



सत्यमेव जयते

PACKAGING OF MIZO CHILLI



AATMANIRBHAR BHARAT

PM Formalisation of Micro Food Processing Enterprises Scheme (PM FME Scheme)



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DESCRIPTION ABOUT THE PRODUCT

- ✓ Chilli (*Capsicum annuum L.*) is an indispensable, commercial spice crop native to the tropical America which belongs to the Solanaceae family.
- ✓ It is hot-tasting tropical berry, widely used as condiments or flavorings in every kitchen in the tropics and subtropics.
- ✓ India has emerged today as the foremost producer and exporter of chillies accounting for 42.81% of the world area.
- ✓ Chilli has many medicinal properties, especially as an anti-cancerous agent, increases metabolism by burning fats, instant pain reliever, helps in digestion.



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FACTORS RESPONSIBLE FOR THE DETERIORATION OF MIZO CHILLI AND ITS PROCESSED PRODUCTS

- ❑ Moisture content of chilli and its products
 - Sogginess and caking / lumping of chilli powder
 - Loss of free flowing nature of chilli powder
- ❑ Oxygen of air
 - Oxidation of aromatic compounds
 - Loss of aroma / flavour
- ❑ Air temperature
 - Loss of volatile oil
 - Loss of aroma / flavour
- ❑ Air humidity
 - Spoilage due to microbial growth
- ❑ Light
 - Discolouration of chilli and processed products
 - Deterioration
- ❑ Insect infestation
 - Spoilage of chilli and processed products

REQUIREMENTS OF PACKAGING OF MIZO CHILLI AND ITS PROCESSED PRODUCTS

- To maintain the quality of product during handling, transportation, storage and distribution.
- To protect the product from spillage and spoilage
- To act as water and oxygen barriers
- To prevent the loss of aroma and flavour
- To prevent the ingress of external odour
- To provide resistance against grease and oil
- To be compatible with the product
- Good machineability, printability and easy availability

Packaging material has to be selected with care, keeping in mind the functional as well as the marketing requirements



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TYPES OF PACKAGING

□ Primary packaging

- Primary packages directly come into contact with food products.
- Primary packages provides first or initial layer of protection to the food products.
- Examples: parchment paper, greaseproof paper, paperboard cartons and plastic pouches.

□ Secondary packaging

- Secondary package surrounds or contains the primary package.
- Examples: Corrugated case, Boxes

□ Tertiary packaging

- Tertiary package contains a number of secondary package together.
- Mainly used for bulk handling of food products.
- Example: Jumbo bags



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PACKAGING MATERIALS FOR MIZO CHILLI AND ITS PROCESSED PRODUCTS

- ❑ Bulk packaging
 - Jumbo bags
 - Jute gunny bags
 - Plastic liner bags
- ❑ Institutional packs
 - Jute gunny bags
 - Laminated flexible pouches
 - Plastic woven sacks
 - Multi-colour printed laminated PP woven bags
- ❑ Consumer packs
 - Glass bottles
 - Printed tinplate container, Composite containers, Plastic containers
 - Printed flexible pouches
 - Lined cartons



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PACKAGING OF DRIED MIZO CHILLIES

- ❑ Packaging of dried Mizo chillies is done to protect it from any damage during storage, transportation and other marketing aspects.
- ❑ Good packaging is essential to facilitate convenience in transportation and storage.
- ❑ Packaging also enhances the market price of dried chillies.



- ❑ Dried Mizo chillies are marketed at
 - Producers' level
 - Middle men / Commission agent / Wholesalers' level
 - Consumers' level
- ❑ Packaging is required at every stage of marketing from producer to consumer.



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PACKAGING OF DRIED MIZO CHILLIES FOR MARKETING AT PRODUCERS' LEVEL

- ❑ Packaging in jute gunny bags. Old gunny bags are also used.
- ❑ Sometime, gunny bags with polythene liner inside are used
- ❑ The capacity of gunny bags varies from 20 to 40 kg.
- ❑ Polythene bags and cartoons are also used



Packing in gunny bags



Gunny bags with polythene liner



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PACKAGING OF DRIED MIZO CHILLIES FOR MARKETING AT MIDDLE MEN / COMMISSION AGENT / WHOLESALERS' LEVEL

- ❑ Jute gunny bags and gunny bags with polythene liner inside are used
- ❑ The capacity of gunny bags varies from 40 to 100 kg.



Mizo chillies in gunny bags with a wholesaler and middle men / commission agent



PACKAGING OF DRIED MIZO CHILLIES FOR MARKETING AT CONSUMERS' LEVEL

- ❑ 100 g consumer unit packs in 3000 gauge low density polyethylene film pouches. Shelf life: 3-6 months
- ❑ 250 g packs in 200 gauge low and high density polyethylene films. Can be stored in cool, dark and dry place for one year.
- ❑ Dried Mizo chilli is available in market in the packs of 5, 10, 15, 20, 25, 40 and 50kg.



Stemless Mizochillies -1kg



10 kg bag



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DRIED MIZO CHILLIES FOR MARKETING BY RETAILERS



Use of polythene bags



Use of gunny bags



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MACHINES FOR PACKAGING DRIED CHILLIES

- ❑ Filling dried chillies in jute gunny bags / polythene bags and packing is done manually.
- ❑ The consumer packs upto 200 g are prepared using semi-automatic packing machines.
- ❑ The packaging in pouches of higher weight is done in manually operated packing machines.



Machine for packing dry chillies in pouches



PACKAGING CRUSHED DRIED RED CHILLI FLAKES

- Printed flexible pouches
- Pouch in mono-carton boxes
- High density polyethylene and Saran / Cello / Saran poly laminate pouches
- Composite, plastic and glass jars.
- Sachets
- ❑ Packing machines for volumetric cup filling 5-15 gram flakes in plastic films



Chilli flakes



Chilli flakes sachets



Chilli flakes in pouch



Chilli flakes in glass jar



Chilli flakes packing machine

PACKAGING DRIED MIZO CHILLI POWDER

- ❑ Bulk packaging
 - Jumbo bags: Cloth, plastic (PP) fabric
- ❑ Institutional packs
 - 2-10 kg packs
 - Laminated flexible pouches
 - Plastic woven sacks
- ❑ Consumer packs
 - Glass bottles
 - Printed tin plate containers
 - Composite containers
 - Plastic containers
 - Printed flexible pouches
 - Lines cartons



CHILLI POWDER – BULK PACKAGING



Chilli powder in Jumbo bags



Chilli powder in Jumbo bags

- Jumbo bags can hold upto 1 MT chilli powder
- Bags are flexible and durable
- Mechanised filling and packing works

CHILLI POWDER – INSTITUTIONAL PACKS



Bag filling machine

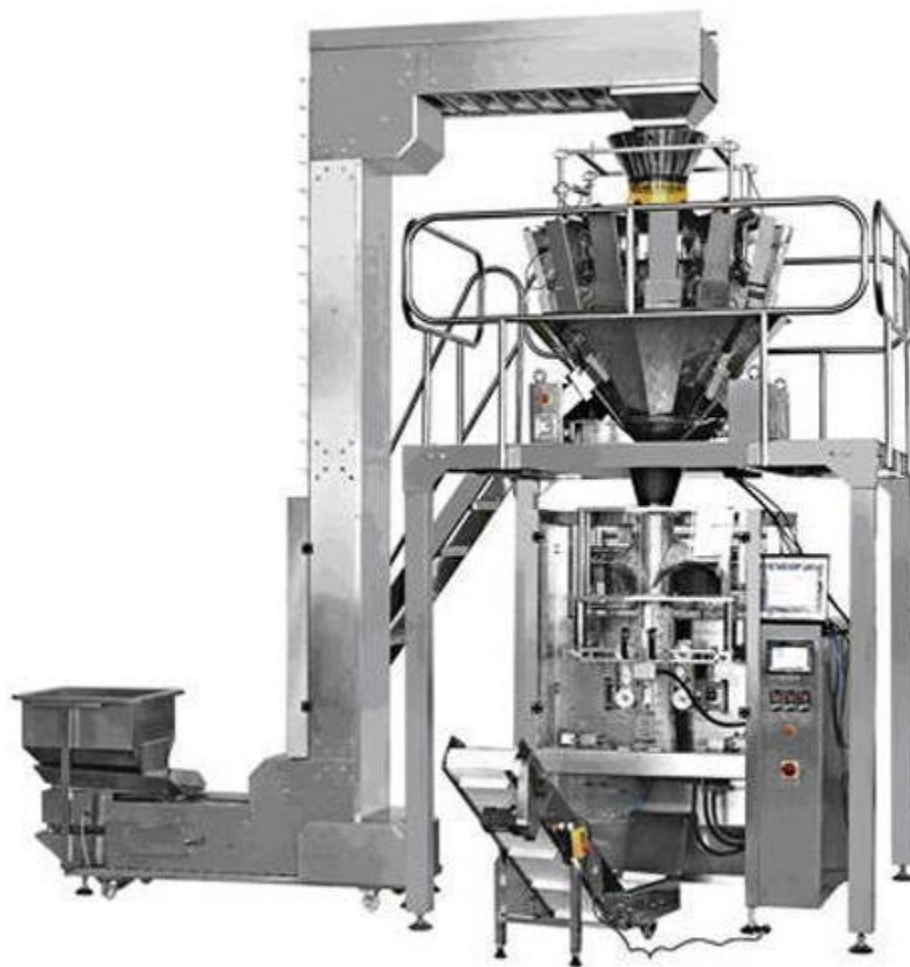
- ❑ The bags are gusseted and have window and micro perforations
- ❑ The bags are woven bags

Chilli powder: 5-10 kg bags

CHILLI POWDER – CONSUMER PACKS



Chilli powder 100 g – 1 kg packs



Multi-head powder weigher packing machine



PACKAGING OF MIZO CHILLI PASTE , AND PICKLE



Chilli paste

Double head paste filling machine

Chilli chutney (Ranjka)

PACKAGING SPECIFICATIONS FOR FLEXIBLE PACKS OF DRIED MIZO CHILLIES AND PRODUCTS

Laminates / Co-extruded films

(up to 500 grams capacity)

50 μ HD – LD

50 μ HD – LD – HD

12 μ PET / 37.5 μ LD

25 μ BOPP / 37.5 μ LD

12 μ PET / 37.5 μ PP

25 μ LD – 7.5 μ Tie – 25 μ PA – 7.5 μ Tie –
25 μ LD

The LDPE Inner and Outer layers could also
be LLDPE or EAA or LD-HD

Laminates / Co-extruded films

(up to 1000 grams capacity)

50 μ HD – LD 62.5 μ HD – LD

62.5 μ HD – LD – HD

12 μ Polyester / 50 μ LD

25 μ BOPP / 50 μ LD

12 μ PET / 50 μ PP

30 μ LD – 7.5 μ Tie – 25 μ PA – 7.5 μ Tie –
30 μ LD

The LDPE Inner and Outer layers could also
be LLDPE or EAA or LD-HD

Source: ICPE Packaging of Spices, Indian Centre for Plastic in the Environment



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SEALING OF FLEXIBLE PACKS OF DRIED MIZO CHILLIES AND PRODUCTS

- ❑ The types of sealing of pouches from flexible plastic based materials
 - Centre seal formation
 - Three sides seal formation
 - Four sides seal formation
 - Strip pack formation

- ❑ The vital link in the performance of the pouch is the seal integrity.
- ❑ The performance of the heat seal layer is very important.
- ❑ Even if the film structure has been designed with exceptional properties, with excellence in interlayer lamination, if the sealing of the pouch fails, the product may get contaminated
- ❑ If the sealing fails, the food product in pouches become unfit for consumption.

LABELLING

- Information on a label should be in English or Hindi in Devnagri script.
- Information on a label should not be false, misleading or deceptive or is likely to create an erroneous impression regarding character of food in any respect.
- Label should not get separated from the container / pack
- Contents on the label should be clear, prominent, indelible and readily legible by the consumer .
- The label covered by a wrapper should carry the necessary information and should be readily legible.

Ingredients :
Byadgi Chilli

Nutrition Chart

Per 100 g (Approx.)

Energy	436kcal
Protein	19.3 g
Carbohydrate	52.3 g
Sugar	4.90 g
Fat	16.7 g

fssai

Lic. No.: 10017022006173
Proprietary Food. Keep in dry place

Example of Information on the label of a plastic jar of Mizo chilli powder



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INFORMATION ON A LABEL

- Name of the food product.
- List of ingredients.
- Nutritional information.
- Declaration of VEG and NON VEG.
- Declaration of added food additives.
- Name and address of manufacturer.
- Net quantity
- Code number
- Lot number/ Batch number.
- Date of manufacturing.
- Best before date
- Country of origin.
- Number of pieces
- Bar Code
- Brand Name

DECLARATION OF FOOD ADDITIVES ON THE LABEL

❑ Class of Food additives

- Acidity Regulator, Acids, Anticaking Agent, Antifoaming Agent, Antioxidant, Bulking Agent, Colour, Colour Retention Agent, Emulsifier, Emulsifying Salt, Firming Agent, Flour Treatment Agent, Flavour Enhancer, Foaming Agent, Gelling Agent, Glazing Agent, Humectant, Preservative, Propellant, Raising Agent, Stabilizer, Sweetener, Thickener

❑ Addition of colours and / or Flavours

- CONTAINS PERMITTED NATURAL COLOUR(S) **OR** CONTAINS PERMITTED SYNTHETIC FOOD COLOUR(S) **OR** CONTAINS PERMITTED NATURAL AND SYNTHETIC FOOD COLOUR(S)
- CONTAINS ADDED FLAVOUR **OR** CONTAINS PERMITTED NATURAL COLOUR(S) AND ADDED FLAVOUR(S) **OR** CONTAINS PERMITTED SYNTHETIC FOOD COLOUR(S) AND ADDED FLAVOUR(S) **OR** CONTAINS PERMITTED NATURAL AND SYNTHETIC FOOD COLOUR(S) AND ADDED FLAVOUR(S)

DECLARATION OF DATE OF MANUFACTURE AND PACKING

- The date, month and year in which the commodity is manufactured, packed or pre-packed.
- If the “Best Before Date” of the products is more than three months, the month and the year of manufacture, packing or pre-packing should be given
- If the commodity has a short shelf life of less than three months, the date, month and year in which the commodity is manufactured or prepared or pre-packed should be mentioned on the label.
 - Best Before and Use By Date
 - ✓ BEST BEFORE MONTHS AND YEAR
 - OR
 - ✓ BEST BEFORE MONTHS FROM PACKAGING
 - OR
 - ✓ BEST BEFOREMONTHS FROM MANUFACTURE

•The packaging material to be used must be carefully chosen, taking into account both practical and marketing specifications, in order to ensure the consistency of the food shape and size during handling, transport, storage, and delivery. In general, the packaging specifications for Pasta are listed below:

1. To protect the product from spillage and spoilage.
2. To provide protection against atmospheric factors such as light, heat, humidity, and oxygen.
3. The selected packaging materials should have high water vapour and oxygen barriers.
4. The packaging material should have a high barrier property to prevent aroma/flavour losses and in gross of external odour.
5. Therefore, the wrapping material should be resistant to grease and oil and be compliant with the commodity.
6. The packaging content should, in addition to the above practical specifications, have good machinability, printability and be readily available and disposable.

Labelling requirements for packaged food products as laid down in the Part 2.4 of the Prevention of Food Adulteration (PFA) Rules, 1955, and the Standards of Weights and Measures (Packaged Commodities) Rules of 1977, require that the labels contain the following information:

1. Name, trade name or description
2. Name of ingredients used in the product in descending order of their composition by weight or volume
3. Name and complete address of manufacturer/packer, importer, country of origin of the imported food (if the food article is manufactured outside India, but packed in India)
4. Nutritional Information
5. Information Relating to Food Additives, Colors and Flavors
6. Instructions for Use
7. Veg or Non-Veg Symbol
8. Net weight, number or volume of contents
Distinctive batch, lot or code number
9. Month and year of manufacture and packaging
10. Month and year by which the product is best consumed
11. Maximum retail price



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