**Woad**

*Isatis tinctoria*  Brassicaceae

**Botanical description:** A biennial plant that forms a rosette in the first year and produces flowering heads with yellow flowers in the second year that may reach up to 2 metres. The leaves are a bluish green and are lanceolate. The fruits turn black as the ripen.

**Part used:** Leaves for dye. Dried roots as a tea. Seed to produce an expressed oil for external use.

**Habitat, cultivation and harvesting:** Ntive to Asia but long cultivated throughout Europe as a dye plant. Grown from seed sown in the spring. It is generally thought that the plant should not be cultivated in the same ground for more that 2 years in a row. Regarded as a noxious weed in some states of the US. Seeds may need soaking before sowing since they contain a germination inhibitor which is naturally washed out by rainfall. Leaves are harvested when full grown and several harvests ( up to 4 ) can be made during the growing season- the first two are considered to be the most effective.

**History/folklore/taste/energetics:**  Although previously widely cultivated as a dye plant it was replaced by indigo and then by synthetic dyes. It is traditionally held that the Celts would paint themselves with the dye before going into battle painted blue and naked;; this may be inaccurate as Julius Caesar or Pliny did talk of the Britanni going into battle painted with a blue substance called vitrum but this may have been made from copper or iron. Woad was a major part of the European dyeing industry along with weld (used to produce a yellow dye) and madder (used to produce a red dye). It was considered too strong to use internally as a medicine but was applied in poultices, especially over the spleen. It is extremely bitter and astringent.

**Constituents:**  A glucosilinate –glucobrassicin.

**Actions:** Antitumorgenic, immunomodulant, febrifuge, anti-inflammatory, antiviral..

**Traditional and current uses:**

 In China the roots are dried and used as a tea. Over use can cause dizziness, and allergic reactions. Lon term use can irritate the kidneys.

The leaves are considered to need soaking before ingestion.

The roots have become popular as a medicine used to treat the immune system. There is some controversy about its efficacy and also about its toxicity.