

## Cod Liver Oil

肝油

Cod Liver Oil is the fatty oils obtained from fresh livers and pyloric appendages of *Gadus macrocephalus* Tilesius or *Theragra chalcogramma* Pallas (*Gadidae*).

Cod Liver Oil contains not less than 2000 Vitamin A Units and not more than 5000 Vitamin A Units per g.

**Description** Cod Liver Oil is a yellow to orange oily liquid. It has a characteristic, slightly fishy odor and a mild taste.

It is miscible with chloroform, with diethyl ether and with petroleum ether.

It is slightly soluble in ethanol (95).

Its decomposition is accelerated by air or by light.

**Identification** Dissolve 0.1 g of Cod Liver Oil in 10 mL of chloroform, and to 1 mL of this solution add 3 mL of antimony (III) chloride TS: a blue color develops immediately, but the color fades rapidly.

**Specific gravity**  $d_{20}^{20}$ : 0.918 – 0.928

**Acid value** Not more than 1.7.

**Saponification value** 180 – 192

**Unsaponifiable matter** Not more than 3.0%.

**Iodine value** 130 – 170

**Purity** Rancidity—No unpleasant odor of rancid oil is perceptible on warming Cod Liver Oil.

**Assay** Proceed with about 0.5 g of Cod Liver Oil, accurately weighed, as directed in Method 2 under the Vitamin A Determination, and perform the test.

**Containers and storage** Containers—Tight containers.

Storage—Light-resistant, and almost well-filled, or under nitrogen atmosphere.

## Coix Seed

*Coicis Semen*

ヨクイニン

Coix Seed is the seed of *Coix lachryma-jobi* Linné var. *ma-yuen* Stapf (*Gramineae*), from which the seed coat has been removed.

**Description** Ovoid or broad ovoid seed, about 6 mm in length, and about 5 mm in width; with a slightly hollowed apex and base; dorsal side distended; ventral side longitudinally and deeply furrowed in the center; dorsal side mostly white in color and powdery; in the furrow on the ventral surface, attached brown, membranous pericarp and seed coat. Under a magnifying glass, the cross section reveals light yellow scutellum in the hollow of the ventral side. Hard in texture; odor, slight; taste, slightly sweet; adheres to the teeth on chewing.

**Identification** To a cross-section of Coix Seed add iodine

TS dropwise: a dark red-brown color develops in the endosperm, and a dark gray color develops in the scutellum.

**Loss on drying** Not more than 14.0% (6 hours).

**Total ash** Not more than 3.0%.

## Powdered Coix Seed

*Coicis Semen Pulveratum*

ヨクイニン末

Powdered Coix Seed is the powder of Coix Seed.

**Description** Powdered Coix Seed occurs as a brownish, grayish white to grayish yellow-white powder, and has a slight odor and a slightly sweet taste.

Under a microscope, Powdered Coix Seed reveals starch grains, and fragments of endosperm containing them; fragments of tissue accompanied with epidermal cells of pericarp composed of yellowish and oblong cells, and fragments of parenchyma cells containing fixed oil, aleuron grains and starch grains; a very few fragments of spiral vessels. Starch grains are simple and 2-compound grains, simple grain nearly equidiameter to obtuse polygon, 10 – 20  $\mu\text{m}$  in diameter, and have a stellate cleft-like hilum in the center. Spherical starch grains, coexisting with aleuron grains, are spherical simple grains, 3 – 7  $\mu\text{m}$  in diameter.

**Identification** Place a small amount of Powdered Coix Seed on a slide glass, add dropwise iodine TS, and examine under a microscope: nearly equidiameter and obtuse polygonal simple starch grains, usually 10 – 15  $\mu\text{m}$  in diameter, and compound starch grains have a reddish brown color. Small spheroidal starch grains, coexisting with fixed oil and with aleuron grains in parenchymatous cells, have a blue-purple color.

**Purity** Foreign matter—Under a microscope, Powdered Coix Seed reveals no fragments of tissue having silicified cell wall, no stone cells, no fragments of other thick-walled and lignified cells, no fragments of reticulate, scalariform and pitted vessels, no fragments of fibers and hairs, and no large starch grains, more than 10  $\mu\text{m}$  in diameter, appearing blue-purple upon addition of iodine TS.

**Loss on drying** Not more than 14.0% (6 hours).

**Total ash** Not more than 3.0%.

**Containers and storage** Containers—Tight containers.

## Condurango

*Condurango Cortex*

コンズランゴ

Condurango is the bark of the trunk of *Marsdenia cundurango* Reichenbach fil. (*Asclepiadaceae*).

**Description** Tubular or semi-tubular pieces of bark, 0.1 –