2021) asserts that traditional cuisine innovations include the aspect of standardising recipes, menu planning, adding nutritional value of meals and cooking using appropriate methods and aesthetic values in food presentation. Other considerations include being innovative in increasing the nutritional value, flavour, colour and standardising recipes. Recipes standardisation involves experiments carried out by researchers, starting from the original traditional recipe and progressing to use measurements without altering the nutritional content of the dish. Operational innovation represents a deliberate strategy for hospitality organisations to elevate their market competitiveness and adapt to evolving consumer expectations (Kaushal and Yadav, 2021). Scholars postulate that this type of culinary innovation relies heavily on the technical standardisation of traditional and ethnic recipes (Silvestre *et al.*, 2022). By parameterising precise ingredient metrics, quality controls, and execution methods, organisations ensure that identical final dishes can be accurately reproduced, consistently served and successfully commercialised across diverse hospitality operations (Silvestre *et al.*, 2022; Haake, Moore & Oliver, 2000).

RESEARCH DESIGN AND METHODOLOGY

A qualitative research approach was employed as it permits for an in-depth, subtle exploration of indigenous knowledge, culinary practices, and subjective expert opinions pertaining to Zimbabwe's traditional cuisine, which cannot be sufficiently captured through quantitative indicators alone (Creswell & Creswell, 2018). The study was design-orientated as a multiple case study. This design was chosen to allow a mixed investigation of traditional culinary productivity standards covering the ten provinces in Zimbabwe. A multiple case study design was selected over a single case study to permit for strong cross-case comparisons, helping to recognise both localised innovations and wider national patterns in traditional food preparation.

Primary data were gathered from participants from rural communities in Zimbabwe. These participants possessed extensive, verifiable knowledge of traditional culinary practices. Semi-structured interviews were used to gather data from a target population of elderly people who were 60 years and above in the ten provinces in Zimbabwe. The age group was chosen because they are among the most knowledgeable people on Zimbabwe cuisine. A sample size of

30 participants purposively selected was used for data collection. Participants were selected evenly from all ten of the country's administrative regions to ensure balanced geographical representation. Each participant possessed deep indigenous knowledge and expertise in preparing the traditional culinary dishes specific to their respective home regions.

The derivation of core themes was executed systematically from the transcribed interview data, strictly adhering to the analytical framework established by Creswell (2009). Instead of applying this model abstractly, the study contextualised each stage to fit the specific frontiers of traditional Zimbabwean culinary study. The initial stage involved cleaning process. This stage involved transcribing the digital audio recordings verbatim and organising the raw text into specific provincial datasets, varying from Mashonaland Central to Matabeleland South. This systematic classification allowed that regional variations in culinary terminology and ingredient names were preserved before formal analysis. During the second phase, the researchers completely focused themselves in the data through recurrent readings of the transcripts. This allowed researchers obtained an overall understanding of the narratives and reflect deeply on the potential implications pertaining to indigenous knowledge, heritage preservation, and standardisation. The third stage involved a rigorous analysis of the theoretical and methodological approach, where the textual data were segmented and assigned specific conceptual codes. These codes were designed particularly to separate productivity factors like traditional volumetric measurements and preparation times. The fourth phase involved synthesising conceptual codes to generate detailed descriptions of the provincial research settings. It further helped to establish overall themes like the challenges of recipe replication and the commercialisation of heritage cuisines in the hospitality sector. This phase also included a thorough search for structural connections and thematic interrelationships covering the varied provincial cases, illustrating commonalities in the standardisation of obstacles regardless of geographical separations. The fifth stage involved methodically structuring the emerged themes and narratively contextualises them within the final study report to present an interrelated narrative of Zimbabwe's culinary landscape. The final stage entailed a higher-level interpretation of the empirical findings to extrapolate insightful contextual meaning, directly synthesising the primary data with present literature on culinary heritage preservation, sustainable tourism and quality management. Ultimately to guarantee analytical clarity, the processed

data were configured into structured data display tables and accompanied by comprehensive descriptive narratives. All participants were above the age of 60 years, with 7 of the participants had the level of education of being tertiary education and the rest of the 23 participants were house wives. Most of the participants are now the elderly who are now grandparents and cut across all Zimbabwe's 10 provinces.

FINDINGS

An analysis of participants over Zimbabwe's ten provinces demonstrates that traditional food choices are profoundly influenced by local culture, language and the environment. Instead of a random collection of recipes, the 30 recognised dishes show a practical dependence on crops and wild foods that flourish in each region's specific climate. This analysis categorizes the regional results into three primary ethno-geographical groups, namely; the Mashonaland and Harare Provinces, the Matabeleland and Bulawayo Regions, and the Southern-Central Intermediary Zones (Manicaland, Masvingo, and the Midlands)-to assess how ecological availability and cultural heritage influence indigenous food preservation and preparation methodologies.

THE MASHONALAND PROVINCES AND HARARE: STARCH DIVERSIFICATION AND FORAGED ECOLOGIES

In the northern and eastern regions which consists of Mashonaland West, East, Central, and Harare (Participants 1–3, 19–24, and 28–30), traditional cooking centres around small grains, root tubers, and protein-rich legumes. The basis of these meals is *sadza*. Sadza is a thick porridge traditionally made from drought-resistant grains such as *rapoko* (finger millet), sorghum, and modern maize meal. Participants exhibited a complex understanding of nutrition through dishes such as *mutakura*.

Ecological seasonality deeply influences culinary practices within the Mashonaland cluster. During the rainy season, dietary attention changes toward wild-foraged resources. Participants regularly reported harvesting *madora* (mopane worms), *ishwa* different indigenous mushrooms, and small game like *mbeva* (field mice). These proteins are methodically sun-dried for preservation into *chimukuyu* (biltong) and later reconstituted in fresh cream (*ruomba*) or a rich peanut butter sauce (*dovi*). Moreover, leafy greens like *muboora*, *tsunga*, and *nyevhe* are cooked with peanut butter to improve nutrient absorption.

Alongside hardy tubers such as *madhumbe* (taro) and cassava, and fermented drinks like *mahewu* and *mapfura* (marula wine), these methods form a complex regional framework meant to survive seasonal food shortages.

THE MATABELELAND REGIONS AND BULAWAYO: PASTORAL LEGACIES AND AGRO-ECOLOGICAL ADAPTATION

Contrary to the farming practices of the north, the traditional diet in Matabeleland South, Matabeleland North, and Bulawayo (Participants 4–6 and 13–18) shows a profound cattle-herding heritage influenced by a dry climate. These regions receive very little annual rainfall, as a result, local culinary knowledge prioritises livestock products, drought-resistant squashes (cucurbits), and specialised maize-processing techniques meant to extend shelf life.

In this region, the prominence of pastoral culture is verified through the widespread use of dairy-derived dishes. Participants reported the preparation of *umphokoqo* (a crumbly, granular maize porridge) and *puthu*, both typically served with *amasi* (curdled milk). Equally, *umcaba* uses boiled green maize mixed with curdled milk, demonstrating a smart adaptation to utilise fresh grain before it spoils. Cattle and poultry proteins are fully used, as seen in the popularity of *amanqina* (boiled trotters, or *mazondo*) and stewed indigenous chicken, regularly accompanied by *umngqusho* (somp). Crop cultivation features resilient melons and squashes, giving rise to the dishes like *amajodo* (boiled melons), *amathanga* (boiled pumpkins), and *inopi* (porridge cooked with melon). Resource-saving innovations are also evident in *amaqebelengwana* (salted cornmeal balls boiled in water) and *umxhanxa*, a winter-resilient dish combining boiled dry maize with *mashamba* (cattle melons) to ensure food security in arid environments.

THE SOUTHERN, CENTRAL, AND EASTERN ZONES: CONVERGENCE AND HYPER-LOCAL SPECIALISATION

The last geographical cluster comprises of Manicaland, Masvingo, and the Midlands (Participants 7–9 and 25–27). This region is situated in a transitional geographic and climatic zone. These central provinces serve as a culinary melting pot, combining the starch-and-tuber traditions of the north with the livestock-and-squash staples of the south, while preserving their own hyper-local specialties. Small grains are the real heartbeat of the region's food culture and ecology. Participants consistently reported that *sadza* made from hardy

rapoko (finger millet) or sorghum is their primary daily staple. In Manicaland, the local microclimate supports a diet featuring unrefined brown rice and samp. Both of these are typically enriched with peanut butter. These staples are served together with slow-cooked indigenous poultry ('roadrunner' chicken) and root crops like *madhumbe* and sweet potatoes. In Masvingo and the Midlands, culinary practices connect regional and linguistic divides through common dishes like *nhopi* (pumpkin porridge) and *chimukuyu* stewed in peanut butter sauce. As the Midlands province is geographically central to all the provinces, it exhibits an exceptionally broad food culture. Its cuisines blend wild vegetables such as *nyevhe*, *mowa* (amaranth), and *muboora* dressed in fresh cream (*ruomba*), together with specialised local delicacies like *zvinyenze* (wrapped tripe) and oil extracted from *runinga* (wild sesame seeds). In all its three provinces, consuming *mangai* (boiled dried maize kernels) remains a vital strategy for utilising surplus grain yields long after the harvest.

In summary, the data show that Zimbabwe's traditional cuisines are dynamically structured around what is locally and seasonally available. Instead of a static list of food preferences, these culinary choices exhibit a practical response to regional environments. Northern and eastern provinces take advantage of high rainfall to forage for wild insects, mushrooms, and leafy greens, depending heavily on peanut butter for rich fats and food preservation. Conversely, the drier western provinces exploit cattle-herding and drought-hardy melons to maintain dietary stability. Ultimately, these findings highlight that traditional food systems across Zimbabwe are directly shaped by ecological boundaries, cultural heritage, and sustainable resource management.

TRADITIONAL DISHES KNOWN BY THE PARTICIPANTS IN DIFFERENT REGIONS IN ZIMBABWE

Traditional dishes prepared in Zimbabwe differ from one region to another. In Mashonaland West they prepare *Rupiza*, *Nhopi Mutakura*, *Sadza*, *Casava*, *Madhumbe*, *Madora*, *Mbeva*, *okra*, *Mushroom*, *Ishwa* and *Mutakura*. In Bulawayo they prepare *Puthu* with curdled milk, *Umxhanxa*, *Mancimbi*, *Umphokoqo* with curdled milk, *amanqina* (*mazondo*). In Manicaland they prepare Brown rice with peanut butter, *Madora*, *Mahewu*, *Sadza*, stewed traditional chicken (road runner), samp with peanut butter, *Madhumbe*, Sweet potatoes. In Masvingo they prepare, *Nhopi* dried meat (*chimukuyu*) in peanut butter sauce, *Sadza*, *Mutakura*, and *Rupiza*. They also prepare *Rupiza*,

Vegetables, *nyevhe*, pumpkin leaves, with peanut butter or cream (*ruomba*). *Madora* with peanut butter or cream (*ruomba*). Pumpkin seeds or peanuts roasted with salt (*chikangireni*), Biltong (*chimukuyu*) in peanut butter sauce, *Sadza*, Sweet potatoes and *Madhumbe*. In Matabeleland South foods prepared include *Amajodo* (boiled melons) *Amathanga*, *Ilambazi*, *Igwadla* (Boiled dry maize), and *Umxhanxa* (Boiled dry maize with *mashamba*, *Amaqebelengwana* (small balls made out of mealie meal then boiled with salt), *Inopi* and *Umcaba*

In Midlands region they prepare salted nuts (*mutetenerwa*), Rice with peanut butter (*mashakada*), Samp with peanut butter, (*manhuchu*) Roasted pumpkin seeds and *sadza*, *Sadza* and curdled milk (*Hodzeko*), pumpkin leaves and *uraza* (cream), *Nhopi*, roasted maize (*maputi*), *Umqutshu* (boiled Samp served with beef stew or chicken stew), *Isitshwala* (*Sadza* (*rapoko*, millet, sorghum) and Vegetables. In Harare traditional dishes prepared include *sadza* (*rapoko*, maize), dried meat with peanut butter, rice with peanut butter and stewed chicken, vegetables and Mahewu drink. In Mashonaland East, the dishes prepared include *Rupiza*, *Nhopi*, *Mutakura* Mahewu drink, *Mapfura* drink (*mukumbi*), Rice with peanut butter and Ground fresh mealie balls and fresh or dried mushroom. The dishes are prepared from ingredients which are locally available and in season. It was also established through this study that the dishes had similar ingredients but in certain instances have different names and had slight differences in the way they are prepared (Table 1).

Table 1: *Measurement Used to Quantify Ingredients when Preparing Traditional Dishes* (Authors' own compilation though Interviewers, 2025)

Participant	Region	Measurements used	Sub-theme
1-3	Mashonaland West	measure with palm or cup, estimated according to the number of people and	Estimation
4-6	Bulawayo	Measurements are estimated According to the number of people using any container	Estimation
7-9	Manicaland	Estimated using any home gadgets	Estimation
10-12	Masvingo	Measurements differ from one chef to the other dependent on number of persons served.	Estimation
13-15	Matabeleland South	Measurements vary from one chef to the other dependent on number of persons served.	Estimation and experience

16-18	Matabeleland North	Measurements vary from one chef to the other dependent on number of persons served.	Estimation and experience
19-21	Mashonaland East	Measurements are estimates to formulate quantities for ingredients	Estimation and experience
22-24	Mashonaland Central	Measurements are estimates to formulate quantities for ingredients	Estimation and experience
25-27	Midlands	Measurements vary from one cook to the other dependent on number of persons served.	Estimation
28-30	Harare	Estimated using palms of hands	Estimation

Challenges were the same across all ten provinces in Zimbabwe. The challenges are: estimation of measurements, many people prepare western dishes and do not prepare traditional dishes at homes. Inaccuracy of traditional estimates in measuring ingredients, challenges of lack of documented recipes seasonality of ingredients, lack of refrigeration facilities and Westernisation. Participants from all regions indicated that estimation of measurements give differences in flavours, consistency, nutritive value and textures of dishes as this depends solely on the individual preparing the dish. In addition, participants from Masvingo region stated that measuring can be a problem if skills are to be passed on to another person as one needs to be very skilful with timing and temperatures in the absence of standard recipes. Another challenge brought forward by respondent number 5 is that many people are preparing English dishes in their homes as compared to traditional dishes. Moreover, some traditional dishes can only be prepared when ingredients are in season. The other problem raised by the respondent in the Midlands region was lack of storage facilities in rural settings to keep left over food in instances where the dish prepared might be more than what one family could consume at any given time. One respondent from Harare province indicated that some of the traditional ingredients are no longer readily available in towns and cities. It was established through this study that in all instances there is lack of documented standard recipes.

All participants expressed that there is need to formulate standard recipes, especially when teaching others how to make the dishes. The standard recipes would give guidance with regards to preparation, duration of cooking, temperature and portioning of the dish. One respondent from Masvingo region

added that there is need for a standard recipe for every dish to avoid the inconsistency of traditional estimates by using standardised measurements.

STANDARD RECIPES DEVELOPMENT

The researchers developed standard traditional recipes using standard measurements (Boxes 1-9). Experiments were carried out as follows:

- i. Each of the four researchers measured mealie-meal using the palm.
- ii. The four portions were measured separately on a measuring scale.
- iii. It was established that all the portions were of different weights.
- iv. To standardise the measurement, the four weights were added together and then divided by four to formulate the average weight.
- v. It was agreed that the weights of other ingredients will be standardised in the same manner.
- vi. Modern measuring scales calibrated in kilograms, grams were used.
- vii. Liquids were measured using measuring jugs calibrated in litres and millilitres.
- viii. Length of cooking time was ascertained.

The following are the dishes that were prepared:

Box1: Nhopi

Ingredients 1 litre water 100g maize meal 150g peanut butter 500g pumpkin	 Method 1. Remove seeds, peel and dice the pumpkin; 2. Boil the pumpkin for 1 hour or until soft; 3. Gradually add the mealie meal to the cooked pumpkin while briskly whipping with a whisker for 5 minutes; 4. Add the peanut butter while still on heat and continue whipping to a smooth consistency; and 5. Serve hot as a main dish.
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Box2: Rapoko Sadza

Ingredients

400g rapoko (sorghum,
millet or maize) meal
1 Litre water



Method

1. Boil 750ml of water in a saucepan;
2. Prepare a paste using 250ml cold water and 75g mealie meal;
3. Add the paste to the boiling water while whisking vigorously so that lumps are not formed;
4. Continue whisking until the mixture is porridge-like and is starting to boil;
5. Cover the saucepan with lid and leave to boil for 15 minutes;
6. Using a wooden spoon, fold in the rest of the mealie meal a little at a time while sadza is boiling;
7. Fold in the mealie meal, thoroughly mix to ensure the mixture does not form lumps and is smooth;
8. When thoroughly mixed, put the lid on the saucepan and simmer at low heat for 5 minutes; and
9. Serve hot with desired relish

Box3: Brown rice with Peanut Butter (mashakada)

Ingredients 500 g brown rice 1 litre water 15 g salt 100 g peanut butter	 Method 1. Boil water in a saucepan; 2. Remove any impurities from the rice and wash it thoroughly to remove excess starch; 3. Add the rice and seasoning to the boiling water, cook the rice till soft and all the water has evaporated; 4. Add peanut butter, mix thoroughly until all the peanut is evenly distributed and the rice grains are bound together; and 5. Serve hot or cold as a starch dish.
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Box4: Green Mealies Bread

Ingredients 4 cobs green mealies Pinch of salt Tablespoon of sugar 1 litre water	 Method 1. Remove husks from the maize cobs; 2. Grate maize cobs and place in a mixing bowl; 3. Add salt and mix well; 4. Clean 5 inner husks of maize and place on a board; 5. Place 50g of the grated maize mixture into each of the husks and fold the ends and tie. The mixture may produce 5 portions depending on the size of the cob; 6. Put water in a pan and allow to boil; 7. Place the tied husks with grated maize mixture into the saucepan with boiling water and boil for 40 minutes until cooked; 8. Remove the maize husks from boiling water, untie the ends and remove the mealie breads from the husks; and 9. Serve hot with tea.
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Box5: Chicken Stew (Road Runner)

Ingredients 300g stewing chicken (road runner) 450 ml water 1 medium sized tomato peeled and chopped ¼ small onion chopped 15g salt	 Method 1. Cut meat into neat pieces leaving the bones on; 2. Place the meat pieces in a saucepan, add 250 ml water, salt and get to boil; 3. Reduce heating, simmering until meat is tender and water is finished; 4. Fry the chicken in the fat that remains in the saucepan after chicken is cooked until golden brown; 5. Add finely chopped onion and continue frying until onion is shrivelled; 6. Add chopped tomato and continue frying; 7. Add 200 ml water and continue simmering for 15 minutes; and 8. Serve hot with sadza, rice or samp and fried green leaf vegetables (tsunga or covu).
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Box 6: Dried Meat in Peanut Butter Sauce (Chimukuyu)

Ingredients 500 g dried meat cut into even (game, beef, goat, and sheep) 1 litre water 200 g peanut butter 10 g salt	 Method 1. Boil 1 litre water, add the biltong and simmer for approximately 1 hour or until the meat is soft; 2. Drain the stock into a smaller saucepan, use it to prepare the peanut butter sauce; 3. Add the peanut butter into the hot stock, whisk until smooth and allow simmering for 5 minutes; 4. Add the cooked biltong into peanut butter sauce; 5. Season with salt, if necessary, as some biltong is salty; and 6. Serve with a starch dish of your choice.
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Box7: Rupiza

Ingredients

500 g shelled cow peas
2 litres water
200 g peanut butter
15 g salt



Method

1. Remove impurities from the cow peas
2. Roast the cow peas in a pan until golden brown
3. Boil the water, add the cow peas and boil them for 1 hour 30 minutes or until soft
4. Add peanut butter and whip until smooth while still on heat
5. Add salt and continue whipping on heat for 5 minutes
6. Serve hot with any type of sadza or brown rice with peanut butter.

Box 8: Mahewu

Ingredients

100 g mealie meal porridge
(use 100g mealie meal and
1 litre water, cooked for 10 minutes)
1 litre water
50 g rapoko malt meal
100 g sugar



Method

1. Prepare mealie meal porridge using maize meal by making a smooth paste using 100g mealie meal and 300 ml cold water;
2. Add 700 ml boiling water, while whisking vigorously;
3. Allow to boil, moderate heat and simmering for 10 minutes;
4. Take away from heat, pour the porridge into a large mixing bowl and leave to cool;
5. Add 1 litre water to the porridge and whip until smooth;
6. Add rapoko malt and continue whipping so that the mixture remains smooth;
7. Cover and leave at room temperature overnight to allow fermentation. In cold temperatures, more time may be needed for the mixture to ferment;
8. Add sugar and stir the fermented mixture; and
9. Serve the drink cold.

Box 9: Pumpkin Leaves in Peanut Butter Sauce or Cream

Ingredients 300g pumpkin leaves 50g peanut butter or 50 ml fresh cream 10g salt 125 ml water	 Method 1. Wash pumpkin leaves until clean; 2. Remove hard fibre on the stock; 3. Slice pumpkin leaves into small strips; 4. Put water and seasoning in a pan and bring to boil; 5. Add pumpkin leaves and leave to boil for 10 minutes or until soft; 6. Remove vegetables and place them into a bowl and leave remaining liquid in the saucepan; 7. Add peanut butter or fresh cream to the remaining liquid in the saucepan and stir to a smooth paste; 8. Return saucepan to moderate heat, stirring all the time until the paste starts boiling and is smooth; 9. Add the cooked pumpkin leaves to the peanut butter sauce or fresh cream, mix well and simmer for 5 minutes; and 10. Serve as relish with sadza of your preference.
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The findings of the study revealed that there is limited documented literature on traditional cuisine and standard recipes in Zimbabwe. Therefore, this study makes significant theoretical and practical contribution enabling cooks to use standard recipes resulting in consistency of the end product. Preparation of the traditional dishes should be done using standardised ingredients so that the

nutritive value of dishes may be established. Traditional cuisine has a major potential for attracting foreign tourist seeking cultural tourism.

CONCLUSION AND RECOMMENDATIONS

The standardisation of Zimbabwean traditional dishes provides insights to the hospitality industry on how Zimbabwean traditional dishes can meet international standards. The study provides guidelines to restaurant managers, chefs and culinary students on the actual measurements of traditional ingredients to produce standardised recipes. The researchers recommend that the country needs policy development in the following areas:

- Encouraging people to learn preparation of traditional dishes in primary schools, high schools and in tertiary institutions.
- Growing Traditional crops particularly small grains used in the preparation of nutritionally balanced traditional meals.
- Development of policies in the hospitality industry that aggressively promote culinary tourism in line with the global trends.
- Standardisation of traditional food recipes and patenting them.
- Documentation of standard recipes should be done and recipe books should be developed.
- Further research resulting from the study is to focus on exploring the nutritive value of Zimbabwean dishes.
- SOPs for cooking times and temperatures for specific dishes to reduce under- or over-cooking (Phiri and Banda, 2022).
- Portion control templates to standardise serving sizes and caloric estimates (Dube and Mutasa, 2021).

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