Column temperature: A constant temperature of about 40°C.

Mobile phase: Dissolve 3.4 g of potassium dihydrogenphosphate and 1.7 g of sodium lauryl sulfate in 1000 mL of a mixture of water and acetonitrile (1:1).

Flow rate: Adjust the flow rate so that the retention time of berberine is about 10 minutes.

Selection of column: Dissolve 0.001 g each of Berberine Chloride Reference Standard and palmatine chloride in 10 mL of methanol. Proceed with 20 mL of this solution under the above operating conditions. Use a column giving elution of palmatine and berberine in this order, and clearly dividing each peak.

System repeatability: When the test is repeated five times with the standard solution under the above operating conditions, the relative deviation of the peak area of berberine is not more than 1.5%.

Corn Oil

Oleum Maydis

トウモロコシ油

Corn Oil is the fixed oil obtained from the embryo of *Zea mays* Linné (*Gramineae*).

Description Corn Oil is a clear, light yellow oil. It is odorless or has a slight odor, and a mild taste.

It is miscible with diethyl ether and with petroleum ether.

It is slightly soluble in ethanol (95), and practically insoluble in water.

At −7°C, it congeals to an unguentary mass.

Specific gravity d_{25}^{25}: 0.915 - 0.921

Acid value Not more than 0.2.

Saponification value 187 - 195

Unsaponifiable matter Not more than 1.5%.

Iodine value 103 - 130

Containers and storage Containers—Tight containers.

Corn Starch

Amylum Maydis

トウモロコシデンプン

Corn Starch consists of starch granules derived from the seeds of *Zea mays* Linné (*Gramineae*).

Description Corn Starch occurs as white to pale yellowish white masses or powder, and is odorless and tasteless.

Under a microscope, Corn Starch appears as spheroidal or polygonal, simple grains of irregular sizes with diameter ranging from 3 to 35 μm, mostly 9 to 18 μm. Hilum is central, often in the shape of a radial cleft; and striation is indistinct.

It is practically insoluble in water and in ethanol (95).

Identification (1) To 1 g of Corn Starch add 50 mL of water, boil, and allow to cool: a turbid, neutral and pasty liquid is formed.

(2) To a portion of Corn Starch add iodine TS: a dark blue-purple color is produced.

Purity Foreign matter—Under a microscope, Corn Starch does not contain starch grains of any other origin. It may contain a minute quantity, if any, of fragments of the tissue of the original plant.

Loss on drying Not more than 15.0% (6 hours).

Total ash Not more than 0.5%.

Cornus Fruit

Corni Fructus

サンシュユ

Cornus Fruit is the sarcocarp of the pseudocarp of *Cornus officinalis* Siebold et Zuccarini (*Cornaceae*).

Description Flattened oblong, 1.5 - 2 cm in length, about 1 cm in width; externally dark red-purple to dark purple, lustrous, and with coarse wrinkles; a crack-like scar formed by removal of true fruit; a scar of calyx at one end, and a scar of peduncle at the other; soft in texture. Odor, slight; taste, acid and slightly sweet.

Identification To 1.0 g of coarse cuttings of Cornus Fruit add 10 mL of ethanol (95), shake for 5 minutes, filter, and use the filtrate as the sample solution. Separately, dissolve 1 mg of loganin for thin-layer chromatography in 2 mL of ethanol (95), and use this solution as the standard solution. Perform the test with these solutions as directed under the Thin-layer Chromatography. Spot 10 μL each of the sample solution and the standard solution on a plate of silica gel for thin-layer chromatography. Develop with a mixture of ethyl acetate, water and formic acid (6:1:1) to a distance of about 10 cm, and air-dry the plate. Spray evenly 4-methoxybenzaldehyde-sulfuric acid TS on the plate, and heat at 90°C for 3 minutes: one of the spots from the sample solution is the same with a red-purple spot from the standard solution in color tone and *R*f value.

Purity Foreign matter—The amount of its peduncles and other foreign matter contained in Cornus Fruit does no exceed 2.0%.

Total ash Not more than 5.0%.

Extract content Dilute ethanol-soluble extract: not less than 35.0%.