



Project Report on

“Study of vegetable for different uses & which vitamins and minerals they contain”

Submitted By

M.Sc. SEM-I Students

(Roll No 33 to 40)

Guided By

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Submitted To

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SIR P.T.SCIENCE COLLEGE, MODASA

Managed by

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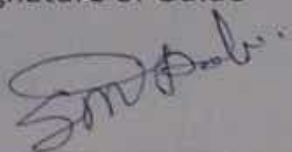
Certificate

This is to certify that project report entitled "Study of Vegetable for Different uses & which Vitamins and Minerals they Contain" are carried out by students mentioned below. They have been satisfactorily completed their project work for academic year 2022-23. The project has been approved as it satisfies the academic requirement in respect of project work prescribed for the Master of Science. M.Sc-I

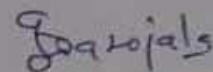
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➤ Aim:

To study Vegetables for different uses and what vitamin & mineral they contain

➤ Introduction Theory

Vegetables are parts of plants that are consumed by humans or other animals as food. The original meaning is still commonly used and is applied to plants collectively to refer to all edible plant matter, including the flowers, fruits, stems, leaves, roots, and seeds. An alternative definition of the term is applied somewhat arbitrarily, often by culinary and cultural tradition. It may exclude foods derived from some plants that are fruits, flowers, nuts, and cereal grains, but include savoury fruits such as tomatoes and courgettes, flowers such as broccoli, and seeds such as pulses.

➤ Requirements

Different Types of Vegetables

➤ Vegetables Name & Uses

1. Potato

The potato is a starchy food, a tuber of the



plant *Solanum tuberosum* and is a root vegetable native to the Americas. The plant is a perennial in the nightshade family Solanaceae.

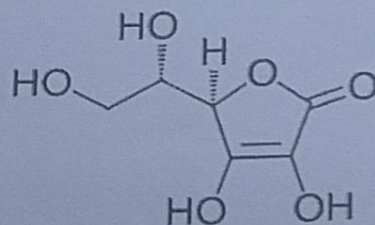
Binomial name: *Solanum tuberosum* L.

Uses:

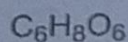
People use potatoes for diabetes, heart disease, high blood pressure, indigestion (dyspepsia), and other conditions, but there is no good scientific evidence to support these uses.

Vitamins:

- Carbohydrate
- Protein
- calcium
- Iron
- Magnesium
- Phosphorus
- Potassium
- Vitamin C
- Vitamin B6



Vitamin C
Ascorbic acid



2. Tamato

Tomatoes are a significant source of umami flavor. They are consumed in diverse

ways: raw or cooked, and in many dishes, sauces, salads, and drinks.



Binomial name: *Solanum lycopersicum* L.

Uses:

the fruit, leaf, and vine are used to make medicine. Protects the heart, Regulates blood pressure, Healthy skin, Prevents eye problems, Anti-inflammatory action, Bone Health, Helps prevent some types of cancer,

Vitamins & Mineral:

A Raw tomato is Contain

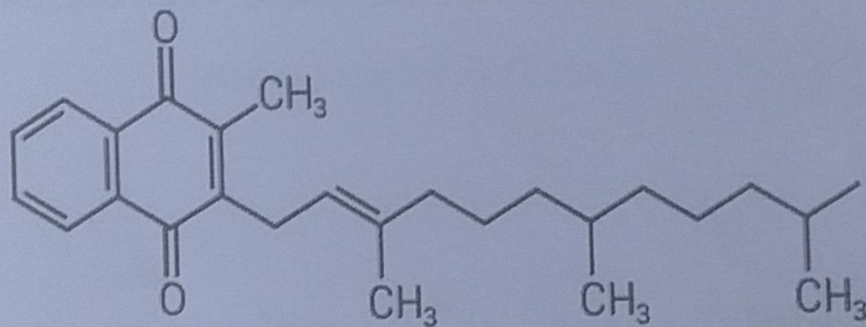
95% water,.

4% Carbohydrate

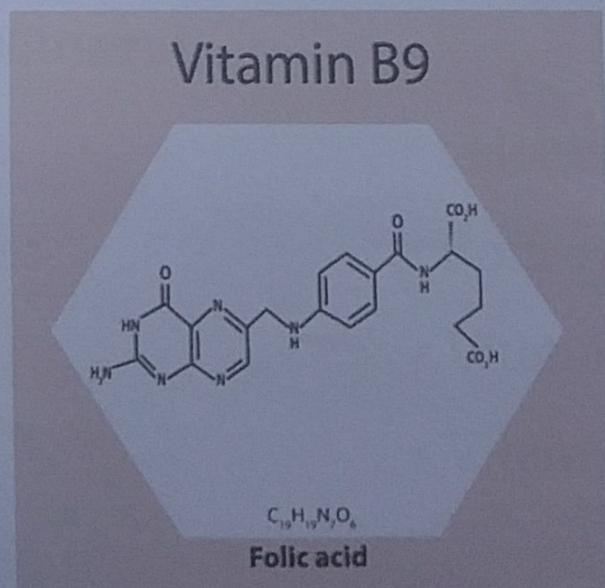
18 Kilocalories / 100gm Vitamin C (17% of the Daily Value) / 100gm

1. Vitamin C. This vitamin is an essential nutrient and antioxidant. One medium-sized tomato can provide about 28% of the Reference Daily Intake (RDI).
2. Potassium. An essential mineral, potassium is beneficial for blood pressure control and heart disease prevention.
3. Vitamin K1. Also known as phyloquinone, vitamin K is important for blood clotting and bone health.

Vitamin K1 | $C_{31}H_{46}O_2$



4. Folate (vitamin B9). One of the B vitamins, folate is important for normal tissue growth and cell function. It's particularly important for pregnant women.



3. Carrot

Carrots (*Daucus carota* L) are one of the most widely used and most important tubers in the world, also because they



are relatively easy to grow, are widely used in various dishes and cultural cuisine

Binomial name: *Daucus carota* subsp. *sativus*

(Hoffm.) Schübl. & G. Martens

Uses:

Help Promote Healthy Vision, Aids Weight Loss, Improves Skin Health, Helps Improve Immunity, May Support Heart Health, Digestive Health, Diabetes Management, May Help Bones

Vitamins & Mineral:

- calories
- carbohydrates
- Fiber
- Sugar
- Protein
- calcium
- Potassium
- Vitamin A
- Vitamin K

4. Onion

An onion also known as the bulb onion or common onion, is a vegetable that is



the most widely cultivated species of the genus *Allium*. The shallot is a botanical variety of the onion which was classified as a separate species until 2011

Binomial name: *Allium Cepa* L.

Uses:

heart health, loaded with antioxidants, Contain anti-cancer compounds, Help control blood sugar, Boost bone density, Have antibacterial properties, boost digestive health, Easy to add to your diet.

Vitamin & Mineral

- Calories: 40/100gm
- Water: 89%/100gm
- Protein
- Carbs
- Sugar
- Fiber
- Vitamin B6
- Vitamin C
- Folaet (B9)
- Potassium

5. Lemon

Lemons (Citrus limon) are among the world's most popular citrus fruits.



A great source of vitamin C and fiber, lemons contain many plant compounds, minerals, and essential oils.

Binomial name: Citrus limon (L.)

Uses:

Support Heart Health, Help Control Weight, Prevent Kidney Stones, Protect Against Anemia, Reduce Cancer Risk, Improve Digestive Health.

Vitamins & Mineral:

Calories: 29/100gm

Water: 89%/100gm

Protein

Carbs

Sugar

Fiber

Vitamin C

Potassium

Vitamin B6

6. Chilli Peppers

Capsicum annum is a species of the plant genus *Capsicum* native to southern North America, the Caribbean, and northern



South America. [This species is the most common and extensively cultivated of the five domesticated capsicums.

Binomial name: *Capsicum annum* L.

Uses:

Pain relief, Weight loss,

Vitamins & Minerals:

Calories: 6

Water: 88%

Protein: 0.3 grams

Carbs: 1.3 grams

Sugar: 0.8 grams.

Fiber: 0.2 grams

Per 100gm

Vitamin A

Vitamin K1

Vitamin C

Potassium

Vitamin B6

Vitamin C. Chili peppers are very high in this powerful antioxidant, which is important for wound healing and immune function.

Vitamin B6. A family of B vitamins, B6 plays a role in energy metabolism.

Vitamin K1. Also known as phylloquinone, vitamin K1 is essential for blood clotting and healthy bones and kidneys.

Potassium. An essential dietary mineral that serves a variety of functions, potassium may reduce your risk of heart disease when consumed in adequate amounts.

Copper. Often lacking in the Western diet, copper is an essential trace element, important for strong bones and healthy neurons.

Vitamin A. Red chili peppers are high in beta carotene, which your body converts into vitamin A.

7. Radish

The radish is an edible root vegetable of the family Brassicaceae that was domesticated in Asia prior to Roman times. Radishes are



grown and consumed throughout the world, being mostly eaten raw as a crunchy salad vegetable with a pungent, slightly spicy flavor, varying in intensity depending on its growing environment

Biominal name: *Raphanus raphanistrum* subsp.
Sativus (L.) Domin

Uses:

Reduced Risk for Diabetes,

Enhanced Liver Function:

Along with other compounds, radishes contain **indole-3-carbinol** and **4-methylthio-3-butenyl-isothiocyanate**, which help the liver detoxify and heal against damage. These same compounds also help the kidneys flush out toxins

Cardiovascular Improvement etc.

Vitamin & Mineral

A half cup serving of fresh,
sliced radish contains:

Calories: 1-2 grams

Protein: 0 grams

Fat: 0 gram

Carbohydrates: 2 grams

Fiber: 0 gram

Sugar: 0 gram

Cholesterol: 0 milligrams

Sodium: 23 milligrams.

Calcium

Vitamin B6

Vitamin C

Riboflavin

Niacin

Thiamine

Folate

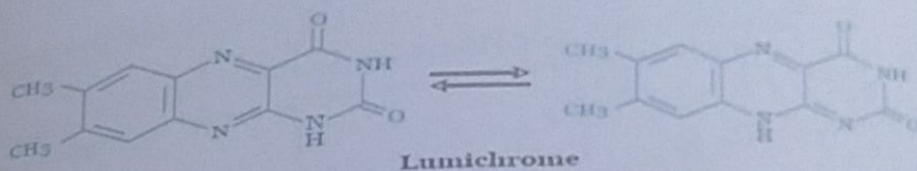
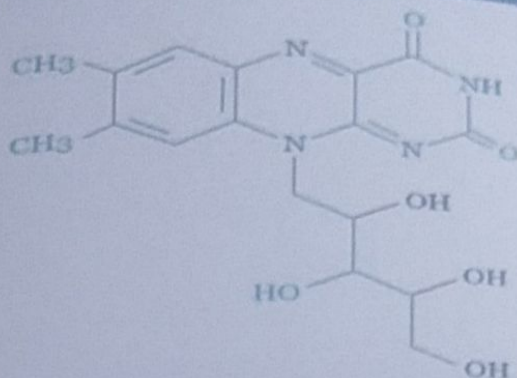
Potassium (K)

Iron (Fe) ,

Manganese

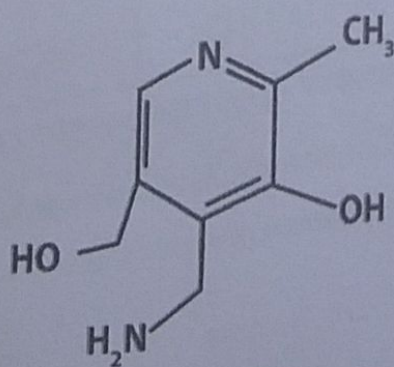
Riboflavin

Riboflavin ($C_{17}H_{22}N_4O_6$)



Vitamin B6

Vitamin B6



$C_8H_{11}NO_3$

Pyridoxine

90

Th

THORIUM

7

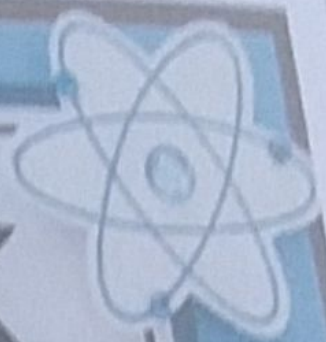
N

NITROGEN

19

K

POTASSIUM



39

Y

YTTRIUM

8

O

OXYGEN

92

U

URANIUM