

Perfecting Tradition: Standardizing The Recipe for Dry shrimp Chutney Powder

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Abstract

Dry shrimp chutney powder is the quintessential South Indian condiment that brings together rich umami flavors, tangy tamarind flavor, and spicy warmth. Mass production in a standard way is essential, as the process can be standardized in home preparation but requires more when the amount is to be multiplied, ensuring quality and shelf life. This article explores all the comprehensive steps involved in standardizing the recipe of a 120g packaged product, including ingredient selection, scaling, processing techniques, and overcoming challenges.

Introduction

Chemmeen podi is the traditional dry shrimp chutney powder of South India. It is used by almost every home because of its rich flavor profile and usability. Prepared with dried shrimp along with grated coconut, tamarind, and an assortment of spices, this accompaniment has an imperative use for rice, idli, dosa, and more.

Although standardization has to be done, traditional flavors are brought to the commercial markets. It implies scaling and, together with the safe handling of food products, ensures the homogenous taste and texture of a food item that increases the product shelf life. Technical matters associated with the production of final products have been given an opportunity while stressing how these classic flavors and tastes are, through current production, retained within today's product.

Ingredients and Their Functional Roles

Preparation of dry shrimp chutney powder has involved great dedication to get a perfect ratio of flavors and textures. Ingredients are selected in order to play out their respective roles so that the final product is great in flavor, aroma, and versatility. Here are the ingredients used with further details:

1. Dry Shrimp (23.50g)

The heart of this recipe is the dried shrimp, which gives out a strong umami flavor that forms the base of the chutney powder. It is rich with proteins and minerals such as calcium and



iron. The strong seafood flavor of the dried shrimp blends well with the other ingredients, which creates a flavorful outcome.

1. Shredded Coconut (153.76g)

The grated coconut adds richness with a creamy texture, and it has a light sweetness to the powder. It is a binding agent that holds all the ingredients together in a cohesive mixture. Its natural fats enhance the ability of the fat-soluble flavors to be absorbed, so the spices, among other elements, are made more pronounced.

2. Tamarind (18.98g)

Tamarind gives slightly astringent taste that cuts through the sweetness of coconut and richness of shrimp. This acidity is critical in preventing the chutney powder from being too heavy or rich. High antioxidant properties of tamarind contribute to the nutritional value of the product.

3. Curry Leaves (4.15g)

Curry leaves impart a typical aromatic flavor of South Indian cuisine. Their earthy and slightly herbal flavoring adds to the overall flavor. In addition to flavoring, curry leaves are a good source of iron and vitamins A and C.

4. Shallots (32.03g)

The natural sugars in shallots caramelize during the roasting stage, creating a rich understated complexity that adds appetizing flavor along with spiciness to the dish. Shallots also add moisture and texture that can bind the mixture without becoming overly dry.

5. Ginger (4.33g)

Ginger has a warm pungency that enhances the overall flavor. Its spicy character pairs well with the hotness of chilly and balances out the sourness from tamarind, providing an excellent mouthfeel. It possesses antimicrobial and digestive attributes, so it is good for the health aspect.

6. Dry Chilly (5.72g)

The main source of heat to this chutney powder comes from the dry chilly, so the heat content is within limits. In addition, it imparts an earthy undertone to the recipe. It is roasted as a result; a smoky flavor is conferred upon the powder. The preservative property of capsaicin present in the chilly, stabilizes the shelf life of the product.

7. Salt (4.08g)

Salt is an all-purpose flavor enhancer that brings out the natural flavors of all the other ingredients. It balances the sweetness of coconut, the sourness of tamarind, and the spiciness of chili. Precise measurement of salt is necessary to avoid overpowering the delicate balance of flavors in the chutney powder.

The Standardization Procedure

Standardizing the recipe requires a very scientific approach in order to achieve consistent

taste, quality, and shelf stability. Each ingredient was cleaned and prepared for impurities. Dried shrimp were sorted to get rid of unwanted particles. Shallots, curry leaves, and ginger were washed under running water to be hygienic. Ingredients were roasted individually to remove moisture. This helped prevent the growth of microbes and intensify natural flavors, which will be carried forward to the final aroma. The time and temperature for roasting were critical in detail. Over-roasting will lead to bitterness, and under-roasting will fail to provide flavor.

The roasted ingredients were ground into fine powder so that flavors would be uniformly distributed. This also provided it with a consistent texture that was easy to apply. Advanced grinding equipment used was able to minimize heat from the process, thereby conserving volatile compounds responsible for aroma. The product was packed in 120 g moisture-proof, vacuum-sealed containers. This process preserved the freshness and flavor of the product. It also prevented oxidation and spoilage, thereby increasing shelf life.

Ingredient's weight percentage:

Ingredients	Original (g)	Percentage (%)
Dried Shrimp	23.50	9.53
Grated Coconut	153.76	62.36
Tamarind	18.98	7.70
Curry Leaves	4.15	1.68
Shallots	32.03	12.99
Ginger	4.33	1.76
Dry Chilly	5.72	2.32
Salt	4.08	1.65

Challenges and Solutions in Standardization

It has quite a few challenges in standardizing a traditional recipe, such as dry shrimp chutney powder, to be mass-produced. This has to be addressed with a thoughtful approach so that the product is kept authentic and meets modern standards of quality and convenience.

1. Moisture Control

Challenge: Moisture contents in raw materials like grated coconut and shallots would cause microbial growth and spoilage if not properly processed. Higher moisture contents will also degrade the texture and flavor of the finished product; clumping may occur, or the finish may be off.

Solution: Ingredients such as coconut, shrimp, and chilies would be roasted separately



under proper temperatures to minimize moisture content, yet not compromise their flavor and nutrients. The vacuum-sealed technology used in packaging avoided the entry of air into an airtight environment, thereby preventing moisture absorption and spoilage, thus ensuring the product remained fresh and dry for longer periods of time.

2. Flavor Consistency

Challenge: Since shrimp and coconut are commodities, taste, size, and quality vary with their source, season, and processing methods. Natural variability has posed a challenge to duplicating a similar flavor profile between batches.

Solution: Ingredient sourcing was standardized by working with reliable suppliers to source high quality, consistent raw materials. In addition, regular sensory evaluation was conducted by a trained team of tasters to ensure the flavor, aroma, and texture of each batch corresponded to the standardized profile. The ingredient proportions were changed accordingly to ensure uniformity so that consumers always experience the same taste when purchasing the product.

3. Packaging and Storage

Challenge: Packaging and storage are of paramount importance to maintain the freshness, flavor, and shelf stability of the product, especially in humid climates or during international shipping. Oxidation, loss of aroma, and contamination can occur from poor packaging.

Solution: Moisture-proof packing materials were utilized with multilayered, vacuum-packed bags or containers packed with packets of silica gel. Airtight packing kept moisture from entering but also retained outside odors and contaminant entry.

Applications and Versatility

Due to its unique flavor and versatility in preparation, dry shrimp chutney powder is a delicious ingredient for an array of traditional and modern dishes to traditionalists and foodies alike. The chutney powder is normally used as a tasty seasoning for staples such as steamed rice, dosa, idli, and chapati. The simplest meals are elevated by their umami-rich and spicy flavor. It is an essential accompaniment in South Indian households.

This chutney powder is the best seasoning for a great addition to the soup, curries, or stir-fried dishes as an additional flavor element; sometimes just a pinch makes an extraordinary difference, converting run-of-the-mill recipes into gourmets' favorites.

The chutney powder is light in weight, and it is shelf-stable. It is suitable for travelers, students, and expatriates because of its convenience. It is an easy way to enjoy authentic homemade food without the mess of cooking elaborate dishes. Adaptability makes it a perfect choice for busy individuals who are experimenting with fusion cuisine, for those living abroad, craving a taste of home, and so on.

Consumer Appeal and Market Potential

To standardize the dry shrimp chutney powder, catering is done for a variety of people who have their demands and requirements.

Traditional Buyers are those who enjoy the authentic taste at their own convenience. From the process of standardizing production, it is assured to retain the home-cooked qualities, which are quite consistent therefore catering to their needs. It contains dried shrimp that is protein-rich, coconut that is nutrient-dense, and has no artificial preservatives, so it appeals to the health-conscious consumer. It will provide essential nutrients like calcium, iron, and healthy fats, making it a wholesome addition to daily meals. Dry shrimp chutney powder is unique and ready to use for the growing interest in Indian cuisine across the globe; it unfolds the bold, complex flavors of South India and holds shelf stability, easy use, and can be exported to international markets. Its appeal goes to a global clientele that prefers packaged foods that are authentic.

Growth Opportunities

The product's versatility opens doors for expansion in various markets. In retail stores they are sold along with other Indian spices and condiments. E-commerce platforms reaches out to expatriates and global consumers who are looking for authentic Indian products. Restaurants and caterers would be utilizing it to add value to their dishes.

Conclusion

Standardizing the recipe for dry shrimp chutney powder is an example of how tradition and innovation can be successfully integrated. This effort refines ingredient proportions, perfects processing techniques, and addresses production challenges to preserve the essence of a beloved condiment for modern consumers. Dry shrimp chutney powder, standardized, is a reflection of the transformation of traditional Indian cuisine in the globalized world.

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