

## III Leaves

### \* Xanthorrhoeaceae

#### → Aloe vera

- atonic constipation
- suppressed menstruation

### Theaceae

#### → Camellia Sinensis (Tea)

green

steamed, dried

- ↑ catechin

- Antioxidant

- ↓ cholesterol

- ↓ triglyceride

- thermogenesis - fat oxidant

- ↑ Plasma antioxidant capacity

#### \* Active constituents

1. Polyphenol :- Tannins (catechins) (500-5000)

epicatechin, epigallocatechin

2. Alkaloids purin (xanthine derivative)

caffeine → CNS stimulant

Theophyllin → bronchodilation

Theobromine → diuretic

### \* Lamiaceae

#### → Salvia officinalis (Sage)

#### \* Constituent

- Acid (phenolic - caffeic chlorogenic - rosmarinic)
- Flavonoid
- Tannins
- V.O (α-Bthujones, 1,8 cineole - borneol camphor)

#### \* Action

- Antispasmodic
- Anticholinesterase (memory)
- Antimicrobial

#### → Peppermint

- mentha x piperita
- glandular trichomes

44-1. menthol (nature - crystalline)

15-32 menthone

45-10 menthyl acetate ester

6-12 tannins, flavonoid, triterpene

- steam distillation
- dried herb
- fresh herb

#### → Rosemary

- originated in mediterranean
- known as culinary healing herb

#### \* use : memory aid

- antioxidant
- prevent breakdown of neurotransmitter acetylcholine

#### \* Topical use

- steam distillation muscle sprain strain, arthritic

- camphor (skin) ↑ blood circulation

- hair (rosemary + thym + lavender + jojoba) hair loss - alopecia areata

#### \* Internal use

- rosemary + oregano + yeast (candida)

- Antibacterial antifungal



## \* Araliaceae

↳ Hederae Folium (ivy).

\* main herbal use (respiratory tract diseases)

- chronic inflammatory bronchitis

Active (triterpene - glycosides hederacosid C, D, B  
phenolics / flavonoids, coumarins).



## 2 Flowers

### \* Asteraceae

#### A - Chamomile (3 iso)

Roman (Europe)

(*Chamaemelum nobile*)

- has thin petals
- intense at center

German

(*Matricaria chamomilla*)

- wide petals
- outspread at center

- matricin  $\rightarrow$  chamazulene (blue).

#### \* Active

$\rightarrow$  glycosides

Coumarin: umbelliferone - methylether - benzoin (benzo + pyrone)

Flavonoid: Apigenin - luteolin - quercetin - rutin (gamma-pyrone)

U.O: alpha-bisabolol - chamazulene

other: matricin - matricarin

chamazulene

- \* use
- antispasmodic - carminative
  - anti-inflammatory - teething pain
  - antiseptic - hypnotic (sleep)
  - antacid

#### B - Artemisia cinerea

Santonin (wormseed)

- Artemisin

- yellow U.O cinerea

anthelmintic property

of the drug (santonin lozenges).

- should be collected in July - August

- use: Poison Parasites Thread  
 $\downarrow$  thread + tapeworm

- empty stomach + refrain eating  
for short time after

- purgative precede - follow

- vision disturbance

- blue  $\rightarrow$  yellow

yellow  $\rightarrow$  red

purplish  $\rightarrow$  alkaline

### \* Myrtaceae

#### A - clove (Syzygium aromaticum)

\* Active: Eugenyl acetate

B-caryophyllene

methysalicylate

menthyl eugenol

benzaldehyde

- 90% Eugenol (odour)

phenyl propene + hydroxyl  
+ methoxy (ortho).

\* use: carminative - anti emetic  
toothach - counter irritant

\* problem: must not be used with  
anti coagulant drug.



### 3] Seed :-

③

Nutmegs (myristica fragrans)

Myristicaceae.

- usually used complete fruit but v.o in seed - kernel
- very expensive? the fruit need long time
- \*Active Myristicine - elemicin (flavouring)
- mace (similar odor of nutmeg oil).
- prisoners use it (prison opium).
- similar atropin the only difference atropin (mydriasis) nutmeg (miosis).

Nigella arvensis  
(Black cummin)

- carminative - diaphoretic
- digestive - diuretic
- emmenagogue - excitant
- lactagogue, laxative
- resolvent, stimulant
- stomachic - tonic
- Alpha-pinasterol → anti-inflammatory
- Asparagin → Diuretic
- Campesterol → Antioxidant  
Hypocholesterolemic
- Carvone → Antiacetylcholinesterase  
Antiproliferative  
Antiseptic
- Hederagenin → Anticollagen  
Allergenic  
Antiedema  
Antifibrin
- phytosterol → Antiproliferative  
Hypocholesterolemic
- Thymohydroquinone → Antibacterial
- Thymoquinone → Anticancer  
Antiallergic  
Antibacterial  
Antiparasitic

## ④ Fruits

umbelliferae - Apiaceae

### \* Anise

*Pimpinella anisum*

- constituents: A.O (anethole) (odor).  
coumarin

- use: - expectorant - spasmolytic  
antibacterial - cold  
cough - bronchitis.  
trachea contraction - ↓ irritation

Anethole: Phenylpropene para-methoxy

↑ temp - long term → Dimmer bind to  
estrogen receptor.

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estrogen receptor.

- Flavoring agent: indigestion like Gaviscon®

### \* Caraway

*Carum carvi*

- Biennial in carrot family  
- fast plant enough seed

## ⑤ Barks

- outside the cambium of the stem, root  
- transverse - longitudinal incisions / peeling out  
- in spring - sundried  
- some bark are decorticated (Cinnamon)

### \* Labiataceae

\* *Cinnamomum cassia* auct

\* China - cool climate - annual rainfall  
1200-1300 - elevation mostly 90-300

\* Chemistry: 1. Cinnassiol (antiallergic).

2. Cinnamaldehyde (orally), ↓ (stimulates CNS)  
↑ (inhibits CNS)

3. Trans aldehyde

4. Cinnamic acid (cinnamoyl)

\* use :- antispasmodic

carminative - antimicrobial

anthelmintic - potentiating

effect on insulin (Hof Diabetes)

↓ triglyceride ↓ cholesterol

warming (vasodilation)

Abortion (uterine stimulating)

induce menstruation.

plantae - Magnoliophyta

magnoliopsida - Laurales

:- Salicylin

salicylin - methyl salicylate

Aspirin - acetyl salicylate

sugar-salicylate

↓  
Salicylic acid

↓  
Aspirin



## ⑥ | Roots & Rhizomes |

### \* Gingerroot (Zingiberofficin.)

\* Zingiberaceae

\* anti oxidant greater than vitamin E  
anti tumor - anti emetic

### Ginseng (Panax ginseng)

\* (Asian) Araliaceae.

\* indigenous (China - Korea - Russia).

\* treatment :-

anaemia - diabetes - gastritis

insomnia - sexual impotence

general restorative

\* white (Dried - peeled).

red (steaming).

Rhubarb (Rha)  
Rubiaceae

\* Triterpenoid saponins (Dammarene) steroidal  
saponins (ginsenosides - panaxo - side).  
glucose

\* Aglycones (protopanaxadiol - protopanaxatriol)  
acid hydrolysis → (panaxadiol - panaxatriol).

\* Adaptogen :- adapt to stress - improve energy and  
providing normalizing and restorative  
aphrodisiac.

\* long-term use :- corticosteroid poisoning  
hypertension - nervousness - sleeplessness  
hypotension - tranquillizing (other)

\* Action and use :-

- protect body and nerves from stress
- stimulate and metabolic function
- ↑ physical - mental efficiency
- ↑↓ B.P - glucose level
- tonic for fortification
- use during convalescence

## ⑦ Bulb

underground organ consisting of scales of  
that are fleshy and contains reserved materials



Squill (Liliaceae).

### \* Active :-

- Cardiac glycosides (Scillaren A - proscillariden A).  
glucosyllaren A (scillardin A) - 2 sugar (acidic).  
+ Scillabiose (glucose - rhamnos)  
- Scillaren B (responsible mixture of squill glycosides)
- Flavonoids :- Apigenin - isovitexin - luteolin - quercetin  
st
- other :- stigmasterol.

Rena Al-Khawalid

### \* use :-

expectorant - cathartic emetic - cardioactive - diuretic  
chronic bronchitis - asthma - whooping cough - scanty sputum.

\* aglycone = digitalis-like cardiotonic

= Digoxin :- + inotropic (↑ contractility)  
\* - Chronotropic (↓ H.R.).