ANNEXURES

Annexure I

Consent Form

I ……give my consent to participate in the survey.
(Name of the participant)

Date:
Place: Signature of the participant

TEAR FROM HERE
……

Survey on Consumption and Labeling of Processed Packaged Foods

This survey is a part of doctoral dissertation and the information collected will be purely for research work. The personal information will be kept strictly confidential. The study has been approved by the Departmental Medical Ethical Committee. We request you to kindly spare your valuable time and complete the questionnaire. A brief background of the study is given below.

India is witnessing a breathtaking rise in grocery retail market. Over the last few decades food processing has grown at a rate of 7.1 percent per annum which shows that there is an increasing consumption of processed foods in the population. Processed packaged foods carry information on symbols and logos, nutrient claims, health claims, ingredients list, allergen declaration, Nutrition Facts Panel (NFP), information on colors, flavors and preservatives, manufacture and best before date and other miscellaneous information. This information serves as an important educational tool for consumers to make healthy food choices. This survey is an attempt to assess the most commonly consumed processed foods in the population and to understand whether the labeling information is consumer friendly and easy to understand. The information gathered through the survey will enable us to know whether the commonly consumed processed packaged foods are healthy or not so healthy. Further, the survey will also enable us to arrive at effective and consumer friendly food labeling.

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Annexure II

Questionnaire on Quantity and Frequency of Processed Packaged Food Consumption

Code no…….

Demographic Profile

1. **Name……**
2. **Age……..**
3. **Gender**
   - **(a) Male……..**
   - **(b) Female…….**
4. **Educational level……..**
5. **Family Income (approx.)**
   …….
6. **Profession……**
7. **Marital status……**
8. **Height (in cms)……**
9. **Weight (in kg)……**
10. **Medical condition (if any):**
    - **(a) Yes…….**
    - **(b) No……..**
11. **Allergic to any food/ingredient (if any)……**
12. **Family Type**
    - **(a) Living Single……**
    - **(b) Nuclear Family……..**
    - **(c) Joint Family……...**
13. **Mb. No.……**
14. **E-mail……..**
15. **Present Address……...**
    ……
    ……
    ……

Operational definition

Processed packaged foods are the foods which undergoes few or many processing techniques like grinding, roasting, baking, frying, preservation by the preservatives etc. to make the product easy to cook or eat with minimum efforts.

Key For Frequency of Consumption

1) Once a month (rarely)
2) Twice a month
3) Once a week (sometimes)
4) 2-3 days a week
5) 4-5 days per week
6) Every day

S.No.	Food categories	Brand	Quantity of consumption per sitting	Frequency of consumption
1.	Cornflakes, oats and muesli (no. of bowls)			
2.	Noodles, pasta and macaroni			
3.	Salty Biscuits (in nos. 1,2…..)			
4.	Sweet biscuits (in nos. 1,2…..)			
5.	Sweet cream wafers (in nos. 1,2…..)			
6.	Chocolates (in nos. 1, 2….)			
7.	Cakes (slices)			
8.	Canned fruits (g)			
9.	Jam, marmalades and jellies (no. of tbsp)			
10.	Butter and cheese (no. of tbsp)			
11.	Spreads and dips (no. of tbsp)			
12.	Malted beverages (in ml)			
13.	Soft drinks (ml)			
14.	Energy drinks (ml)			
15.	Juices (ml)			
16.	Squashes (ml)			
17.	Ready to cook foods (g)			
18.	Ready to use spice mixes (g)			
19.	Ready to make cake and ice cream mixes (g)			
20.	Ready to eat sweets (g)			
21.	Soups (ml)			
22.	Pickles (no. of tbsp)			
23.	Papads (in nos. 1,2…….)			
24.	Chutneys (no. of tbsp)			
25.	Ketchups and sauces (no. of tbsp)			
26.	Namkeens and savories (g)			
27.	Chips (g)			
28.	Popcorn (g)			
29.	Cereal and milk based baby foods (no. of bowls)			

Annexure III

Proforma for Assessing Food Labeling on Processed Packaged Foods

Product Name	Pack Size	Serving Size	No. of Servings	Manufacture and Best Before Date	Kind of NFP	Nutrients on NFP	Symbols and Logos	Health Claims	Nutrient Claims	Ingredients List	Allergen Declaration	Information about Colors, Flavors and Preservatives
Product 1												
Product 2												
Product 3												
Product 4												
Product 5												
Product 6												
Product 7												
Product 8												
Product 9												
Product 10												
Product 11												
Product 12												
Product 13												
Product 14												

Annexure IV

Consumer Awareness and Practices Survey on Food Labeling

Code no……

1. Name…….. **3. Gender……**

2. Age…… **4. Mb. No……**

Part I: Knowledge, Attitude and Practices

1. Why do you purchase processed packaged foods?

a. For convenience
b. Do not have time to cook
c. Do not know how to cook
d. For variety and taste
e. For status
f. Others

2. Do you look for nutrition labels when you purchase processed packaged foods?

a. Always
b. Sometimes
c. Rarely
d. Never

3. If yes, why do you look for nutrition labels?

a. For general knowledge
b. Concern about overall health
c. Concern only about certain nutrients
d. Calorie count
e. Others

4. If no, then why don't you look for nutrition labels?

a. Not interested/think its useless
b. Will not change my mind about food items I prefer
c. Do not understand
d. Do not have time
e. Others

5. What information do you look for on the package while purchasing the processed food?

a. Attractive package
b. Its popular
c. Advertisement
d. Recommended by someone
e. Method of cooking/instructions
f. Brand
g. Pack size
h. Discount/offer on the product
i. Your medical need
j. Information about allergens if any
k. Taste
l. Price
m. Type of food (veg /non veg)
n. Manufacture and best before date
o. Nutrition quality symbols
p. Ingredients list
q. Nutrition panel information

6. Do you read the ingredients list on the package?

a. Always
b. Sometimes
c. Rarely
d. Never

7. In what ways the information about ingredients is useful for a consumer?

_____

_____

8. Do you read nutritional panel facts?

a. Always
b. Sometimes
c. Rarely
d. Never

9. In what ways the nutritional panel facts is useful for a consumer?

_____

_____

10. What do you particularly look in the nutrition panel information?

a. Energy
b. Energy from fat
c. Total fats
d. Saturated fat
e. Polyunsaturated fat
f. Monounsaturated fat
g. Trans fat
h. Cholesterol
i. Protein
j. Sugar
k. Vitamins
l. Minerals
m. Sodium
n. Potassium
o. Iron
p. Fibre

11. Do you look for nutrition quality symbols on the label?

a. Always
b. Sometimes
c. Rarely
d. Never

12. In what ways the nutrition quality symbols on the label are useful for a consumer?

_____

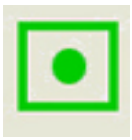
_____

Part II: Symbols and Logos

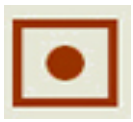
1.

2.

2.



4.



5.

6.

7.

Code no……

Kindly provide the following information after examining the symbols and logos given on page '4'

Symbols and Logos	Are you familiar with the symbol?	What does it stand for?	Does this symbol influence your product selection?
1.	(a) Yes (b) No	(a)…… (b) Don't know	(a) Yes (b) No
2.	(a) Yes (b) No	(a)…… (b) Don't know	(a) Yes (b) No
3.	(a) Yes (b) No	(a)…….. (b) Don't know	(a) Yes (b) No
4.	(a) Yes (b) No	(a)…… (b) Don't know	(a) Yes (b) No
5.	(a) Yes (b) No	(a)…… (b) Don't know	(a) Yes (b) No
6.	(a) Yes (b) No	(a)…… (b) Don't know	(a) Yes (b) No
7.	(a) Yes (b) No	(a)…… (b) Don't know	(a) Yes (b) No

Part III: Nutrition Facts Panel

NFP 1

NUTRITIONAL INFORMATION (after popping)	Quantity per 100 g (Approx.)
Energy (Kcal)	**503**
Protein (g)	**8**
Total Carbohydrate (g)	**57**
-Sugars (g)	0
-Dietary Fibre (g)	8
Total Fatty Acids (g)	**28**
-Saturated Fatty Acids (g)	14
-Polyunsaturated Fatty Acids (g)	4
-Monounsaturated Fatty Acids (g)	10
-Trans Fatty Acids (g)	0
Cholesterol (mg)	**0**
Sodium (g)	**0.4**

NFP 2

Nutritional Facts		
Nutrient	**Best For**	**Per 100g#**
Vitamin A	Good vision, healthy skin	3150 IU
Vitamin B_3	Growth, proper functioning of heart and nervous system	9600 µg
Vitamin B_6		960 µg
Riboflavin		1050 µg
Folic Acid	Healthy blood and body tissues	240 µg
Calcium	Healthy bones and teeth	76 mg
Vitamin C	Protection against infections/cold	40 mg
Phosphorus	Kidney, heart and cell growth	38 mg

Approx. nutrients, when packed

Nutritional Information	**Per 100 g***
Energy	376 Kcal
Carbohydrate	94 g
Fat	0 g
Protein	0 g

Approx. nutrients, when packed

NFP 3

Nutritional Facts		
Serving Size: 20 g Servings per pack- 4	Per serving	Per 100g
Energy	372 kJ 89kcal	1858kJ 444kcal
Protein	2.5g	12.4g
Carbohydrate	9g	46g
of which sugars	7g	34g
Fat	5g	23g
of which saturates	0.5g	2.6g
Fibre	3.4g	17g
Sodium	0.4g	2g

NFP 4

NUTRITION FACTS	
Serving Size 10g	
Serving Per Pack 5	
Amount Per Serving	
Calories (Kcal) 40	Calories From Fat 18
	% Daily Value
Total Fat 2g	**4%**
Saturated Fat 0.2g	1%
Trans Fat 0g	0%
Cholesterol 0g	**0%**
Sodium 360mg	**15%**
Total Carbohydrate 5g	**2%**
Dietary Fibre 0.25g	1%
Sugars 2g	
Protein 1g	
Vitamin A 0.5% ●	Vitamin C 0%
Calcium 1% ●	Iron 2%
*Percent Daily Values are based on 2,000 calories diet. Your daily values may be higher or lower depending on your calorie needs	
Calories per gram: ● Fat 9 ● Carbohydrate 4 ● Protein 4	

NUTRITIONAL INFORMATION	
Approx. Amount per 100 g.	
Calories	402 Kcal
Total Fat	16g
Saturated Fat	0%
Poly Unsaturated Fat	8g
Trans Fat	0.5g
Total carbohydrate	51g
Protein	13g

Code no……..

Kindly provide the following information after examining all the labels given on page '6'

1. Rate the products as healthy, less health and unhealthy based on the NFPs given on page '6'

NFPs	Healthy and why?	Less healthy and why?	Unhealthy and why?
NFP 1			
NFP 2			
NFP 3			
NFP 4			

2. Grade the NFPs as easy to understand, difficult to understand and do not understand at all.

NFPs	Easy to understand	Difficult to understand	Do not understand at all
NFP 1			
NFP 2			
NFP 3			
NFP 4			

3. On which NFP would you like to have more nutrition information?

_____

_____

4. Tick the terms which you found difficult to understand on the Nutrition Information Panels?

   a) % Daily value (% DV)
   b) I.U.
   c) µg
   d) Of which sugar/saturates
   e) KJ
   f) Per serving
   g) Polyunsaturated fatty acids
   h) Monounsaturated fatty acids
   i) Trans fatty acids
   j) Calories from fat
   k) Sodium

A B C of FOOD LABEL

C

OTHER HEALTH CLAIMS

Heart related health claims
- Good for heart
- Healthy heart
- Reduces the risk of heart diseases

The product should have zero cholesterol, no trans fat, low saturated fat, low salt or sodium

Bone related health claims
- Good for bones

The product should be a good source of calcium (more than 20%DV)

OTHER LOGO

Non- Vegetarian Logo

INGREDIENTS

An ideal ingredients list:
- Should have ingredients in the decreasing order of their weight expressed in percentages.
- If ingredients are not given in percentages then pay attention to the order of the ingredients.
- If ingredients like sugar, fat/oil, salt, monosodium glutamate or their alternative sources appear in 1st, 2nd or 3rd position then the food is unhealthy.
- If there are more than one source of fat, sodium, MSG and sugar or their alternative sources, the food may be unhealthy.
- Foods with too many preservatives, additives, colors and flavors are unhealthy.

ALTERNATIVE SOURCES OF INGREDIENTS TO BE LIMITED/AVOIDED

SALT/SODIUM
- Sodium carbonate/bicarbonate
- Sodium citrate
- Di-sodium inosinate/glutamate
- Soy sauce
- Sodium meta-bi-sulphite
- Black Salt
- Monosodium glutamate (MSG)

SUGAR
- Sucrose, Dextrose, Fructose
- Maltose, Maltodextrin
- Cane sugar
- High- Fructose corn syrup
- Honey
- Maple syrup
- Jaggery
- Invert syrup, liquid glucose
- Mollases
- Caramelised sugar

FAT
- Shortening
- Hydrogenated oils
- Partially Hydrogenated Oils/Fat
- Olestra
- Margarine
- Butter

MONO-SODIUM GLUTAMATE
- Autolyzed vegetable protein
- Hydrolyzed vegetable protein
- Calcium caseinate
- Sodium caseinate
- Textured protein
- Yeast extract

ALLERGEN AND SOURCES

- Cereals containing gluten (wheat, rye, barley, oats, etc.)
- Soybean
- Nuts (Groundnuts, Almond, Walnut, Cashew nut, Pistachio nut)
- Celery
- Mustard and Sesame oil and seeds.
- Milk
- Eggs
- Sea foods (i.e. fish, crabs, lobsters, crayfish, shrimp, etc.)
- Sulphur dioxide and sulphites at concentrations of more than 10 mg/kg or 10 mg/litre expressed as SO_2

B

A

Front of Pack (FOP)

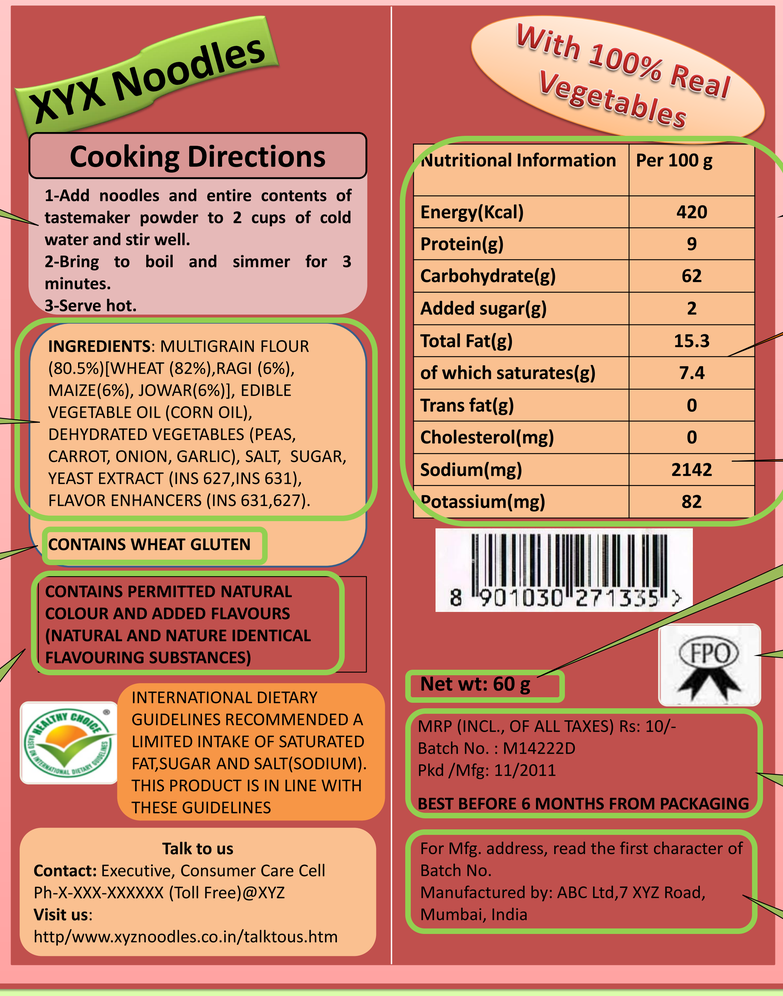
Health Claim

Vegetarian Logo

Nutrition Claims

Quality Symbol (Healthy Choice Logo)

Back of Pack (BOP)



Cooking Instructions

Ingredients List

Allergen Information

Added Colors and Flavors Information

Nutrition Facts Panel (NFP)

Pack Size

Quality Symbol (Fruit Product Order)

Price, Batch Number, Manufacture and Best Before Date

Manufacturer's Address

OTHER NUTRITION CLAIMS

- Low Sugar
- Low Sodium
- Low Salt
- Trans Fat free/Zero trans fat
- Cholesterol free/Zero
- Cholesterol/ No Cholesterol
- Good source of Vitamins
- Good source of Minerals
- Added Vitamin B12
- Reduced Fat
- High in Iron and Calcium/ Calcium and Iron rich
- Source of Fiber/High in Fiber
- Source of Protein
- High in Vitamin B1,B2,B3,B6
- Sugar-free
- No added sugar

OTHER QUALITY SYMBOLS

- Fruit Product Order (FPO)
- Hazard Analysis Critical Control Point (HACCP)
- Agricultural Marketing (AGMARK)
- International Standards Organization (ISO)
- Smart Choice

USING NFP FOR MAKING HEALTHY FOOD CHOICES

Fat Reported

Fat Calculated

Total Energy or Calories in the Product X 0.022 = Fat amount that should be in the product

1. If reported fat > calculated fat = Unhealthy Product

Sodium Reported

Sodium Calculated

Sodium (mg) ÷ No. of meals per day = Calculated sodium for a meal

2. If reported sodium > calculated sodium =Unhealthy Product

When Nutrition Facts are given in % Daily Value (%DV) then,

✓Nutrients to be limited/ avoided [Total Fat, Saturated Fat, Trans Fat, Cholesterol and Sodium] should be < 5% DV

✓Nutrients to be taken liberally [Fiber, Iron, Calcium, Vitamin A and Vitamin C] should be ≥ 20% DV

3. If Nutrients to be limited/avoided > 5% DV= Unhealthy Product

So, what have we learnt?

✓**FOOD LABEL**
Gives an idea about overall quality, standard and safety related to packaged food being consumed

✓**SYMBOLS & LOGOS**
Assure quality

✓**NUTRITION AND HEALTH CLAIMS**
Help in selecting food according to the physiological and health conditions

✓**INGREDIENTS**
Help to verify nutrition and health claims

✓**NUTRITION FACTS PANEL**
Help in comparing nutrient values among products of different brands to make healthy food choices

Developed By: Dr. Suneeta Chandorkar & Ms. Meenu Singh, Department of Foods & Nutrition, The M.S. University of Baroda, Vadodara- 390 002, Gujarat
Project Funded by Gujarat Council of Science & Technology (GUJCOST)

Quick tips to make healthy food selection

- Look for logos and symbols for quality assurance (for more information refer page 3).
- Verify the nutrition and health claims by looking at the ingredients list and NFP.
- Check NFP of products that claim to have "zero cholesterol", "no trans fat", "low sodium" or "sugar free." Products with such claims should have zero/nil cholesterol/trans fat and least sodium/sugar.
- Consume products having least/no preservatives, additives, colors and flavors.
- Always look for trans fat free product. If consuming trans fat containing food then limit the consumption or number of servings of such foods. " Make sure that the calories coming from fat should be less than those from carbohydrates and proteins (refer page 10 to calculate calories from fat, protein and carbohydrate as per thumb rule).
- Check ingredients list and NFP for the products claiming to be "heart healthy", "good for heart" or "reduces the risk of heart." They should not have more than one source of fat/oil in ingredients list and should have zero cholesterol and zero trans fat. " Individuals with allergies must look at the ingredients list for allergy causing substances, additives, preservatives, artificial colors and flavors (for more information on allergens refer page 5).
- Diabetics should look for sugar free or minimum sugar containing products. They should also verify from the ingredients list that no alternative source of sugar is used in the product (for sources of sugar refer page 6).
- People with high blood pressure or heart related diseases should look for foods with minimum sodium, total fat and saturated fat (each less than 5%DV) and zero cholesterol and zero trans fat on NFP. They should verify from the ingredients list that no more than one source of sodium and oil/fat are used in the product. Also the product should not contain hydrogenated fat or its sources (for sources of sodium and fat refer page 6).

The above tips will help you select a healthy product.

For further reading refer:

- http://www.codexindia.nic.in/key.htm
- http://www.fssai.gov.in/
- http://www.efsa.europa.eu/en/aboutefsa.htm
- http://www.fda.gov/Food/GuidanceComplianceRegulatoryInformation/GuidanceDocuments/FoodLabelingNutrition/FoodLabelingGuide/default.htm

For queries contact

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HOW TO READ NUTRITION LABELS: A STEP WISE GUIDE

"Choose Healthy And Stay Healthy"

COMPILED BY

Dr. Suneeta Chandorkar **Ms. Meenu Singh**

GUJCOST funded Trans Fat Project
Department of Foods and Nutrition
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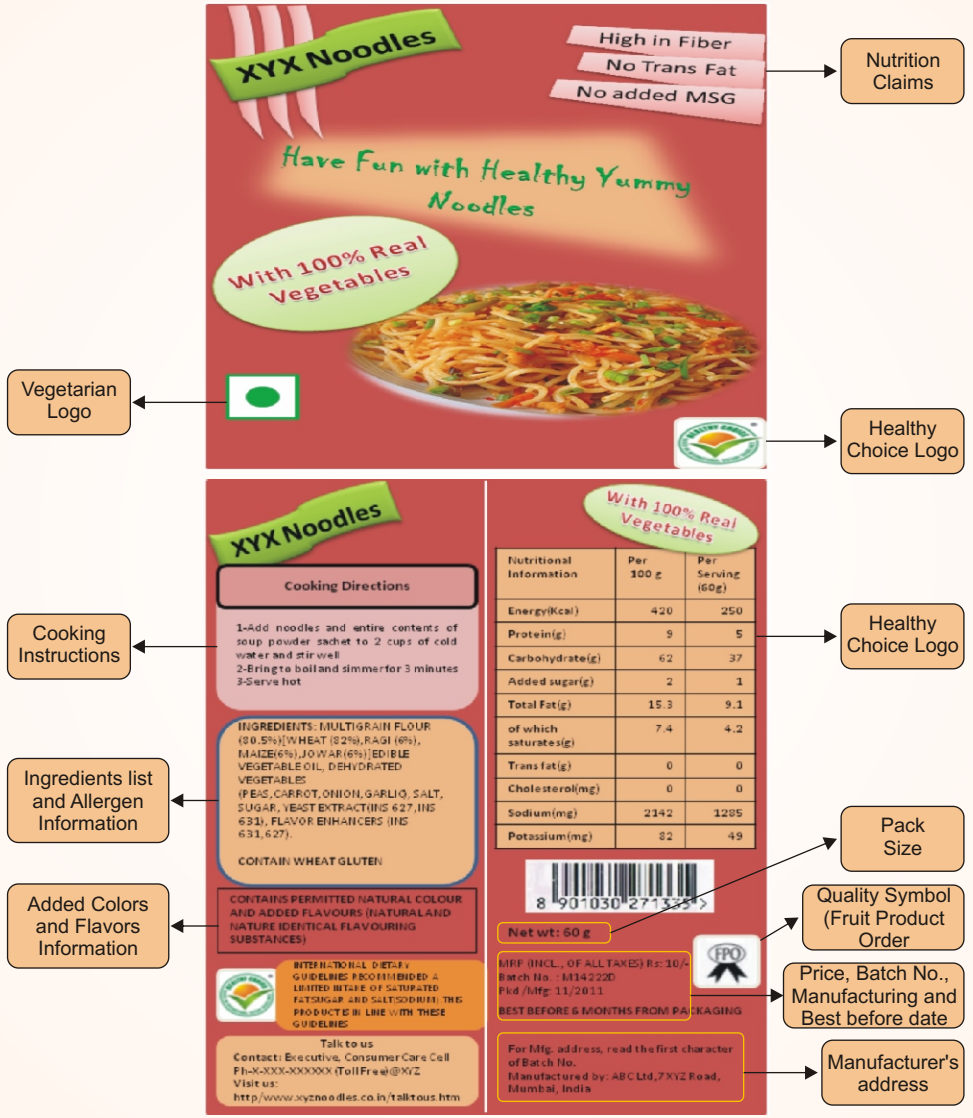
About The Booklet

This booklet on food labeling aims to provide information on importance of food labels and how to read them. It is mandatory for the food manufacturers to provide information on ingredients, allergens, natural or artificial colors and flavors, nutrition content on Nutrition Facts Panel, nutrition and health claims, logos and quality symbols and other miscellaneous information like manufacture and best before date, batch number, manufacturer's address, pack size and method of cooking. The information provided on the labels is an important tool for the consumers to make healthy food choices and therefore is of public health significance. Therefore, consumers should be able to read and understand food labels in order to make informed healthy food choices. This booklet provides you information on the following:

- A typical food label-What does it look like?
- Symbols and logos-What do they stand for?
- Nutrition and Health Claims.
- Ingredients list-Importance and its utility.
- Ingredients to be limited/avoided and their alternative sources and names.
- Types of Nutrition Facts Panel (NFP).
  - NFP 1 with values "per serving" and "% Daily Value (%DV)."
  - NFP 2 with values "per 100g."
  - NFP 3 with values "per 100g" and "per serving."
- Nutrition Facts Panel-How to read it?
- Five easy steps to read and understand Type 2 and Type 3 NFP.
- Selecting a healthy product.
- Quick tips to make healthy food selection.

A typical food label-What does it look like?



Food label gives an idea about overall quality, standard and safety related to packaged food being consumed.

Symbols and logos-What do they stand for?

INTERNATIONAL STANDARDS ORGANIZATION

ISO 9001:2008
ISO 22000:2005
CERTIFIED
DNV

- International standard for food safety management
- On products like ready to eat vegetable's desserts

HAZARD ANALYSIS AND CRITICAL POINT

CERTIFIED HACCP

- Product having no chemical, physical or biological hazard
- On products like ready to cook, ready to eat, etc.

AGRICULTURAL MARKETING (AGMARK)

भारत सरकार GOVERNMENT OF INDIA

- Government Certificate for quality product
- On products like Ghee, Spices, Grains etc.

FRUIT PRODUCT ORDER

FPO

- Government Certificate for quality product
- On products like jam, ketchup, pickles, fruit, juices, etc.

SMART CHOICE

SMART CHOICES PROGRAM GUIDING FOOD CHOICES

- Food many not healthy in the absolute sense but merely heathier in a relative sense with other products in the same food category
- On products like biscuits, cookies, etc.

HEALTHY CHOICE

HEALTHY CHOICE

- Products are lower in total fat, saturated fat, sodium and sugar and higher in dietary fiber and calcium compared to similar products within the same food category
- On products like biscuits, cookies, noodles, etc.

VEGETARIAN SYMBOL

VEG

- Product contains only vegetarian ingredients

NON-VEGETARIAN SYMBOL

Non Veg

- Products contain non-vegetaria ingredients like egg, fish, chicken, shrimp, gelatin etc.

Symbols and logos assure quality and help you select foods based on your food habits and health conditions

Health and Nutrition Claims

HEALTH CLAIMS

Heart Related Health Claims

- Good for heart
- Healthy heart
- Reduces the risk of heart diseases

↓

The product should have zero cholesterol, no trans fat, low saturated fat, low salt or sodium

Bone Related Health Claims

- Good for bones

↓

The product should be a good source of calcium (more than 20%DV)

NUTRITION CLAIMS

- Low Sugar
- Low Sodium
- Low Salt
- Trans Fat free/Zero trans fat
- Cholesterol free/Zero
- Cholesterol/ No Cholesterol
- Good source of Vitamins
- Good source of Minerals
- Added Vitamin B12
- Reduced Fat
- High in Iron and Calcium/ Calcium and Iron rich
- Source of Fiber/High in Fiber
- Source of Protein
- High in Vitamin B1,B2,B3,B6
- Sugar-free
- No added sugar

ALLEGREN INFORMATION

- Gelatin free
- Gluten free
- Contains no MSG
- Contains soy, milk, corn, nuts, mustard seeds, eggs, MSG

Nutrition and Health Claims help in selecting food according to the physiological and health conditions. To verify these claims pay attention to the ingredients list and NFP for the sources and amount of nutrients, respectively.

Ingredients list-importance and its utility

An ideal ingredients list:

- Should have ingredients in the decreasing order of their weight expressed in percentages.
- If ingredients are not given in percentages then pay attention to the order of the ingredients.
- The ingredients list provides information on allergens. The potential allergens are:
  - Cereals containing gluten (wheat, rye, barley, oats, etc.)
  - Soybean
  - Nuts (Groundnuts, Almond, Walnut, Cashewnut, Pistachio nut)
  - Celery
  - Mustard and Sesame oil and seeds.
  - Milk
  - Eggs
  - Sea foods (i.e. fish, crabs, lobsters, crayfish, shrimp, etc.)
  - Sulphur dioxide and sulphites at concentrations of more than 10 mg/kg or 10 mg/litre expressed as SO2
  - Preservatives.

An ideal ingredients list should look like this

INGREDIENTS

Whole Wheat Flour (35%), Dehydrated Vegetables (7%) Edible Vegetable oil, Spices & Condiments, Salt (0.6%), Sugar (0.4%), Green Chilli Powder, Flavor Enhancers (E627, E631), Acidity Regulators [E330, E451(i)], Anti Caking Agent (E551), Softening Agent (E550), Thickener (E412).
Contains Gluten

Ingredients list can be used to verify nutrition claims as stated below:

- If ingredients like sugar, fat/oil, salt, monosodium glutamate or their alternative sources appear in 1st, 2nd or 3rd position then the food is unhealthy.
- If there are more than one source of fat, sodium, MSG and sugar or their alternative sources, the food may be unhealthy.
- Foods with too many preservatives, additives, colors and flavors are unhealthy.

Ingredients list can be used to verify nutrition and health claims

Ingredients to be limited / avoided and their alternative names or sources

FAT

- Shortening
- Hydrogenated oils
- Partially Hydrogenated Oils/Fat
- Olestra
- Margarine
- Butter

SALT SOURCE OF SODIUM

- Sodium carbonate/bicarbonate
- Sodium citrate
- Di-sodium inosinate/glutamate
- Soy sauce
- Sodium meta-bi-sulphite
- Black Salt
- Monosodium glutamate (MSG)

SUGAR

- Sucrose, Dextrose, Fructose
- Maltose, Maltodextrin
- Cane sugar
- High- Fructose corn syrup
- Honey
- Maple syrup
- Jaggery
- Invert syrup, liquid glucose
- Mollases
- Caramelised sugar

MONO SODIUM GLUTAMATE (MSG) or AJINOMOTO

- Autolyzed vegetable protein
- Hydrolyzed vegetable protein
- Calcium caseinate
- Sodium caseinate
- Textured protein
- Yeast extract

The above ingredients should be taken in minimal amount as per the % Daily Value Thumb Rule (discussed in next few pages).
These ingredients or their alternative sources should not appear more than once in the ingredients list.

Type 1: NFP with information per serving and %DV

Nutrition Facts	
Serving Size 75 g	
Servings Per Pack 2	
Amount Per Serving	
Calories (Kcal) 375	Calories from Fat 149
	% Daily Value*
Total Fat 16g	25%
Saturated Fat 7.2g	36%
Trans Fat 0.6g	
Cholesterol 0mg	0%
Sodium 950mg	40%
Potassium 220mg	
Total Carbohydrate 48g	16%
Dietary Fiber 0.9g	4%
Sugars 0.2g	
Protein 8g	
Vitamin A	6%
Vitamin C	0%
Calcium	10%
Iron	22%

*Percent Daily Values are based on a 2,000 calorie diet. Your daily values may be higher or lower depending on your calorie needs

	Calories	2,000	2,500
Total Fat	Less Than	65g	80g
Sat Fat	Less Than	20g	25g
Cholesterol	Less Than	300mg	300mg
Sodium	Less Than	2,400mg	2,400mg
Total Carbohydrate		300g	375g
Dietary Fiber		25g	30g

Calories per gram
Fat 9 Carbohydrate 4 Protein 4

Type 2: NFP with information per 100g

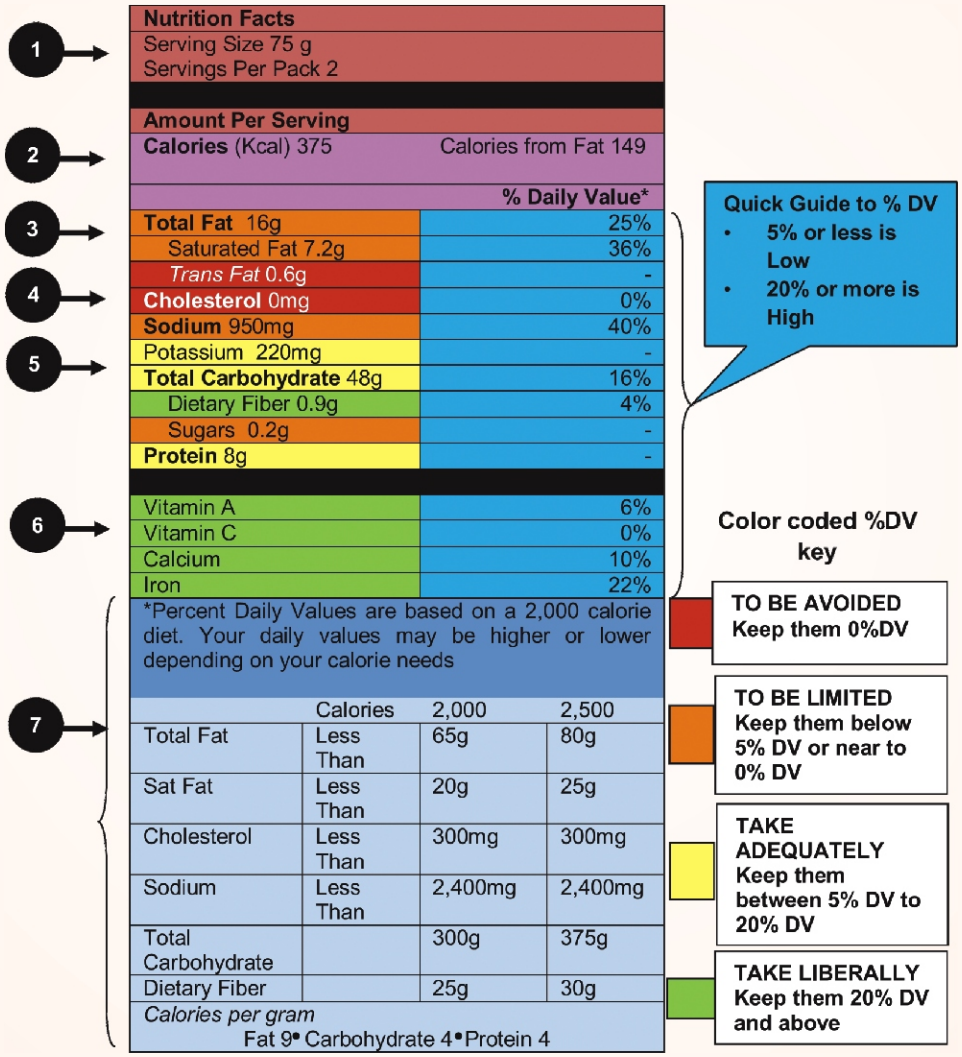
Nutritional Facts per 100g	
Energy	444Kcal
Protein	12.4g
Carbohydrate	46g
of which sugars	34g
Fat	23g
of which saturates	2.6g
Fiber	17g
Sodium	2g

Type 3: NFP with information per 100g and per serving

Nutritional Facts		
Serving Size:20g Servings Per Pack-4	Per Serving	Per 100g
Energy	89Kcal	444Kcal
Protein	2.5g	12.4g
Carbohydrate	9g	46g
of which sugars	7g	34g
Fat	5g	23g
of which saturates	0.5g	2.6g
Fiber	3.4g	17g
Sodium	0.4g	2g

NFP helps in comparing nutrient values among products of different brands to make healthy food choices

Type 1: NFP with information per serving and %DV



Note: Color coded NFP is not present on Indian packaged foods. Colors in the above NFP are given to facilitate better understanding.

Let us examine each part of the NFP

1

Serving Size 75g
Servings per Pack 2

- Look at the serving size and the number of servings in the food package.
- The more the number of servings you eat the greater the amount of nutrients you tend to consume.
- Avoid consuming more servings of the foods which are high in nutrients "to be avoided" and "to be limited."
- For e.g. in the sample NFP, one serving is equal to 75g and if you consume 2 servings then you will actually be eating double the amount of one serving i.e. 150g which doubles all the nutrients as explained in the chart below:

	Single Serving	% DV	Double Serving	% DV
Serving Size	75g		150g	
Calories	375 Kcal		750 Kcal	
Calories from Fat	149 Kcal		298 Kcal	
Total Fat	16g	25%	32g	50%
Saturated Fat	7.2 g	36%	14.4g	72%
Trans Fat	0.6g		1.2g	
Cholesterol	0mg	0%	0mg	0%
Sodium	950mg	40%	1900mg	80%
Potassium	220mg		440mg	
Total Carbohydrate	48g	16%	96g	32%
Dietary Fiber	0.9g	4%	1.8g	8%
Sugars	0.2g		0.4g	
Protein	8g		16g	
Vitamin A		6%		12%
Vitamin C		0%		0%
Calcium		10%		20%
Iron		22%		44%

Pack size = Serving size × number of servings per container

2

Amount Per Serving 75g	
Calories 375	Calories from Fat 149

- The calorie section of the label can help you manage weight (i.e. gain, lose or maintain).
- Calories provide a measure of the amount of energy you are getting from a serving of a food.

- The more the number of calories you eat the more the amount of energy you tend to consume.

General Guide to Calories (based on 2,000 Kcal diet)

- 40 Calories is low
- 100 Calories is moderate
- 400 Calories or more is high

- "Total calories" is the sum of calories from fat, carbohydrates and protein. It can be calculated by using the thumb rule.

Calories from Fat=9 × fat (g)
Calories from Carbohydrates=4 ×Carbohydrates (g)
Calories from Protein=4 ×Protein (g)

- Getting more calories from fat is unhealthy and leads to overweight and obesity.
- "Calories from fat" is the amount of energy per serving derived from fat. For e.g. in the sample NFP, total 375 calories are provided by a single serving and 149 calories from fat, which means a little less than half of the calories are coming from fat. If you eat the whole package i.e. 2 servings then the total calories you will be consuming would be 750 and from fat it would be 298.
- Amount and type of fat or fatty acids are also important. Fats are made up of Saturated fatty acids (SFA), Mono unsaturated fatty acids (MUFA), PUFA (Poly unsaturated fatty acids) and Trans fatty acids (TFA)). As compared to MUFA and PUFA, SFA and TFA are harmful.

3 **TO BE LIMITED**

Total Fat 16g	25%
Saturated Fat 7.2g	36%
Sodium 950mg	40%
Sugars 0.2g	

- Eating too much Total fat, Saturated fat, Sodium and Sugars may increase the risk of certain health conditions like overweight, obesity and high blood pressure.

4 **TO BE AVOIDED**

Trans Fat 0.6g	
Cholesterol 0mg	0%

- These nutrients need to be completely avoided as they have adverse health effects.
- Taking small amount over a longer period may also lead to certain diseases like high blood pressure, heart disease etc.
- As per legislation, product containing 0.2g trans fat per serving of food can be labeled as "0/zero." Therefore, if you eat more than one food containing "0 trans fat" or several servings, then you may end up eating more than the recommended limit which is less than 2g a day.

5 TAKE ADEQUATELY

Protein 8g	
Potassium 220mg	
Total Carbohydrate 48g	16%

- These nutrients if taken in adequate amount help in keeping good health and if taken in excess may lead to health problems. For instance, an obese individual taking more than adequate carbohydrates will tend to put on more weight. Similarly, an individual with kidney malfunction consuming excess protein will damage kidneys more rapidly.
- Adequate potassium helps in normal body functions, healthy heart and muscles.

6 TAKE LIBERALLY

Dietary Fiber 0.9g	4%
Vitamin A	6%
Vitamin C	0%
Calcium	10%
Iron	22%

- Liberal intake of these nutrients improves health.
- Dietary fiber improves digestion and prevents constipation.
- Vitamin A is good for eyes.
- Vitamin C helps in fighting against infections.
- Calcium is good for bone health.
- Iron improves haemoglobin level in blood and prevents anaemia.

7 FOOTNOTE

*Percent Daily Values (DVs) are based on a 2,000 calorie diet. Your daily values may be higher or lower depending on your calorie needs			
	Calories	DVs for 2,000	DVs for 2,500
Total Fat	Less Than	65g	80g
Sat Fat	Less Than	20g	25g
Cholesterol	Less Than	300mg	300mg
Sodium	Less Than	2,400mg	2,400mg
Total Carbohydrate		300g	375g
Dietary Fiber		25g	30g
Calories per gram Fat 9• Carbohydrate 4• Protein 4			

% Daily Value*

- The * (asterisk) used after the heading "%Daily Value" on the Nutrition Facts Panel refers to the Footnote in the lower part of the nutrition label.
- Footnote lists the recommended DVs of total fat, saturated fat, cholesterol, sodium, carbohydrate and dietary fiber one should aim for on a daily basis for diets of 2,000 and 2,500 calories.
- DVs are recommended levels of intakes which should be followed as Dietary advice or a goal for a day's diet.

- The nutrient intake goal should be “less than” the recommended DV for nutrients like total fat, saturated fat, cholesterol and sodium and “atleast or more than” the recommended DV for dietary fiber.
- The DVs for total fat, saturated fat, carbohydrates and dietary fiber changes with the change in the total calorie requirement while for cholesterol and sodium, it remains the same as these two are required in minimal amount.
- The recommended DVs in the footnote do not change from product to product. If a product does not have a footnote then you can refer to the footnote from any product to make comparisons among the brands.
- DVs help in calculating % DV

$$\%DV = \frac{\text{Nutrient per serving (g)}}{\text{Recommended DV for that Nutrient}} \times 100$$

- No % DV is recommended for Trans Fat, Sugars and Protein.

Five easy steps to read and understand Type 2 and Type 3 NFP

Type 2: NFP with information per 100g

Nutritional Facts per 100g	
	Per 100g
Energy	444Kcal
Protein	12.4g
Carbohydrate	46g
of which sugars	34g
Fat	23g
of which saturates	2.6g
Fiber	17g
Sodium	2g

Example: Calculation of carbohydrate “% intake” and its comparison with “%DV thumb rule” in the sample NFP

STEP 1: **Decide the “intake amount (in grams)”**

Intake amount= 20 g.

STEP 2: **Calculate “nutrients per gram” by dividing each nutrient by 100.**

Carbohydrate in 100g = 46 g

Carbohydrate per gram $= \frac{46}{100} = 0.46$

STEP 3: **Calculate “actual nutrient intake” by multiplying “nutrient per gram” and “intake amount”**

Actual carbohydrate intake = Carbohydrate per gram × 20g

= 0.46 × 20 = 9.2g

STEP 4: Calculation of "% Actual nutrient intake"

$$\text{Percent actual nutrient intake} = \frac{\text{Actual carbohydrate intake}}{\text{Recommended carbohydrate DV}} \times 100$$

$$= \frac{9.2}{300} \times 100 = 3.06\%$$

STEP 5: Comparison of "% actual nutrient intake" with "%DV thumb rule"

Therefore, from 20 g of this food you will get 3 % carbohydrate (rounded value) which is lower than 5%. Hence, this food is low in carbohydrate.

The chart below showing 5 steps as discussed above for each nutrient:

Nutritional Facts per 100g							
STEP 1 : If you are eating 20g	Per 100g		Nutrients Per g		Actual Nutrient Intake Per 20g		% Actual Nutrient Intake
Energy(g)	444	**STEP**	4.44	**STEP**	88.8	**STEP**	-
Protein(g)	12.4	**2**	0.124	**3**	2.48	**4**	-
Carbohydrate(g)	46	→	0.46	→	9.2	→	3%
of which sugars(g)	34		0.34		6.8		-
Fat(g)	23		0.23		4.6		7%
of which saturates(g)	2.6		0.026		0.52		3%
Fiber(g)	17		0.17		3.4		14%
Sodium(g)	2		0.02		0.4		17%

Compare with %DV Thumb Rule

With the change in the "intake amount' of the food the "% Actual Nutrient intake" will also change. Consume as much quantity of food that will keep the nutrients within recommended %DV

NUTRITIONAL FACTS		
Serving Size:20g Servings Per Pack-4	Per 100g	Per Serving
Energy	444Kcal	89Kcal
Protein	12.4g	2.5g
Carbohydrate	46g	9g
of which sugars	34g	7g
Fat	23g	5g
of which saturates	2.6g	0.5g
Fiber	17g	3.4g
Sodium	2g	0.4g

Type 3: NFP with information per 100g and per serving

Follow

- **STEP 4** to get % Actual nutrient intake from per serving
- **STEP 5** to compare with %DV

Quick Guide to % DV
- **5% or less is Low**
- **20% or more is High**

In order to compare two or more brands of the same product using %DV, steps to be followed are:

- Serving size should be similar.
- Units of measurement of nutrients should be same (grams(g)or milligrams(mg), Kilocalories (Kcal) or Kilo Joules(KJ)) in the food packages to be compared. If not then convert them to similar units with the help of following conversion factors:

1 KJ=4.2 Kcal
1g= 1000mg

Let us compare Brand 1 and Brand 2 of product XYZ and arrive at a healthier brand

Brand-1		
Nutrition Information	**Per Serve (70g)**	**% Daily Value**
Energy(Kcal)	310	-
Protein(g)	7.8	-
Carbohydrate(g)	45	15%
of which Sugar(g)	3	-
Fat(g)	11	17%
of which saturates(g)	1.8	9%
Cholesterol (mg)	1.5	0.5%
Fiber(g)	0.5	2%
Sodium (mg)	288	12%

Brand-2		
Nutrition Information	**Per Serve (70g)**	**% Daily Value**
Energy(Kcal)	248	-
Protein(g)	12	-
Carbohydrate(g)	50	18%
of which Sugar(g)	1.4	-
Fat(g)	2.9	4%
of which saturates(g)	0.2	1%
Cholesterol (mg)	0	0%
Fiber(g)	3	12%
Sodium (mg)	72	3%

Comparison Table

	Limits	**Brand-1**	**Brand-2**
Energy(Kcal)	Should be below 400	Higher	Moderate
Protein(g)	_	Adequate	Adequate
Carbohydrate(g)	Between 5%DV to 20%DV	Adequate	Adequate
of which sugar(g)	As low as possible	Higher	Lower
Fat(g)	Below 5% DV	Higher	Lower
of which saturates	Below 5% DV	Higher	Lower
Cholesterol (mg)	Below 5% DV	Present	Nil
Fiber(g)	Above 20% DV	Lower	Higher
Sodium (mg)	Below 5%DV	Higher	Lower

Nutrients to be limited or avoided are in higher amount in Brand 1 than Brand 2. Nutrients to be taken liberally are lesser in amount in Brand 1 than Brand 2. Therefore, Brand 2 is healthier than Brand 1.

Annexure VII

Impact Evaluation Survey Code no……

1. Name…… **3. Gender: Male ☐ Female ☐**

2. Age…… **6. Contact no……...**

Based on the two food labels "Food label 1" and "Food Label 2" answer the following questions

Food Label 1

1. **Indicate whether the given package has the following information and name them.**

S.No.	Information	Yes	If yes, name it	No
1.	Quality Symbols			
2.	Logos			
3.	Health claims			
4.	Nutrition Claims			
5.	Allergen Information			
6.	Information about Preservatives			
7.	Information about Colors and Flavors			

2. **INGREDIENTS LIST**

S.No.		Yes	If yes, name them	No
1.	Does the ingredients list follow the 3 basic principles of listing ingredients?		**Not applicable**	
2.	Are there any harmful ingredients in large quantity in the ingredients list?			
3.	Are there any alternative sources of harmful ingredients being used in the ingredients?			

3. Indicate (tick) whether the nutrients given on NFP are high or low?

S. No.	Nutrients	High	Low	Cannot calculate on the basis of this kind of NFP
1.	Total Fat			
2.	Saturated Fat			
3.	Cholesterol			
4.	Sodium			
5.	Carbohydrate			
6.	Fiber			

Food Label 2

1. Indicate whether the given package has the following information and name them.

S.No.	Information	Yes	If yes, name it	No
1.	Symbols			
2.	Logos			
3.	Health claims			
4.	Nutrition Claims			
5.	Allergen Information			
6.	Information about Preservatives			
7.	Information about Colors and Flavors			

2. INGREDIENTS LIST

S.No.		Yes	If yes, name them	No
1.	Does the ingredients list follow the 3 basic principles of listing ingredients?		Not applicable	
2.	Are there any harmful ingredients in large quantity in the ingredients list?			
3.	Are there any alternative sources of harmful ingredients being used in the ingredients?			

3. Indicate (tick) whether the nutrients given on NFP are high or low?

S. No.	Nutrients	High	Low	Cannot calculate on the basis of this kind of NFP
1.	Total Fat			
2.	Saturated Fat			
3.	Cholesterol			
4.	Sodium			
5.	Carbohydrate			
6.	Fiber			

Annexure VIII (a)- Food Label 1

Nutritional Information	Per 100 g	Per Serving (50g)
Energy(Kcal)	420	210
Protein(g)	12	6
Carbohydrate(g)	80	40
Added sugar(g)	2	1
Total Fat(g)	5	2.5
of which saturates (g)	0.8	0.4
Trans fat(g)	0	0
Cholesterol(mg)	0	0
Sodium(mg)	402	201
Potassium(mg)	82	41

INGREDIENTS: Gram flour (40%), Split green gram (20%), Ground nut (20%), Rice flakes (8%), Tamarind powder (1%), Iodized salt (0.2%), Refined edible oil (safflower oil) (0.15%), Condiments & Spices

Product Contain Nuts

For Mfg. address, read the first character of Batch No.
Manufactured by: ABC Ltd,7 XYZ Road, Mumbai, India

Annexure VIII (a)-Food Label 2

GENUINE

CHICKEN SOUP WITH VEGETABLES

No Added MSG
No Added Preservatives

NUTRITION FACTS Serving Size 110ml Serving Per Pack 6	
Amount Per Serving Calories (Kcal) 86.8 Calories From Fat 46.8	
	% Daily Value
Total Fat 5.2 g	**8%**
Saturated Fat 1.2g	6%
Trans Fat 0g	0%
Cholesterol 0g	**0%**
Sodium 360mg	**15%**
Total Carbohydrate 9g	**3%**
Dietary Fiber 0.5g	2%
Sugars 2g	
Protein 1g	
Vitamin A 0.5%	Vitamin C 0%
Calcium 1%	Iron 2%
*Percent Daily Values are based on 2,000. Calories diet. Your daily values may be higher or lower depending on your calorie needs	
Calories per gram: Fat 9 Carbohydrate 4 Protein 4	

Cooking Instructions

✓Mix contents of pack in 4 cups water (600ml) in a pan and stir so that no lumps are formed

✓Place the pan on stove and bring to boil while stirring continuously. Simmer for 3 minutes

✓Optional: Add more chicken to taste

MRP (INCL., OF ALL TAXES) Rs: 32/-
Batch No. : TZ56897
Pkd /Mfg: 10 Feb 2013
Best Before: 10 Aug 2013

For Mfg. address, read the first character of Batch No.
Manufactured by: XYZ Ltd,7 ABC Road, Kolkata, India

With 100% Real Chicken & Vegetables

1284593579822

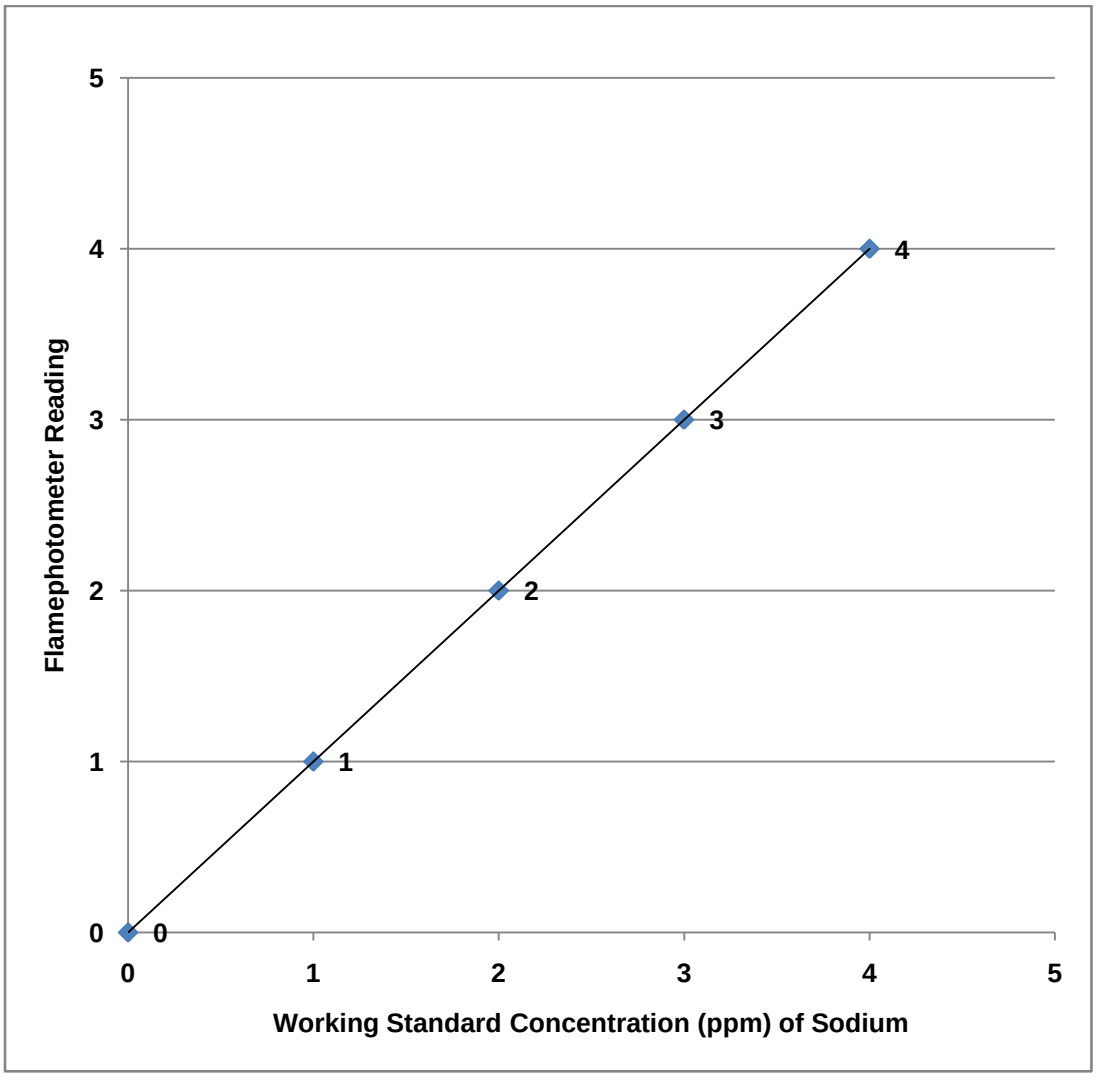
Net wt: 47 g

Ingredients: Refined Wheat Flour, Edible Vegetable Fat, Salt, Sugar, Dehydrated Chicken Shreds, Dehydrated Vegetables (Lettuce, Spinach, Carrot, Green Onion, Carrot), Yeast Extract, Butter, Sodium Citrate, Hydrolyzed Vegetable Protein, Spices & Condiments,, Acidity Regulator- 330, Flavor Enhancer (627, 651)

May Contain Traces of Soya & Nuts
Contains Permitted Natural Color 100(I) & Added Flavor- Nature Identical Flavoring Substances

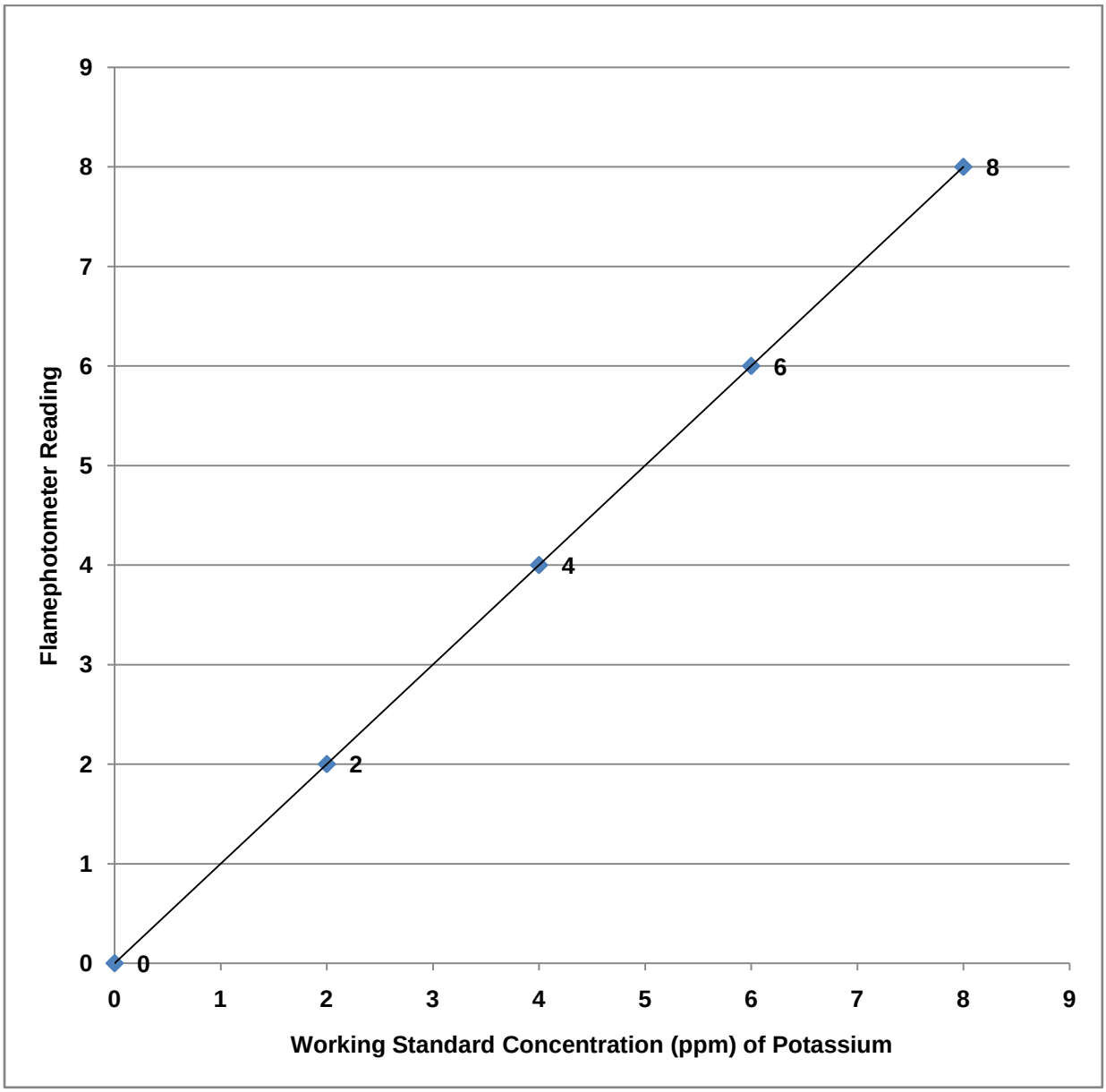
Annexure IX

Standard Graph for Sodium



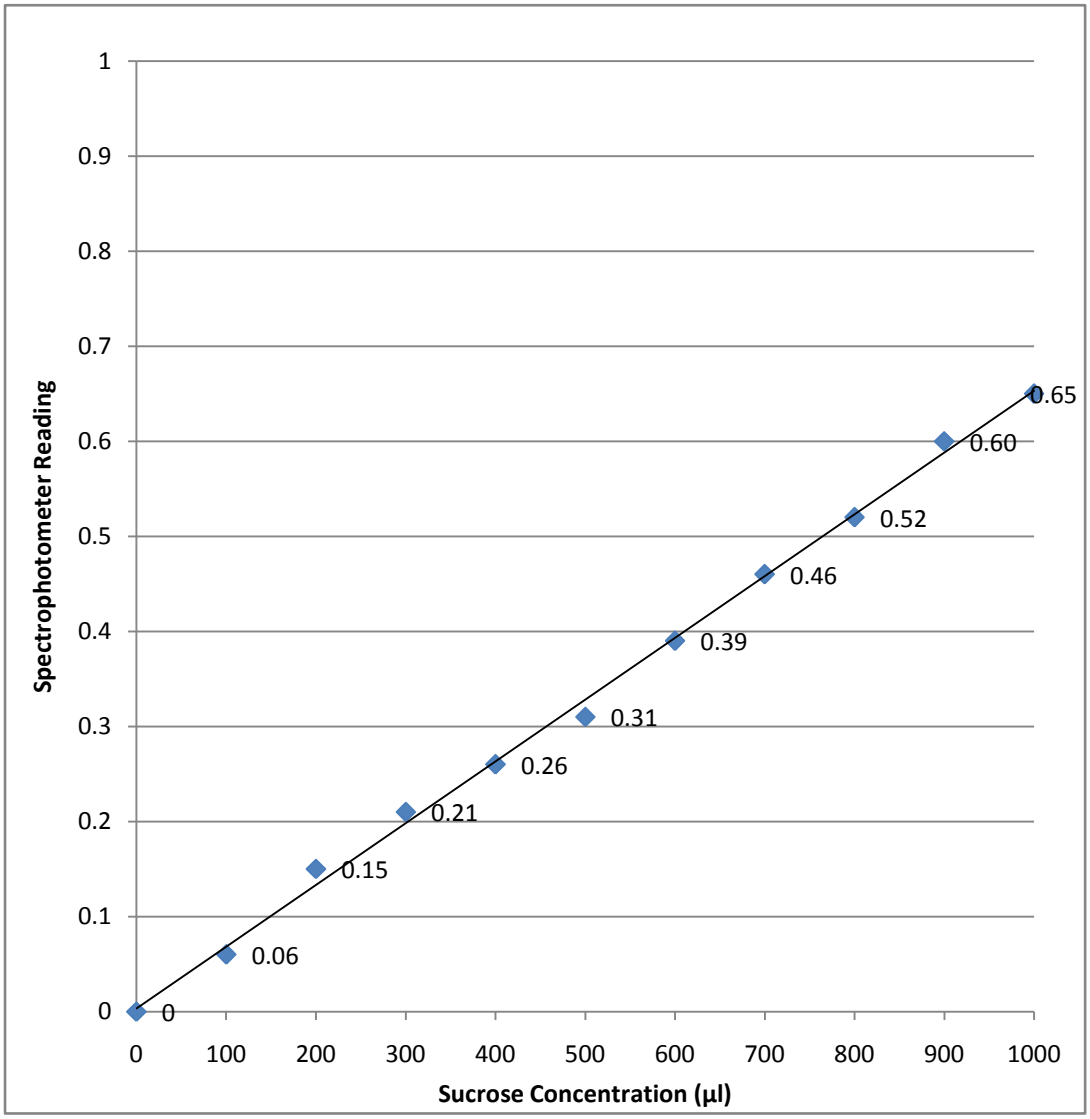
Annexure X

Standard Graph for Potassium



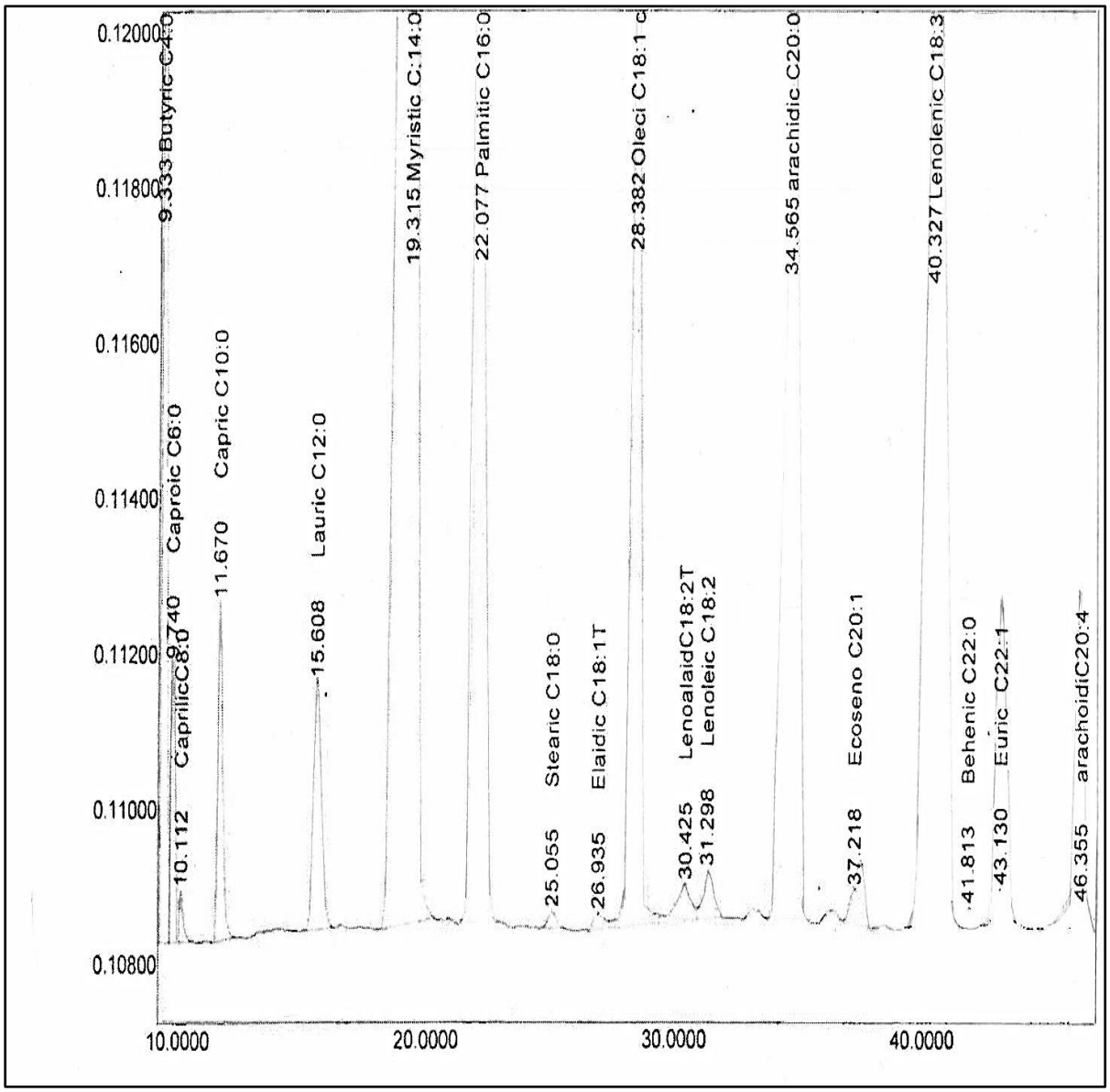
Annexure XI

Standard Graph for Sucrose



Annexure XII

37-FAME Mix Standard Graph (Standard Chromatogram)



Annexure XIII

Chromatogram for Ghee Sample