

M A (II Semester)

HSCM205

Food Science and Experimental Foods

Unit-v

NUTS AND OIL SEEDS

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INTRODUCTION

NUTS

- Nuts are seeds or fruits consisting of an edible fat containing kernel and surrounded by a hard or brittle shell. The nuts we are most familiar in India are almond, cashewnut , coconut, groundnut, pistachio nut, walnut and chilgoza etc. Nuts have a fairly good shelf life but their high fat content does give them certain drawback. They become rancid, particularly in warm climates. With the exception of cashewnuts, most other nuts are marketed either shelled or unshelled. Shelled nuts are subject to contamination.



OILSEEDS

- A seed oil is a vegetable oil that is obtained by seed of some plant rather than the fruit. Oilseeds rank next to the food grains in importance in the Indian diet. According to the nature of the yielded oil, these are classified as edible oilseeds and non edible oilseeds. Most important edible vegetable oils are seed oil. Some common examples are rapeseed, sunflower oil, mustard oil, sesame oil , niger, safflower coconut oil, soya bean oil and groundnut oil etc. Castor and linseed are two most important non edible oil crops. Fat and oils are important energy source. They are smooth ,greasy substances that are in soluble in water



COMPOSITION

- **Protein**

- Nuts and oil seeds are rich in protein. They contain proteins of high quality and generally have all the essential amino acid. The protein content of nut varies from approximately 7 percent in dry coconut to 15 percent in walnuts, 19 percent in pistachio, 21 percent in cashewnut and 26 percent in groundnut.

Carbohydrate

- They don't contain an appreciable amount of carbohydrate.

• Fat

- All nuts are high in fat content and therefore also provide lots of energy. All the nuts we use contain on average 50 per cent of fat, with fresh coconut and groundnut contain 40 per cent, dry coconut 62 per cent and walnut 64 per cent.

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Minerals

- They contain good sources of minerals such as calcium iron and phosphorus, potassium and magnesium.

• Vitamins

- They contain high level of vitamin B complex . Groundnuts are particularly rich in thiamine and nicotinic acid. Nuts such as almond and hazelnuts are an excellent source of vitamin B and antioxidants.

Nuts and Oilseeds as a source of Antioxidant

- Soya beans are rich in isoflavones like genistein and diadzein which protect against cancer, heart disease.
- Canola and mustard possess strong antioxidant activity.
- Sesame seeds contain sesamol which has superior oxidative stability.
- Groundnuts are rich in the antioxidant flavanone.

USES IN COOKERY

- Nuts and oil seeds are used in cookery as whole, halved, flaked, nibbed, ground or desiccated.
- Nuts are used in fresh, raw, roasted or boiled or salted forms and also fried forms.
- Nuts are used as thickening agents. Coconut, poppy seeds and cashewnuts are used as thickening agents as a preparation of gravy.
- Chutney can be made and used from nuts, example -ground nut and coconut.
- Sweets are made from nuts, examples- chikki , burfi, cashewnut cake.

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- Oil is used as cooking media for frying and seasoning.
- Oil is used as preservative in pickles.
- Powders made out of nuts like groundnut and coconut are used as chutney and salad dressing.
- Nuts are also used in ice-creams, pastries, payasams and chocolates
- Nuts are also used in beverages ,e.g badam kheer
- Nuts are used as garnishing material – raw, roasted, salted or boiled form
- Oil seed cakes are used as weaning food or as thickening agents in vegetables like capsicum.
- Peanut butter is used as a topping on the bread or as a side dish along with chapattis.

CONCLUSION

- High fats and consequently high calorie content of nut in addition to their high contents is very significant from the point of view of adequate nourishment of our country. They are concentrated source of energy as well as good quality protein for the under nourished. However their high energy content makes them almost taboo food items for the overweight.

THANKS