

Lavandula officinalis

(=L. angustifolia,

Common lavender, Lavanta)

A shrub with narrow
leaves.

The flowers yield **Flores Lavandulae (Lavandulae flos) T.K.** (**Lavanta çiçeği**) and the volatile oil obtained by steam distillation from these leaves are called **Oleum Lavandulae (Lavandulae aetheroleum) T.K.** (**Lavanta esansı**); is used in perfumery. This oil contains **linalool** and **linalyl acetate**.

Lavandula spica

***Lavandula spica* also yields **volatile oil**; however, its **camphor** and **eucalyptol** ratios are higher. It is used in perfumery.**

Lavandula stoechas
(French lavender, Karabaş)

Contains 0.8-0.9%
volatile oil, this oil
contains 23-29%
camphor.

Melissa officinalis

(Lemon balm, Oğulotu, Melisa)

Leaves are ovate,
margins crenate and has
characteristic lemon
odor.

Leaves of this plant yield **Folia Melissa** (**Melissae folium**) T.K. (**Melisa yaprağı**) and the volatile oil obtained from these leaves with steam distillation **Oleum Melissa** (**Melissae aetheroleum**) T.K. (**Melisa esansı**) contains 40% **citronellal**; is **stomachic** and **sedative**.

***Thymus sp.* (Thyme, Kekik)**

Both calyx and corolla are bilabiate; stamens 4 (as usual) but filaments are long and are distant from each other. The leaves get narrow at the base and have ciliate margins.

Thymus vulgaris **(Common Thyme)**

Leaves contain 2.5% volatile oil, this ratio varies according to the chemical variety. The volatile oil obtained by steam distillation **Oleum Thymi (Thymi aetheroleum) T.K.** (Kekik esansı) is rich in **thymol** and **carvacrol** (a total of 70%).

Aerial parts of the plant give the drug called **Herba Thymi (Thymi Herba)**; total amount of **thymol** and **carvacrol** in the volatile oil (1.2% oil yield) can be as high as 64%.

The effect of thymol and carvacrol are supported by flavonoids and saponosides.

Used in gastrointestinal disorders, bronchitis, dry coughing in the form of extract, tincture or infusion.

Also has proved antibacterial, expectorant effects.

Thymus serpyllum (Wild Thyme, breckland thyme)

Flowers and stems with leaves yield **Herba Serpylli (Serpylli herba)** T.K. (Yabani kekik) contains **thymol** and **carvacrol**; is **antispasmodic**, **expectorant** and **carminative**, also used as **spice**.

***Origanum* sp. (Mercanköşk, Merzengüş)**

Flowers are found in the protection of dense, imbricately arranged bracts. **Thymol** and **carvacrol** containing species are used as spice.

Origanum heracleoticum
**(=*O. hirtum*, Greek oregano,
İstanbul kekiği)**

**Stems with leaves are
sold in İstanbul as
“thyme”.**

**4-5% volatile oil is
obtained from the aerial
parts, it is rich in
carvacrol.**

Origanum smyrnaeum

(= *O. onites*, İzmir kekiği)

Stems with leaves are sold in İzmir under the name “Cheese thyme”.

The volatile oil obtained from the aerial parts contain **carvacrol.**

Corydothymus capitatus **(Spanish oregano, Kara kekik)**

Contains 3.5-5% volatile oil,
50-60% of this oil is carvacrol.
Used as thyme.

***Thymbra spicata* (Karabaş kekik, Zahter)**

Volatile oil obtained from this plant is rich in **carvacrol** (55% of the oil). This plant is also used as thyme.

***Sideritis* sp.**

Used in Anatolia in vast amounts under the name “Mountain tea”.

These species are found to contain **diterpenoids, **flavonoids** and **volatile oil**, **iridoids**, **triterpenic acids**.**

This herbal tea is used in common cold and also to increase the amount of urine.

***Salvia* sp. (Sage, Adaçayı)**

Has 2 stamens; calyx and corolla are bilabiate.

All of the species are called sage.

Salvia officinalis
**(Garden sage,
Common sage, Tibbi
Adaçayı)**

Does not grow naturally
in Turkey.

Leaves yield **Folia Salviae (Salviae officinalis folium) (Tibbi adaçayı yaprağı)**; hot infusions are used to relieve throat ache in the form of gargle and also used as wound healer.

**Oleum Salviae (Salviae officinalis aetheroleum)
(Adaçayı esansı);**

is obtained from the leaves and contains 50% **thujon** and 15% **cineol (eucalyptol)**, is a good respiratory tract antiseptic, has also sedative effect, however is not used for this purpose due to its thujon content.

Salvia triloba (= *S. fruticosa*,
Greek sage, adaçayı)

2 small lobes are present at the base of the lamina, therefore the epithet “**triloba**” is used.

Volatile oil obtained by steam distillation from the leaves is called **Elma yağı (apple oil)**, is rich in **cineol** (60%), therefore is more valuable than officinal sage.

Leaves of this plant are good respiratory tract antiseptics; used in the form of tea.

Salvia sclarea

(Clary sage)

Its volatile oil contains **linalool**, therefore this species is valuable in perfume industry.

Rosmarinus officinalis

(Rosemary, Biberiye, Kuşdili)

Leaves **Folia Rosmarini (Rosmarini folium)** are narrow-linear, revolute (the edges are bent to the back).

Volatile oil obtained from these leaves is called **Oleum Rosmarini (Rosmarini aetheroleum) (Biberiye esansı)** is irritating, used externally in rheumatism. Leaves are used as spice.

Fam: Scrophulariaceae **(Figwort family)**

Some of them are parasites

Digitalis purpurea
**(Common foxglove, Kırmızı
çiçekli yüksükotu)**

**Folia Digitalis (Digitalis
purpurea folium) T.K.**
(Yüksükotu yaprağı): rosette
leaves of the first year and
both rosette and stem leaves
of the second year forms the
drug; contains **cardioactive
heterosides (digitoxin,
gitoxin).**

**Cardiotonic, regulates cardiac activity,
discharges edema, diuretic; these
compounds accumulate in the cardiac
muscle.**

Digitalis lanata
(Woolly foxglove, Yünlü
yüksükotu)

Folia Digitalis lanatae (Digitalis lanatae folium) contains heterosides called **lanatosides**; **lanatoside C** is a cardiotonic compound that dissolves in water more easily and is more effective compared to **digitalin** and **digoxin**.

Verbascum sp. (Mullein, Sığırkuyruğu,
kral şamdanı)

Verbascum phlomoides (Orange mullein, Sığır kuyruğu)

Verbascum thapsus (Great mullein)

Corolla and 4 stamens yield **Flores Verbasci (Verbasci flos) T.K. (Sığır kuyruğu çiçeği)**. Contains **mucilage** and **flavonoids** and is **expectorant** and **emollient**.

Fam: Pedaliaceae

Sesamum indicum
(Sesame, susam)

Semen Sesami contains 40-50% fixed oil. Used in the production of halvah and bakery. **Oleum Sesami** (Susam yağı) T.K obtained from the seeds by pressing is slightly laxative.

Fam: Plantaginaceae

Plantago psyllium

(Sand plantain, Sinirli ot)

Seeds *Semen Plantaginis (Semen Psylli)* (Phr. Eur.) are rich in mucilage (10-30%), oil (2.5-10%), protein (15-20%).

Mucilage (arabinoxylan) is only found in the testa epidermis, therefore *Plantaginis ovatae seminis tegumentum* is a different drug. Used in chronic constipation* due to its laxative effect, in hemorrhoids, to lower blood cholesterol and consumed in diets with vast amount of water.

(*constipation: difficult, incomplete, or infrequent evacuation of dry hardened feces from the bowels)

Fam: Rubiaceae

Cinchona succirubra (kinakinaağacı)

Trunk and branch barks yield **Cortex Chinae (C. Cinchonae)**
T.K. (Kinakina kabuğu). Appetizer and tonic, contains
chinine and cinchonine alkaloids. Chinine is the specific
remedy for **malaria*** and also antipyretic**.

(***malaria**: an infectious disease characterized by cycles of chills, fever, and sweating, caused by a protozoan of the genus *Plasmodium* in red blood cells, which is transmitted to humans by the bite of an infected female anopheles mosquito;
**antipyretic: reducing or tending to reduce fever)

***Uragoga ipecacuanha* (ipeka)**

Ipecacuanha, is derived from the **Tupi** word *i-pe-kaa-guéne*, which translates to "road-side sick-making plant".

Radix Ipecacuanhae (Ipeccuanhae radix) T.K. (ipeka kökü) also contains alkaloids; the main alkaloids are emetine and cephaelin. Emetine is expectorant in low doses and emetic* in high doses, additionally the specific remedy for amoebic dysentery.

(*emetetic: an agent that causes vomiting; ** amoebic dysentery: an acute disease caused by ingesting substances contaminated with the amoeba *Entamoeba histolytica* and characterized by severe diarrhea, nausea, and inflammation of the intestines)

Coffea arabica (Coffee, Kahve)

Seeds, *Semen Coffeae* contain *caffeine*, this alkaloid is stimulant, stimulates circulation, digestion and central nervous system; it is also diuretic.

Fam: Valerianaceae

***Valeriana officinalis* (Valerian, kediotu)**

Roots and rhizomes of the plant yield **Radix Valerianae (Valerianae radix)** (Kediotu kökü). Fresh drug contains **valepotriates**. Waited drug contains **isovalerianic acid**. In addition, it contains volatile oil and starch. This drug is a good sedative and antispasmodic, used in irritable sleeplessness and nervous deficiency. Volatile oil obtained from the roots **Oleum Valerianae (Valerianae aetheroleum)** (Kediotu esansı) is also used for the same purpose.

Fam: Cucurbitaceae

***Citrullus colocynthis* (Colocynth, Bitter apple, Bitter cucumber, Ebu Cehil karpuzu)**

Fruit is a big berry with soft or woody exocarp resembling a small watermelon. **Fructus Colocynthis** is the fruits with exocarps removed; is purgative, however irritating and dangerous in high amounts.

Ecballium elaterium

(Squirting cucumber, Exploding cucumber, Cirtatan, Acidülek)

Have thick roots that resemble mandragora roots (**Radix Mandragorae**) and is sold instead of this drug. Fruit juice is concentrated to yield **Elaterium**. This drug is a drastic purgative and also used in sinusitis* traditionally. However it is dangerous without dose adjustment since it is irritating and leads to edema**.

(*sinusitis: inflammation of the sinuses or a sinus, especially in the nasal region; **edema: an excessive accumulation of serous fluid in tissue spaces or a body cavity)

Momordica charantia (Bitter melon, Bitter gourd, Kudretnari)

Mature fruits are allowed to stand in olive oil and a pommade is prepared, this pommade is used in wound healing and also in skin disorders.

Order: Campanulales

Fam: Campanulaceae (Bellflower family)

***Lobelia inflata* (Indian tobacco)**

Herba Lobelia is the aerial parts collected during flowering period. Contains **lobeline** alkaloid, therefore is respiratory system stimulant and expectorant.

Fam: **Compositae** (Asteraceae) (Daisy family)

The richest family of Spermatophyta with approximately 1000 genera and 20000 species. Most of them are herbaceous.

Inflorescens is in the form of **capitulum**; an **involucrum** consisting of the bracts is found at the base.
Flowers are hermaphrodite, or male or female.

Fruit is an achene, sometimes a pappus or calyx remnant is present at the top.

Most of the members of the family contain Compositae type glandular hairs and trichomes.

Volatile oil, inulin and latex are frequently found in this family.

In addition, they contain sesquiterpen lactones, alkaloids (*Senecio*), esters (pyrethrins); saponosides, coumarins and flavonols.

This family is divided into two subfamilies.

Subfam: **Tubuliflorae** (Asteroideae, Tubiflorae)

All flowers or at least the ones at the centre are in the form of tubes. The remaining are ligulate. Most of the species that are used in pharmacy are found in this taxon.

***Matricaria chamomilla* (German chamomile, Mayıs papatyası)**

Flores Chamomillae T.K. (Adi papatya) consists of the capitulums, contains **volatile oil**. This oil is blue colored when distilled fresh, the color comes from **camazulene** that it contains.

The drug is **antispasmodic, stomachic, stimulant** and **heals wounds**, used in stomachaches, throat aches (in the form of gargle).



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Anthemis nobilis

(Roman chamomile, Alman papatyası, rumi papatya)

Capitulums: Flores Chamomillae romanae (Chamomillae romanae flos)

(Rumi papatya) contains volatile oil and used for the same purposes as Flores Chamomillae.

Tussilago farfara

(Coltsfoot, Öksürükotu)

Leaves come after flowers
wither, lower side is tomentosus,
off-white colored, upper side is
pale green colored.

**Folia Farfarae (Farfarae
folium)**

(Öksürükotu yaprağı) contains
mucilage, used alone or in
combination with other drugs as
antitussive and **emollient**.

***Artemisia absinthium* (Absinthium, Wormwood, Pelinotu)**

Stems with flowers and leaves yield

Herba Absinthii (Absinthii herba) (Pelinotu);

contains **bitter substance** and **volatile oil**, is

appetizer and **stomachic**.

However is a poisonous drug.

Also a spirit called absenth is prepared.

***Artemisia cina* (Levant
wormwood, Horasani)**

Grows in Turkmenia
(Horasan) and Asian
steppes. Flower buds yield
Flores Cinae or **Semen
Contra**. Contains **santonin**
and used against worms.

Arnica montana (Leopard's
bane, Mountain arnica)

Yellow colored capitulums
yield

**Flores Arnicae (Arnicae
flos) T.K. (Arnika çiçeği)**
poisonous; used externally for
rheumatoid pain and in wound
healing.

***Helichrysum* sp. (Ölmez çiçek, gudema otu, altınotu)**

Stem is grey colored, contains hairs.

Capitulum contains **flavonoid**, are **antispasmodic** and **diuretic**, used to pass **kidney** and **bladder stones**.

***Carthamus tinctorius* (Safflower, Yalancı safran, aspir, boyacı aspiri)**

Origin: Arabia

Flowers are orange colored, used as a dye and for the adulteration of crocus.

***Calendula officinalis* (Pot marigold, Nergis, susi)**

**Cholagogue and wound
healer.**

***Cynara scolymus* (Artichoke, Enginar)**

**Contains cynarin,
roots and leaves of
the plant are
cholagogue and
diuretic.**

***Silybum marianum* (= *Carduus marianus*)**
(Milk thistle, Meryemana dikenî, devedikenî)

Fructus Silybi mariani (Silybi mariani fructus)

(Fructus Cardui mariae) contains flavanolignan type compounds (1.5-3%). The compound mainly responsible for this effect is silymarin, this compound is a mixture of silibin, silicristin and siliadinin.

Used in intoxications of the liver (alcohol, drugs, mushrooms), in acute and chronic hepatitis, cirrhosis* and jaundice, to pass bile stones. Accelerates regeneration of the liver.

(*cirrhosis: A chronic disease of the liver characterized by the replacement of normal tissue with fibrous tissue and the loss of functional liver cells. It can result from alcohol abuse, nutritional deprivation, or infection especially by the hepatitis virus; ** jaundice: Yellowish discoloration of the whites of the eyes, skin, and mucous membranes caused by deposition of bile salts in these tissues. It occurs as a symptom of various diseases, such as hepatitis, that affect the processing of bile. Also called *icterus*)

Echinacea purpurea (Purple coneflower, Ekinezya)

Echinacea angustifolia (Narrow-leaved purple coneflower)

Echinacea pallida (Pale purple coneflower)

Contains **polysaccharides** (arabinorhamnogalactane) **alkamides** (echinasein) and **caffeic acid derivatives** (echinacoside), strongly immunostimulant due to polysaccharides and increases interferon production.

Used in common cold and flu as an antiviral and antibacterial, and also in urinary tract infections.

Grows in North America and Canada.

Mostly roots

Radix Echinaceae (Echinaceae pallidae radix) and sometimes aerial parts collected during flowering period

Herba Echinaceae purpureae (Echinaceae purpureae herba) are used.

Inula helenium (Elecampane, Horseheal, Andız)

Roots **Radix Inulae** or **Radix Helenii (Helenii rhizome)** are among the richest drugs in respect to **inuline** (45%).

Inuline is a polyholoside found in the plants of Compositae family. It consists of 30 fructofuranose molecules and are stored in the underground parts.

Subfam: Liguliflorae (Cichorioideae)

In this subfamily, all members of the flowers forming the capitulum are ligulate. Contains latex channels, however volatile oil is seldomly found.

Cichorium intybus
(Common chicory, Beyaz Hindiba)

***Taraxacum officinale* (Dandelion, Karahindiba)**