



**Centurion**  
**UNIVERSITY**

Shaping Lives...  
Empowering Communities...

EXPERIMENT NO: 7

**Ginger rhizome : Jamaica Ginger: Rhizoma Zingiberis**

**Latin name: *Zingiber officinalis* Rosco.**

**Family: *Zingiberaceae***



**Zingiber officinale**



Fresh Ginger rhizome

- Perennial herbaceous plant with large leaves.
- Colour: brown or pale brown.
- Odor: aromatic.
- Taste: pungent and acrid.
- Origin : Africa , India and Central America.

**Chemical constituents:**

- 1- Volatile oil 3% (zingiberene, zingiberol, zingiberenol, zingerone).
- 2- Starch 50 %.
- 3- Protein.
- 4- Sugars (glucose, sucrose).
- 5- Resins (oleo- resin).

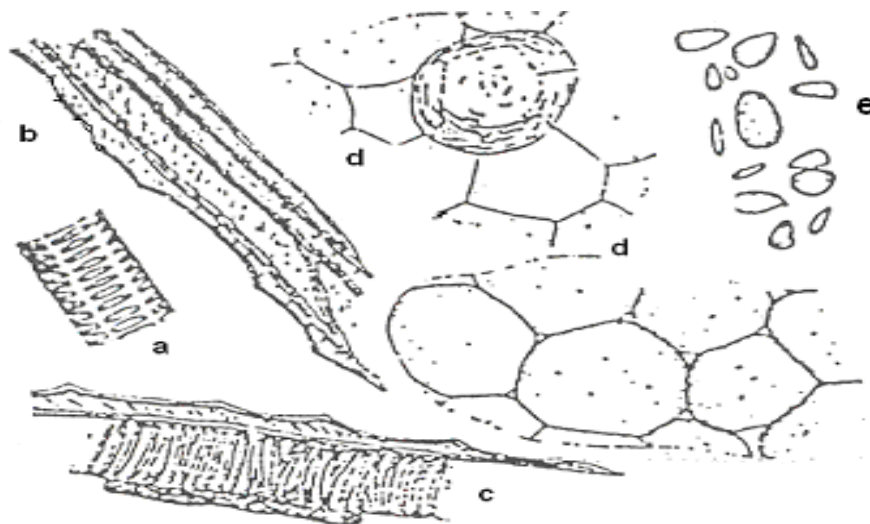
**Uses:**

Carminative, condiment, flavouring agent, cause anorexia, popular drink.  
Used also in the throat problems (voice loss).

**Microscopical examination**

The characteristic key elements are:

1. Starch granules (50%) (e).
2. Scalar form vessel (a).
3. Sclerenchymal fiber (b).
4. Parenchyma & oleo-resin cell (d).



- a) Fragment of a scalar vessel.
- b) Fragment of broken sclerenchymal fiber from a vascular bundle, cell walls slightly thickened, pits oblique & slit shaped.
- c) Vessel fragment with adjoining sclerenchymal fibers ( top , see also b ) & elongated oil cells ( bottom ).
- d) Parenchyma & oleo-resin cell.
- e) Starch granules, more or less flattened with end protruberance ( usually at the more narrow end), stratification present in most cases.