

Compound Rhubarb and Senna Powder

複方ダイオウ・センナ散

Method of preparation

Powdered Senna Leaves	110 g
Powdered Rhubarb	110 g
Sulfur	555 g
Magnesium Oxide	225 g
To make	1000 g

Prepare as directed under Powders, with the above ingredients.

Description Compound Rhubarb and Senna Powder occurs as a yellow-brown powder, having a characteristic odor and a bitter taste.

Identification To 2 g of Compound Rhubarb and Senna Powder add 50 mL of water, warm on a water bath for 30 minutes, and filter. Add 2 drops of dilute hydrochloric acid to the filtrate, shake with two 20-mL portions of diethyl ether, and remove the diethyl ether layer. Add 5 mL of hydrochloric acid to the aqueous layer, and heat it on a water bath for 30 minutes. Cool, shake with 20 mL of diethyl ether, take the diethyl ether layer, add 10 mL of sodium hydrogen carbonate TS, and shake: the aqueous layer is red in color.

Containers and storage Containers—Well-closed containers.

Rice Starch

Amylum Oryzae

コメデンプン

Rice Starch consists of the starch granules obtained from the seeds of *Oryza sativa* Linné (*Gramineae*).

Description Rice Starch occurs as white masses or powder. It is odorless and tasteless.

Under a microscope, Rice Starch appears as polyhedral, simple grains 3 – 10 μm , mostly 4 – 6 μm , in size. These simple grains often gather in ellipsoidal, compound grains 50 – 100 μm in diameter. Hilum and striation are not observable.

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

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

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

Purity Foreign matter—Under a microscope, Rice 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 1.0%.

Ringer's Solution

リンゲル液

Ringer's Solution is an aqueous solution for injection. It contains not less than 0.53 w/v% and not more than 0.58 w/v% of chlorine [as (Cl: 35.45)], and not less than 0.030 w/v% and not more than 0.036 w/v% of calcium chloride ($\text{CaCl}_2 \cdot 2\text{H}_2\text{O}$: 147.01).

Method of preparation

Sodium Chloride	8.6 g
Potassium Chloride	0.3 g
Calcium Chloride	0.33 g
Water for Injection	a sufficient quantity
To make	1000 mL

Prepare as directed under Injections, with the above ingredients.

No preservative may be added.

Description Ringer's Solution is a clear and colorless liquid. It has a slightly saline taste.

Identification (1) Evaporate 10 mL of Ringer's Solution to 5 mL: the solution responds to the Qualitative Tests for potassium salt and calcium salt.

(2) Ringer's Solution responds to the Qualitative Tests for sodium salt and chloride.

pH 5.0 – 7.5

Purity (1) Heavy metals—Evaporate 100 mL of Ringer's Solution to about 40 mL on a water bath. Add 2 mL of dilute acetic acid and water to make 50 mL, and perform the test using this solution as the test solution. Control solution: to 3.0 mL of Standard Lead Solution add 2 mL of dilute acetic acid and water to make 50 mL (not more than 0.3 ppm).

(2) Arsenic—Perform the test with 20 mL of Ringer's Solution as the test solution using Apparatus B (not more than 0.1 ppm).

Bacterial endotoxins Less than 0.50 EU/mL.

Assay (1) Chlorine—To 20 mL of Ringer's Solution, accurately measured, add 30 mL of water. Titrate with 0.1 mol/L silver nitrate VS while shaking vigorously (indicator: 3 drops of sodium fluorescein TS).

Each mL of 0.1 mol/L silver nitrate VS
= 3.5453 mg of Cl

(2) Calcium chloride—To 50 mL of Ringer's Solution, exactly measured, add 2 mL of 8 mol/L potassium hydroxide TS and 0.05 g of NN indicator, and titrate immediately with 0.01 mol/L disodium dihydrogen ethylenediamine tetraacetate VS, until the color of the solution changes from red-purple to blue.

Each mL of 0.01 mol/L disodium dihydrogen
ethylenediamine tetraacetate VS
= 1.4701 mg of $\text{CaCl}_2 \cdot 2\text{H}_2\text{O}$