

MICA-minerals.

Micas are distinguished by a perfect basal cleavage, which causes them to split into thin elastic plates, and by their splendid, pearly, somewhat metallic lustre. They all crystallise in the monoclinic system, but the forms approximate to those of the hexagonal system, and possess the Si_4O_{10} sheet structure.

In composition the micas are silicates of aluminium and potassium, together with magnesium and iron in the dark varieties, such as biotite. Some varieties contain sodium, lithium, or titanium. Hydroxyl is always present, and is commonly replaced in part by fluorine.

Cleavage plates of micas give a bi-axial interference figure in convergent polarised light, and by the orientation of this figure, micas may be divided into two groups.

Trace of the optic axial plane is perpendicular to the plane of symmetry.

(a) The Muscovites

Muscovite, ——— potassium mica, white mica.

Paragonite, ——— sodium mica.

Lepidolite, ——— lithium potassium mica.

Trace of the optic axial plane lies in the plane of symmetry

(b) The “Biotites”

Biotite, ——— iron magnesium mica, black mica.

Phlogopite, ——— magnesium mica.

Zinnwaldite, — lithium biotite.