4- Jaborandi leaf اوراق الجابورندي

Origin:

It is the dried leaflets of *Pilocarpus jaborandi*

Family: Rutaceae

Geographical source

South America, West India, Brazil and Central America

Active constituent

Alkaloids: (Pilocarpine, Isopilocrpine,

Pilosine and Isopilosine)

Therapeutic uses

1- Pilocarpine salts are used in ophthalmic therapy

as eye drop, as it cause contraction of eye pupil

(myotic action) used in treatment of glaucoma.

N.B.(Glaucoma=increase the **I**ntra **O**cular **P**ressure (**IOP**)

*Pilocarpine has parasympathomimetic activity and cholinesterase inhibitor

2- Pilocarpine is antidote for Atropine this means

(It antagonize the action of Atropine) where, it has Miotic action, induce salivation

(Sialagogue) and increase sweating (Diaphoretic)

3-Used in renal diseases to eliminate both water and urea

Tests for identity:

Helch's test

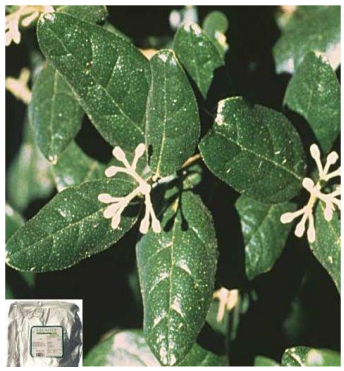
Pilocarpine soln in H_2O + **Pot. dichromate** + H_2O_2 + **dil. acid** → **violet** color

5- Boldo Leaf اوراق البولدو

Origin:

It is the dried leaves of *Peumus boldus*

Family: Monimiaceae



Geographical source

Chile, Mediteranean mountains

Active constituents

- Alkaloids: boldine, isoboldine

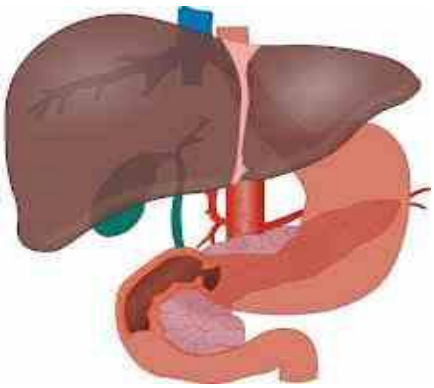
- Volatile oil: mainly *p*-Cymene, 1,8-Cineole, Ascaridole and Linalool

- Flavonoid glycosides

Therapeutic uses

- Cholagogue , liver stimulant and **diuretic**

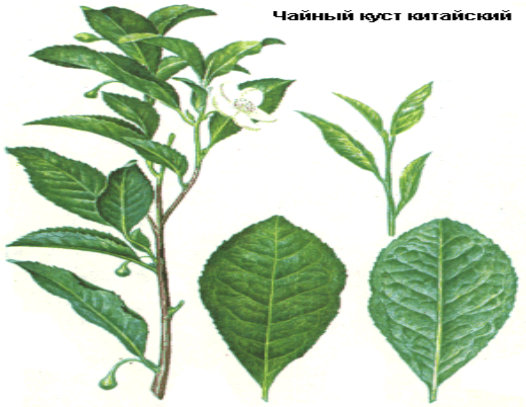
- **Carminative**, **diaphoretic** and **flavouring** agent



6-Tea Leaf
اوراق الشاي

Origin:

- **It consists of the prepared leaves of *Thea sinensis* (*Camellia thea*)**
  Family: Theaceae



Geographical source

Sri-Lanka, China, Japan

Preparation of **black** and **green** tea

1- In preparation of **black tea** (Slow drying)

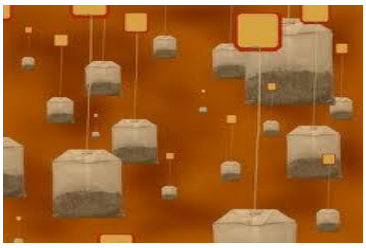
- **During the drying and in the fermentation process (slow drying at temperature of 20-27 °C) → The colour of tea leaves change from green to reddish brown → due to the activity of an oxidase enzyme called (Thease) which converts partly Phlobatannins (the soluble tannin) into → insoluble Phlobaphens (Reddish brown in colour) + and liberate free caffeine.**

2- While in **green tea** manufacture (**Rapid** drying)

- Some enzymes of which ''Thease'' are destroyed and therefore, the soluble tannin (Phlobatannins) is not oxidized. (The colour of tea leaves still green after rapid drying).

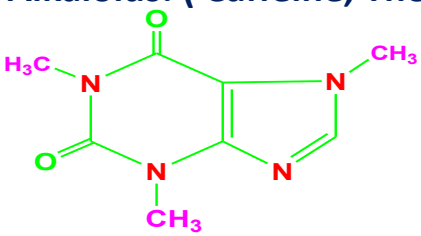
N.B.

- Black tea contains higher percent % of Caffeine than green tea.

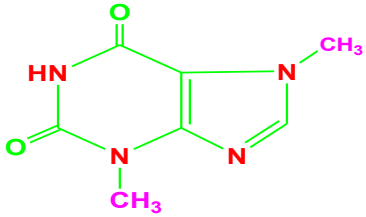


Active constituents

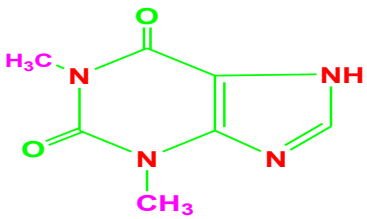
-Alkaloids: (Caffeine, Theobromine, Theophylline)



Caffeine



Theobromine



Theophylline

Therapeutic uses

- **Marked CNS stimulant, heart stimulant (Refreshment) and relief headache** due to **Caffeine**
- **Mild diuretic** and **Weak smooth muscle relaxant** due to **Theobromine** and **theophylline.**

7- Coca Leaf
اوراق الكوكا

Origin:

It is the dried leaves of *Erythroxylum coca*

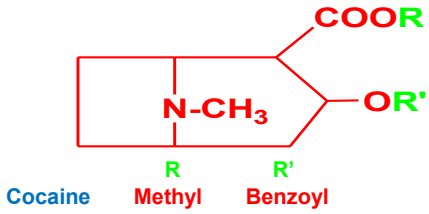
Family: Erythroxylaceae

Geographical source

South America, Peru, Bolivia, Colombia

Active constituents

Alkaloids: Cocaine



Therapeutic uses

1- CNS stimulant (small dose)

- **In large dose causes CNS stimulation followed by depression and may cause cardiac arrest.**
- **Large dose causes addiction**

2- Cocaine HCl is a local anaesthetic.

- **Now it's use restricted and confined to minor surgical operation (as ophthalmic, ear, nose and throat surgery) due to it's strong addiction developing power and it's toxicity.**