REPORT OF THE COMMITTEE ON UNOFFICIAL STANDARDS.

PLANTAGINIS SEMEN.

Plantago Seed.

Psyllium Seed—Plantain Seed.

The cleaned, dried, ripe seed of *Plantago Psyllium* Linné, known in commerce as French Psyllium Seed, or of *Plantago ovata* Forsk., known in commerce as Blonde Psyllium or Indian Plantago Seed (Fam. *Plantaginaceæ*).

It contains not more than 0.5 per cent of foreign matter, none of which is injurious, and all of its natural mucilage. It yields not more than 4 per cent of total ash and not more than 0.8 per cent of acid-insoluble ash.

Description and physical properties.—*Plantago Psyllium Seed.* Elliptical to ovoid, dark brown to reddish brown, shining, from 2 to 3 mm. in length and from 1 to 1.2 mm. in breadth, concavo-convex, with a longitudinal light brown area extending lengthwise along the center of the upper surface and a deep concavity on the lower surface in the center of the base of which is an oval, white hilum; when soaked in water the seed coat swells and the seeds become enveloped with a transparent mucilage free from taste and odor.

One part of seed occasionally agitated with 8 parts of water forms a thick tasteless mucilage.

Plantago ovata Seed. Broadly elliptical or ovate, boatshaped, pale grayish brown with a pinkish tinge, and with a dull surface, from 2 to 3 mm. in length and from 1 to 1.5 mm. in width; on the convex surface there is a small, elongated, shining, brown spot; on the concave surface is a deep excavation at the base of which is the hilum, covered with a thin whitish membrane; when soaked in water the seed coat swells and the seeds become enveloped with a transparent, colorless mucilage free from taste and odor.

One part of seed occasionally agitated with 15 parts of water forms a thick tasteless mucilage.

Structure.—Transverse sections cut through the center of the seed have a reniform outline and show a seed coat composed of a colorless epidermis of mucilaginous cells with more or less obliterated walls, a hyaline layer (in groove) and a brown pigment layer beneath which is a broad endosperm of thick-walled cells in the center of which is an embryo. Both endosperm and embryo possess aleurone grains of rounded, oval, pyriform or irregular shape from 2 to 8 microns in diameter and fixed oil droplets.

POTASSII THIOCYANAS.

Potassium Thiocyanate.

Pot. Thiocyan. Potassium Sulphocyanate, Potassium Rhodanate

Potassium Thiocyanate, when dried to constant weight at 110° C., contains not less than 99 per cent of KCNS. It contains not more than 3 per cent of water.

Description and physical properties.—Colorless, transparent, adherent, prismatic crystals. It is odorless and has a cooling, saline taste.

One Gm. of Potassium Thiocyanate is soluble in 0.5 cc. of water and in 12 cc. of alcohol at 25° C. One Gm. is soluble in 0.2 cc. of boiling water and in 8 cc. of boiling alcohol.

Tests for identity: The salt fuses at about 170° C. and at a higher temperature decomposes, finally leaving a white residue, which imparts a violet color to a non-luminous flame and is alkaline to litmus paper.

An aqueous solution of the salt (1 in 10) responds to the reactions for potassium and for thiocyanates, U. S. P. X, page 444.

Tests for purity: Dissolve 1 Gm. of the salt in 10 cc. of boiling alcohol: the solution is clear and free from undissolved residue.

Dissolve 1 Gm. of the salt in 100 cc. of distilled water, add 15 cc. of nitric acid and heat on a steam-bath for one hour: not more than 0.005 Gm. of precipitate is produced upon the addition of 1 cc. of silver nitrate T.S. (chloride).

An aqueous solution of the salt (1 in 10) meets the requirements of the test for heavy metals, U. S. P. X, page 439, and of the test for arsenic, page 428.

A 2-Gm. portion of the salt shows no more sulphate than corresponds to 0.5 cc. of fiftieth-normal sulphuric acid, U. S. P. X, page 462.

On heating the salt with a slight excess of sodium hydroxide T.S., ammonia is not evolved (ammonium salts).

Dissolve 1 Gm. of the salt in 10 cc. of distilled water, add 1 cc. of sodium hydroxide T.S., five drops of ferrous sulphate T.S. and one drop of ferric chloride T.S. Warm gently for one minute, acidify with diluted sulphuric acid, filter through white paper and wash well with distilled water: no green or blue color appears on the paper (cyanides).

Assay.—Dry about 0.2 Gm. of Potassium Thiocyanate to constant weight at 110° C. and weigh accurately. Dissolve in 100 cc. of distilled water and add 50 cc. of tenth-normal silver nitrate. Add 2 cc. of ferric ammonium sulphate T.S., and 2 cc. of nitric acid and titrate with tenth-normal Potassium Thiocyanate. Each cc. of tenth-normal silver nitrate corresponds to 0.009717 Gm. of KCNS.

Preserve in tightly stoppered glass containers free from iron. The salt must not be exposed to contamination with even traces of iron, which might occur in dust.

AVERAGE DOSE: Metric 0.3 Gm.—Apothecaries, 5 grains.

ACIDUM MALICUM.

Acid. Malic. Malic Acid

Malic Acid contains not less than 99.0 per cent of $C_2H_3(OH)(COOH)_2$.

Description and physical properties.—A white or nearly white, crystalline powder, which is stable in dry air. It is odorless and possesses a distinct acid taste.

One Gm. of Malic Acid dissolves in approximately 0.7 cc. of water at 25° C. It is freely soluble in alcohol and ether.

Tests for identity: An aqueous solution of Malic Acid 1 in 20 is strongly acid to litmus paper.

A concentrated aqueous solution of Malic Acid after neutralization yields with several volumes of calcium chloride T.S. a white precipitate upon boiling. The precipitate is soluble in diluted hydrochloric acid.

When boiled with potassium dichromate and diluted sulphuric acid, Malic Acid evolves the odor of acetaldehyde.

Tests for purity: Upon ignition a 2-Gm. portion of Malic Acid yields not more than 0.3 per cent ash.

Ten cc. of an aqueous solution of Malic Acid 1 in 50 mixed with 0.5 cc. of hydrochloric acid meet the requirements of the test for heavy metals. (U. S. P. X, page 439.)

Ten Gm. of Malic Acid dissolved in 10 cc. of distilled water and set aside at room temperature for 3 days deposit no crystals (fumaric acid).

An aqueous solution of Malic Acid meets the requirements of the U. S. P. test for arsenic, page 428.

Assay.—Weigh accurately about 1 Gm. of Malic Acid and dissolve in about 30 cc. of recently boiled distilled water. Titrate the solution with half-normal sodium hydroxide using phenolphthalein T.S. as an indicator. Each cc. of half-normal sodium hydroxide corresponds to 0.0335 Gm. of $C_2H_3(OH)(COOH)_2$.

A speaker recently embodied the following in his remarks: "Unwisdom landed all the world into a bog of futility. My conception of the wisdom of life is simple—work with a will and with honesty, hope with a persistence that will paint the rainbow on the scene of 1933 even while you gaze on the foreground of it, and will give you the fortitude and the courage to go on and bear your burden yet awhile, for soon the better day approaches."