

ANEMARRHENA



This product is the dried tuber of *Alisma orientate* (Sam.) Juzep. or *Alisma plantago-aquatica* Linn. of the Alismataceae family. It is dug up in winter when the stems and leaves begin to wither, washed, dried, and the fibrous roots and rough bark are removed.

【 PROPERTIES 】

This product is long and slightly curved, slightly flat, occasionally branched, 3 to 15 cm long, 0.8 to 1.5 cm in diameter, with light yellow stem and leaf remnants at one end. The surface is yellow-brown to brown, with a groove on the top and closely arranged ring nodes. The nodes are densely covered with yellow-brown residual leaf bases, growing from both sides to the top of the rhizome; the bottom is raised and slightly wrinkled, with sunken or protruding dot-shaped root marks. It is hard, easy to break, and the cross section is yellow-white. It has a slight odor, tastes slightly sweet and slightly bitter, and is sticky when chewed.

【 IDENTIFICATION 】

(1) The powder of this product is yellow-white. The mucous cells are round, oval or fusiform, with a diameter of 53 to 247 μm , and the cell cavity contains bundles of calcium oxalate needle crystals. The calcium oxalate needle crystals are bundled or scattered, 26 to 110 μm long.

(2) Take 0.5g of the powder of this product, add 10ml of dilute ethanol, and ultrasonically treat for 20 minutes. Take the supernatant as the test solution. Take the mango smoothie reference substance, add dilute ethanol to make a solution containing 0.5mg per 1ml, as the reference solution. According to the thin layer chromatography method (General Rule 0502), take 4 μl of each of the above two solutions and spot them on the same polyamide film. Use ethanol-water (1:1) as the developing agent, develop, take out, dry, and examine under ultraviolet light (365nm). In the chromatogram of the test product, at the corresponding position of the chromatogram of the reference substance, a fluorescent spot of the same color appears.

(3) Take 0.2g of the powder of this product, add 10ml of 30% acetone, and ultrasonically treat for 20 minutes. Take the supernatant as the test solution. Take the Anemarrhena saponin BII reference substance, add 30% acetone to make a solution containing 1mg per 1ml, as the reference solution. According to the thin layer chromatography method (General Rule 0502), 40 of each of the above two solutions were taken and spotted on the same silica gel G thin layer plate, and the upper layer solution of n-butanol-glacial acetic acid-water (4:1:5) was used as the developing agent. After development, the plate was taken out, dried, sprayed with vanillin sulfuric acid test solution, and heated at 105°C until the spots were clearly colored. In the chromatogram of the test sample, spots of the same color appeared at the corresponding positions of the chromatogram of the reference sample.

【 INSPECTION 】

The water content shall not exceed 12.0% (General Rule 0832 Method 2).

Total ash shall not exceed 9.0% (General Rule 2302).

Acid insoluble ash shall not exceed 4.0% (General Rule 2302).

【 CONTENT DETERMINATION 】

Determined by mango back-illuminated high performance liquid chromatography (General Rule 0512).

Chromatographic conditions and system suitability test: Octadecylsilane bonded silica gel is used as filler; acetonitrile-0.2% glacial acetic acid aqueous solution (15:85) is used as mobile phase; detection wavelength is 258 nm. The number of theoretical plates calculated based on the mango smoothie peak should not be less than 6000. Preparation of reference solution: Take an appropriate amount of mango smoothie reference, accurately weigh it, add dilute ethanol to make a solution containing 50% of mango smoothie per 1 ml, and obtain it.

Preparation of test solution: Take about 0.1 g of the powder of this product (passed through a No. 3 sieve), accurately weigh it, put it in a stoppered conical bottle, accurately add 25 ml of dilute ethanol, weigh it, ultrasonically treat it (power 400W, frequency 40kHz) for 30 minutes, let it cool, weigh it again, make up the lost weight with dilute ethanol, shake it well, filter it, and take the filtrate to obtain it.

Determination method: Accurately aspirate 100 ml of reference solution and test solution respectively, inject them into the liquid chromatograph, and determine them to obtain it. This product, calculated on a dry basis, contains no less than 0.70% mango.

Anemarrhena asphodeloides BH is determined according to high performance liquid chromatography (General Rule 0512).

Chromatographic conditions and system suitability test Octylsilane bonded silica gel is used as filler; acetonitrile-water (25:75) is used as mobile phase; evaporative light scattering detector is used for detection. The theoretical plate number calculated based on the Anemarrhena asphodeloides EU peak should not be less than 10000. Preparation of reference solution Take an appropriate amount of Anemarrhena asphodeloides reference substance, accurately weigh it, and add 30% acetone to make a solution containing 0.50mg per 1ml.

Preparation of test solution Take about 0.15g of the powder (passed through No. 3 sieve), weigh accurately, place in a stoppered conical bottle, accurately add 30% acetone 25ml, weigh, ultrasonically treat (power 400W, frequency 40kHz) for 30 minutes, take out, cool, weigh again, make up the lost weight with 30% acetone, shake well. Filter, take the filtrate, and get it. Determination method Accurately take 50 and 100 of the reference solution and 5~100 of the test solution, inject into the liquid chromatograph, determine, and calculate with the external standard two-point method logarithmic equation, and get it.

This product, calculated on the basis of dry product, contains not less than 3.0% of Anemarrhena saponin Bn (C₄₅H₇₆O₁₉).

Decoction pieces

【 PROCESSING 】

Remove impurities from Anemarrhena, wash, moisten thoroughly, cut into thick slices, dry, and remove hair.

【 PROPERTIES 】

This product is an irregular round thick slice. The outer skin is yellow-brown or brown, with a small amount of yellow-brown leaf base fibers and sunken or protruding dot-shaped root marks. The cut surface is yellow-white to yellow. It has a slight smell, tastes slightly sweet and slightly bitter, and is sticky when chewed.

【 INSPECTION 】

The content of insoluble ash in liquor is the same as that of medicinal materials, not more than 2.0%.

【 CONTENT DETERMINATION 】

The content of mangoside (C₁₉H₁₈O₁₁) in the same medicinal materials shall not be less than 0.50%, and the content of Zhimu saponin BII (C₄₅H₇₆O₁₉) shall not be less than 3.0%.

【 IDENTIFICATION 】 【 INSPECTION 】 (WATER CONTENT AND TOTAL ASH)

The same medicinal materials.

Salt Zhimu Take Zhimu slices and fry them dry according to the salt water roasting method (General Rule 0213).

【 PROPERTIES 】

This product is shaped like Zhimu slices, yellow in color or with slight burnt spots. It tastes slightly salty.

【 INSPECTION 】

The content of insoluble ash in acid is the same as that of medicinal materials, not more than 2.0%.

【 CONTENT ASSAY 】

Same as the medicinal material, containing mangosteen (C₁₉H₁₈O₁₁) shall not be less than 0.40%, containing Zhimu saponin BII (C₄₅H₇₆O₁₉) shall not be less than 2.0%.

【 IDENTIFICATION 】 【 INSPECTION 】 (MOISTURE AND TOTAL ASH)

Same as the medicinal material.

【 NATURE AND FLAVOR AND MERIDIANS 】

Bitter, sweet, cold. Enter the lung, stomach, and kidney meridians.

【 FUNCTION AND INDICATIONS 】

Clears heat and purges fire, nourishes yin and moisturizes dryness. Used for exogenous febrile diseases, high fever and thirst, lung heat and dry cough, bone steaming and hot flashes, internal heat and thirst, dry intestines and constipation.

【 USAGE AND DOSAGE 】

6~12g.

【 STORAGE 】

Place in a ventilated and dry place, moisture-proof.

