

LICHENS

Lichens are composite organisms consisting of a symbiotic association of a fungus (the mycobiont) with a photosynthetic algae

They look like a moss; do not have roots, stems and leaves.

The function of algae in this symbiotic organism is making photosynthesis and provide carbohydrate that the organism needs; the fungus on the other hand provides the necessary amount of water and mineral elements.

Lichens contain approximately 150 lichen acids which are the metabolites of secondary substances; e.g. Usnic acid, evernic acid and vulpinic acid are the most important ones among them.

They usually taste bitter and therefore used as appetizers and display antibiotic activity, as well.

They can be grouped as follows according to their habitats:

- 1. Lichens living on the trunk, branches or leaves of living trees (*Usnea*, *Cladonia*).**
- 2. Lichene living on logs, fences and similar places (*Cladonia*).**
- 3. Lichenes that live on the soil (*Cladonia*).**
- 4. Lichens living on calcerous, siliceous rocks (*Parmelia isidiotyla*, *P. consparsa*, *Rhizocarpon geographicum*).**

Lichens can be grouped according to their shapes owing to their thalli having different forms:

1. Shrubby Lichens

a) Branch like lichens

b- Filiform lichens:

2- Leafy lichens: *Cetraria, Parmelia, Sticta, Petigera, Xanthoria, Lobaria*

3- Testaceous lichens

SIGNATURA PLANTARUM

Doctrine of Signatures

Benefitting from the plant in the treatment of the diseases of the organs that they resemble.

***Usnea barbata* was used to grow hair;**

***Lobaria pulmonaria* was used in pulmonary diseases.**

***Xanthoria parietina*, a lichen having yellow thallus was used in jaundice.**

Cetraria islandica **(Iceland moss)**

Dried thalli are known as
Lichen Islandicus

**Usage: Expectorant and
appetizer**

Lichen Islandicus

***Lobaria pulmonaria* (Tree Lungwort, Ciğer Likeni)**

Thalli are known as **Lichen Pulmonariae** (ciğer likeni)

Laxative, Antibiotic

Lichen Pulmonariae

***Cladonia pyxidata* (Cup Lichen, Kadeh likeni)**

Thalli are known as
Lichen Pyxidata
Expectorant, antibiotic

Lichen Pyxidata

***Usnea barbata, U. florida* (Beard Moss)**

Rich in **usnic acid.**

Strong antibacterial.

Used in tuberculosis.

Evernia prunastri (Oakmoss)

Lichen Quercinus

Lives on Quercus sp.

Thalli are known as Lichen

Quercinus

Rich in Usnic acid, Evernic acid

Astringent, antidiaretic,

foodstuff.

Lecanora esculenta (Manna lichen, manna likeni, yürüyen liken)

Drug: Gives -Manna celesta (Kudret helvası)

Rich in Mannitol, lichenin, lecanoric acid, lecanorin A

Tonic, Mild laxative

Cladonia rangiferina (Reindeer lichen, Ren geyiği likeni)

Contains **lichenin** and consumed as food by reindeer.

Rocella tinctoria, R. fusiformis

Litmus paper is obtained from this species.

Rhizocarpon geographicum
(Map lichen, Harita likeni)

Parmelia furfuracea

Division: BRYOPHYTA (Bryophytes)

No medical importance