

# Lichens

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**Species:** varies

**Genus:** varies

**Family:** varies

**Order:** varies

**Class:** Dicotyledonae

**Phylum:** Ascomycota, can vary

**Kingdom:** Fungi

## Conditions for Customer Ownership

We are a USDA compliant facility and hold all necessary permits to transport our organisms. Each state is assisted by the USDA to determine which organisms can be transported across state lines. Some organisms may require end-user permits. Please contact your local regulatory authorities with questions or concerns. To access permit conditions, [click here](#).

**Never purchase living specimens without having a disposition strategy in place.** Live specimens should not be released into the wild! Please dispose of any unwanted organisms using the guidelines below.

## Primary Hazard Considerations

In order to protect our environment, never release a live laboratory organism into the wild.

## Availability

- Lichens are field-collected and are generally available year-round, though shortages can occur.

## Information

- Your sample will be shipped in a 4 oz. plastic jar. The foliose and crustose lichens are any of a wide variety of species; the fruticose lichen is either *Cladonia* or reindeer moss.
- Open the jar upon receipt. The lichen can be kept in a terrarium or in the shipping container

## Captive Care

### Habitat:

- A woodland terrarium (470223-622) is a suitable habitat for lichens. A 3–5-gallon terrarium with a substrate of peat moss (470006-560) is preferred for a woodland terrarium. The terrarium should be kept damp, but not wet. Avoid strong sunlight, but allow indirect light. Maintain at room temperature, 18–22 °C (68–72 °F). The leaves are transparent, allowing light to enter the body and activating cells to assist with the process of photosynthesis.

### Care:

- Clean out any moldy substrate as soon as you notice it.

## Information

- **Method of reproduction:** Asexual or fungal. The lichen reproduces fungally by developing fruiting bodies and producing spores. These spores can produce another fungus, but the alga does not get the opportunity to reproduce at all. Either the new fungus has to find an algal partner or it perishes. The lichen reproduces asexually by producing soredia, a fragment containing both the alga and fungus.
- Lichens are dual in nature, composed of a fungi and an alga growing together to form a single body. The fungal component is often a species of *Ascomycetes*, although a few of the *Basidiomycetes* will grow in association with several genera of green algae (such as *Protococcus*, *Cryptococcus* or *Trebouxia*), or blue-green algae (such as *Gloeocapsa*, *Nostoc* or *Stigonema*).

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## Life Cycle

- The life cycle of lichen begins when a mycobiont (fungal part) combines with a phycobiont (algal part).
- The fungal filaments enclose and grow into the algal cells and provide the lichen with the majority of its physical structure and shape.
- The apothecium, a fungal reproduction structure, produces spores.

## Wild Habitat

- Lichens survive in a wide variety of areas such as the surface of exposed rocks, sun-burned areas, and the sides of trees, old logs and on the ground in wooded areas. Lichens are found in the Arctic tundra and Antarctic as well as tropical areas.
- Lichens grow in three forms: foliose or leaf-like, fruticose or erect and branched, or crustose which grows as a thin crust, inseparable from its substrate.

## Special Notes

- Lichens are instrumental in soil production in the Arctic and Antarctica where the climate is harsh. The lichen's secretions etch the rock which can then be broken down by physical agents. The organic remains from lichen vegetation are then incorporated among the broken rock particles.
- Because they exhibit slow growth, there is little commercial value in lichens, although litmus solution is made from *Rocella tinctoria*. Paper is soaked in the neutralized solution to make litmus paper.

## Disposition

We do not recommend releasing any laboratory specimen into the wild, and especially not specimens that are not native to the environment. When finished with your lichen, please dispose of it by incineration in a well-ventilated area.