

Practical No. - 1

To prepare simple dishes

Aim

- i) to prepare cost effective yet nutritious dishes that promote good health;
- ii) to develop cooking skills and incorporate variety in meals through these dishes;
- iii) to demonstrate simple procedures and principles underlying the methods of (a) combination, (b) germination and (c) fermentation.
- iv) to innovate tasty and easy to cook dishes by incorporating the above techniques;
- v) to evaluate the prepared dishes for general acceptability and suggest improvement/variations, if any.

Introduction

You have already learnt that the food that you eat provides your body with the energy to do work. It also provides all the materials required by your body to keep healthy and fit.

Do you remember how you help the body to achieve this? Yes, you are right, you achieve it by-

- i) right selection of food items in your daily meals,
 - ii) using the right procedures in preparation of this food. Germination, fermentation and combination are methods which help in increasing the nutritive value of the food. We have already discussed them in Book 5 of your course.
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In this assignment you will learn to prepare dishes using the methods of food enrichment. You will also evaluate the products that you make.

VARIOUS ENRICHMENT PROCEDURES AND THEIR EFFECT ON FOOD

(i) COMBINATION

It is a good practice to combine foods providing different nutrients. You can even combine cheap and nourishing foods to effect economy in meals.

You have already studied about the food groups in Lesson 20 in Book 5. You can combine foods from 2 to 3 different food groups. You are already familiar with some of the following combinations of food

Cereal + pulse	-	khichri, dosa, missi roti
Cereal + milk	-	kheer and custard
Cereal + meat	-	biryani
Cereal + vegetable	-	stuffed parantha, vegetable pulau
Pulse + vegetable	-	pakorras, dal bhujia, sag dal
Milk + fruit	-	fruit cream, fruit custard, orange kheer
Milk + pulse	-	moong dal payasam
Milk + vegetable	-	pumpkin raita, carrot kheer, bathua raita etc.

You need to add salt, sugar, ghee or oil etc. to add taste and flavour to your dish.

Can you think of some other food combinations? List a few dishes that you can make with them.

_____	_____
_____	_____
_____	_____
_____	_____

BENEFITS OF FOOD COMBINATION

It is beneficial to have a dish made with two or three foods from different food groups rather than one made by using only one food group. For example, cereals are low in lysine (amino acid content), while the pulses have less of methionine. Hence a cereal pulse combination (khichri) provides a dish that has better nutrient content.

Combination also saves cooking time. Time taken to cook one dish is less than cooking rice and pulse separately. One can have 'khichri' and similar combination foods to have variety in a meal and also to save energy.

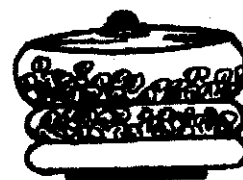
(ii) GERMINATION

It is a common practice to germinate moong dal, lentils, black gram and wheat for preparing different dishes. Soya beans can also be germinated or sprouted for getting better nutritive value.

Do you know the procedure for germinating the grains? Do you remember when you soaked the familiar 'rajmah' seed and observed the development of root and shoot arising out of it? The term germination refers to this development of new root and shoot from the seed.

The simple procedure of germination involves soaking of the grain for 4-8 hours in water. The grains, after initial soaking, are tied in clean muslin cloth and kept in a warm place that gets diffused sun light. Keep sprinkling a little water to maintain moisture till the sprouts appear. Sprouting will start in about 24-48 hours depending upon the weather. Germinated seeds with 1/2cm to 1 cm sprouts are ideal for consumption. The time taken for germinating different seeds is different. Bigger and harder seeds take longer to germinate.

You can buy a "Sprout Maker" in the market these days. It is a two/three tier container made of good quality transparent plastic material. The container is designed to maintain air, moisture and warmth for the germinating seeds besides providing diffused sun light.



Sprout Maker

BENEFITS OF GERMINATING FOODS

The dried pulses are totally devoid of vitamin C. Soaking sprouting and germination of grains shows a tremendous increase in their vitamin C content. It can be seen in the table given below:

Germinating	Increase in Vitamin C/ 100 gms
24 hours	7-8 mg.
48 hours	10-12 mg.
72 hours	12-14 mg.

The B-group vitamin content also shows an increase after the grains have germinated. The B-group vitamin increases to twice its original content. Niacin increase may be 50%-100% in about 48 hours.

Iron is generally found in bound form in grains and as such a major portion of it is not available to the body. Germination loosens this binding, thereby ensuring better availability of iron content.

The pulse tastes better/sweeter after germination. Do you know why? Germination brings about the breakdown of some starch content (polysaccharides) by converting it into monosaccharides and hence the sweetness. Germination breaks open the outer skin of the grain and enables the digestive juice to penetrate for better digestion.

(iii) FERMENTATION

Have you ever noticed that your 'chapati' dough changes in texture and also gives a different flavor? Do you know what brings about these changes?

The bacteria found in foods multiply in the presence of enzymes naturally present in food. This increase in the microbial activity brings about physical and chemical changes in the dough or batter. Some of the carbohydrates get converted into acid with the production of carbon dioxide (CO_2). The production of acid gives a sour taste and CO_2 gives a porous texture to the dough/batter.

Do you know the procedure for fermenting a dough/batter? Prepare the dough/batter in the usual way and keep in a warm place to start microbial the activity. Fermentation will start in 4 hours to 24 hours time depending upon the weather conditions. Remove the batter/dough from the warm place once the desired fermentation has been achieved

BENEFITS OF FERMENTING FOODS

The nutritional benefits in a fermented food are quite similar to the ones in germinated foods. There is a general increase in the B-group vitamin content. Do you know that the thiamin, riboflavin and niacin contents almost double up after fermentation?

Vitamin C content shows tremendous increase in fermented foods.

Iron too gets released from the bound form and is hence available to the system for better health.

Fermentation provides variation in taste, texture and flavor. Nan and bhaturas are popular examples of fermented foods.

RECIPES INCORPORATING NUTRIENT ENHANCEMENT TECHNIQUES

Given below are some recipes suitable for breakfast, lunch/dinner and tea time snacks.

A. COMBINATION METHOD

PAUSHTIK RICE IN A MOULD

Ingredients	Amount	Ingredients	Amount
Rice	1 Cup	Carrot	1 med
Water	2 ¼ Cup	Lemon	½
Peas	80 gm	ghee/oil	1 sp.

Salt and whole spices – As desired

Method

1. Pick, wash and soak rice in a little water for 10 min.
2. Shell peas and cut carrot into 1" long thin strips
3. Squeeze the lemon juice and keep, shred the lemon rind into very thin and long strips.
4. Heat ghee/oil in a heavy bottom pan. Add the desired spices (Bay leaf, zeera, cardamom and clove) and fry the rice for 2-3 min.
5. Add peas, salt and water, bring to oil, stir, lower flame, cover and cook till done.
6. Add lemon shreds, lemon juice and carrots to the rice, cover and keep aside.
7. Grease a jelly mould and lightly pack the prepared rice.
8. Unmould rice, garnish with tomato slices and spring onions before serving.

NOTE : Suitable for lunch/dinner

NUTRITIOUS WRAP

Ingredients	Amount	Ingredients	Amount
Atta	50 g.	Nutrella Granules	20 g
Besan	30 g.	Pumpkin	40 g.
Methi leaves	few	Onion	50 g.
		Potato	75 g.
		Green chilly	1-2
		Coriander leaves	few
		Ghee/oil	as required

Method

1. Make a dough with atta, besan, chopped methi leaves, and salt using water, keep aside
2. Soak nutrella granules for half an hour in water
3. Boil, peel and mash potatoes.
4. Peel and grate pumpkin
5. Saute finely chopped onions. Add mashed potatoes, grated pumpkin, and nutrella granules, green chillies, coriander leaves along with salt and spices. Adjust the taste of the filling.
6. Divide the dough in 2-3 parts and roll out as a chapati. Cook on tawa smearing ghee/oil as for parantha.
7. Put some of the filling and wrap it up.
8. Serve hot with curd + green chutney.

NOTE: suitable for breakfast

CHATPATA KUJA

Ingredients	Amount	Ingredients	Amount
Maida	50 gms.	For Filling	
Ghee	15 gms	Boiled potatoes	1 med
Salt	to taste	Murmura	20gm
Ghee	for frying	Green chilli	1
		Coriander leaves	few
		Tomato	½ small
		Lemon juice	1 tsp
		Onion	¼ med.

Method

1. Sift flour, rub in shortening and make a stiff dough using water.
2. Divide dough into 3-4 parts. Roll them like a poori and put on the back of a katori.
3. Put them into hot ghee and fry, the 'kuja' (covering) will separate from the katori. Fry it till crisp and colour of papri, keep aside.
4. Prepare a spicy 'bhel' mixture using the ingredients given for the filling.
5. Put the filling in the prepared 'kuja'. Garnish with some coriander leaves and broken kuja bits.

VARIATION

You can wrap the 'kuja' dough around a metal kulfi mould and fry to get a case in the shape of cone.

NOTE: A suitable snack.

GERMINATION METHOD

SPROUT STUFFED PARANTHA

Ingredients	Amount	Ingredients	Amount
Atta	100 gm.	Ginger	5 gm
Sprouted green gram	40 gm	Coriander leaves	few
Onion	½ small	salt, amchoor	to taste
Green Chilli	1	ghee/oil	1 tbsp

Method

1. Make dough with atta and water as for parantha. Divide dough into 2-3 parts.
2. Make a spicy mixture of sprouts with finely chopped onion, green chillies, ginger and coriander leaves.
3. Stuff the above mixture in the dough and make the parantha.
4. Serve hot with curd, and pickle/chutney

NOTE: Suitable for a simple lunch/dinner

POTATO PUFF

Ingredients	Amount	Ingredients	Amount
Potatoes	200 g	salt & pepper	to taste
Mixed sprouts (Moong + channa)	50 g	corn flour/maida	2 tbsp
onion	½ small	bread crumbs	3-4 tbsp
green chilli	1-2	ghee/oil for frying	

Method

1. Boil, peel and mash potatoes. Mildly salt the potatoes and divide into balls (A little bigger than a walnut)
 2. Make a spicy filling with sprouts, onion, chillies, salt and pepper.
 3. Flatten the potato ball in the palm and enclose the filling and roll in cylindrical/ sausage shape.
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4. Dip in corn flour /maida paste and roll in bread crumbs.
5. Deep fry to a golden brown colour. Drain on paper.
6. Serve hot with green chutney/ketchup.

NOTE: Suitable as snack

HARYALI BARFI

Ingredients	Amount	Ingredients	Amount
Milk	250 ml	Sugar	80-100g
Paneer	50g	Powdered elaichi	½ tsp
Khoya	50 g	Silver foil	1
Sprouted green gram	100 g		

Method

1. Boil milk to 1/3 rd its volume in a heavy bottom pan.
2. Add sprouted moong to it and cook for five minutes
3. Add the crumpled paneer and khoya now and continue cooking till almost dry.
4. Add sugar, stir constantly and cook for 5 more minutes.
5. Set on a greased tray, sprinkle elaichi powder. Put silver foil and cut into pieces before serving

NOTE: A delicious, nourishing dessert

C. FERMENTATION METHOD

PANCHMEL DOSA

Ingredients	Amount	
		Filling
Rice	1 ½ Cup	Potatoes /paneer 1/3 Cup
Channa dal	¼ Cup	Ghee/oil - for cooking
Moong dal	¼ Cup	Chutney
Soya beans	¼ Cup	Coconut chutney ½ Cup

Method

1. Soak parboiled rice for 1 hour and grind to a paste.
2. Soak soya beans for 4 hrs and other dals for 1 hour. Grind them together with 1 tsp of methi seeds.
3. Allow both rice and dal batters to ferment.
4. Mix the two batters together and leave aside while you prepare the filling and coconut chutney.
5. Heat a heavy bottom flat tawa and smear with ghee/oil to season it. Wipe off with a cloth.
6. Now spread a ladle full of batter and make the dosa.
7. Fill with prepared potato/paneer filling, roll and serve hot with chutney.

NOTE: Suitable for main meal or breakfast.

TIRANGA KHAMAN DHOKLA

Ingredients	Amount	Ingredients	Amount
		For Tempering	
Channa Dal	½ cup	Oil	2 tbsp
Par boiled rice	1 cup	Curry leaves	few
Spinach paste	1 tbsp	Mustard seeds	1 tsp
		Hing	a pinch
Beet root paste	1 tbsp	Green chillies	6-8
Sugar	2 tsp		

Method

1. Soak channa dal for one hour. Grind and keep overnight in a warm place till it ferments.
 2. Soak rice for one hour. Grind and leave overnight till it ferments.
 3. Mix finely ground spinach paste to half of the rice batter. Mix beet root paste to the other portion of fermented rice batter. Add salt to taste.
 4. Add a pinch of haldi to the dal paste. Add salt to taste.
 5. Steam these three khamans separately in similar size dishes till done.
 6. Pile one on top of the other with green chutney and tomato ketchups in between.
 7. Heat oil, add hing, crackle mustard seeds, add curry leaves and green chillies. Add sugar and 1/3 cup water. Bring to a boil and pour on tiranga dhokla.
 8. Cut in pieces and serve.
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NOTE : A suitable snack

KHAJUR KI ROLI-POLI

Ingredients	Amount	Ingredients	Amount
Maida	200 g	Filling	
Sour curd	2 tbsp	Dates	80 g
Ghee/oil	for frying	Milk	150 ml
		Sugar	1 tsp

Method

1. Sift flour and make a firm dough using sour curd and water. Leave the dough in a warm place till it ferments.
2. Remove seeds from dates, wash and cut into small bits.
3. Cook dates in milk till they soften. Add sugar and cook till it leaves the sides of the pan.
4. Divide dough in small parts and roll to the size and thickness of puri. Spread date paste and roll. Seal the ends with some paste made with flour.
5. Deep fry over medium heat till done.
6. Serve hot or cold with or without cream/malai

VARIATION – You can use dry khumani instead of dates.

NOTE: Suitable dessert

EVALUATION OF THE DISH PREPARED BY USING NUTRIENT ENRICHMENT TECHNIQUES

Evaluate each dish prepared by you in the table given below. Grade each dish for its appearance, taste and acceptability as poor/average/good/excellent. An average plus evaluation means that the dish prepared with nutrient enrichment techniques will find acceptability with many persons.

You can mention any improvement or variation that will enhance dish acceptability in the remarks column.

	DISHES PREPARED	APPEARANCE	TASTE	ACCEPTABILITY	REMARK
A	Combination				
1.					
2.					
3.	B. Germination				
1.					
2.					
3.	C. Fermentation				
1.					
2.					
3.					

ACTIVITY

Make a list some other recipes that you know of and can cook. Put them in the table below:

S.No.	Combination	Germination	Fermentation
1			
2			
3			
4			