

## 37030 Kamala

C.I. Natural Orange 2

Kamala is a reddish brown powder. It is the glandular and tufted hairs of the fruits of the monkey face tree *Mallotus philippinensis* (formerly *Rottlera tinctoria*). The monkey face tree belongs to the spurge family (Euphorbiaceae) and, as the Latin name suggests, is native to the Phillipines. The tree is also widespread in Arabia, in Pakistan, from the Near East to southeastern China, as well as in New Guinea and northern Australia.

To extract kamala, the fruits are harvested and shaken in baskets until all the hairs have broken off the fruit and fallen through the basket walls onto blankets or cloths spread out below. Kamala is odorless and tasteless. Is hardly attacked by water, gives a red resin to alcohol, ether and potassium hydroxide, contains traces of essential oil, citric and oxalic acid, but essentially resins (camalarotene) and rottlerin C<sub>22</sub>H<sub>20</sub>O<sub>0</sub>. 1)

The fruits yield about 11% of their weight in kamala. Hairs are also found on the undersides of the leaves, but these are not used for dye extraction. The flowers, on the other hand, can be used to produce yellow dyeing extracts (C.I. Natural Yellow 25).

Kamala contains rottlerin, isorottlerin, homorottlerin, and resin. Rottlerins are chemically classified in the group of chalcones. The powder is very difficult to dissolve in water, even in boiling water it hardly dissolves. With ether or benzene, the dye rottlerin can be extracted from the color powder.

In the East Indies and South China, kamala was used to dye silk. Without pre-mordanting, the dye gives a beautiful and durable fiery orange. Cotton can be dyed brown-black with iron mordant, pale orange with alumina. An orange shade can also be dyed on unpickled wool. Aluminum-treated wool takes on a slightly darker orange.

For dyeing only; never for internal use or consumption!

1) FIG. Medicinal Plants III, ab. 10