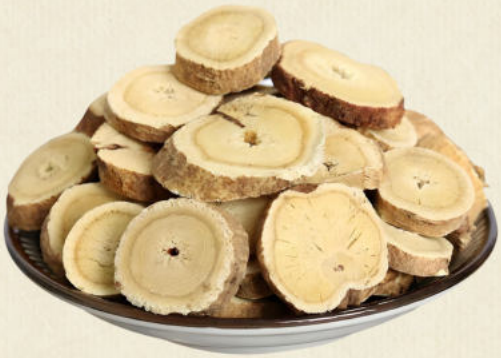
ASTRAGALUS



This product is the dried root of Astragalus membranaceus (Fisch.) Bge. var. mongholicus (Bge.) Hsiao or Astragalus membranaceus (Fisch.) Bge. of the Leguminosae family. It is dug up in spring and autumn, the fibrous roots and root heads are removed, and then dried in the sun.

【 PROPERTIES 】

This product is cylindrical, some with branches, thicker at the top, 30 to 90 cm long, 1 to 35 cm in diameter. The surface is light brown or light brown, with irregular longitudinal wrinkles or grooves. It is hard and tough, not easy to break, with strong fiber and powdery cross section, yellowish white cortex, light yellow wood, with radial texture and cracks, and the center of old roots is occasionally rotten, dark brown or hollow. It has a faint smell and a slightly sweet taste. It has a slight beany smell when chewed.

【 IDENTIFICATION 】

(1) Cross section of this product: There are many rows of cork cells; the inner layer of the cork is 3 to 5 rows of thick-horned cells. The outer side of the phloem rays is often curved and has cracks; the fibers are bundled, thick-walled, lignified or slightly lignified, and arranged alternately with the sieve tube groups; stone cells can sometimes be seen near the inner layer of the cork. The cambium is ringed. Xylem vessels are scattered singly or gathered in groups of 2 to 3; there are wood fibers between vessels; stone cells can sometimes be seen singly or in groups of 2 to 4 in the rays. Thin-walled cells contain starch grains. The powder is yellowish white. The fibers are bundled or scattered, with a diameter of 8 to 30 μm, thick walls, and longitudinal cracks on the surface. The primary wall is often separated from the secondary wall, and the two ends are often broken into whiskers or relatively flat. The bordered pit vessels are colorless or orange-yellow, and the bordered pits are closely arranged. Stone cells are rare, round, oblong or irregular in shape, and have thicker walls.

(2) According to the thin layer chromatography method (General Rule 0502), 5 to 10 R of the test solution and reference solution under the item [Determination of Content] are taken and spotted on the same silica gel G thin layer plate. The lower layer solution of chloroform-methanol-water (13:7:2) is used as the developing agent. The plate is developed, taken out, dried, sprayed with 10% sulfuric acid ethanol solution, heated at 105°C until the spots are clearly colored, and examined under sunlight and ultraviolet light (365nm). In the chromatogram of the test sample, at the corresponding position in the chromatogram of the reference sample, the same brown spots appear under sunlight; the same orange-yellow fluorescent spots appear under ultraviolet light (365nm).

(3) Take 2g of the powder of this product, add 30ml of ethanol, heat and reflux for 20 minutes, filter, evaporate the filtrate, add 15ml of 0.3% sodium hydroxide solution to the residue to dissolve, filter, adjust the pH value of the filtrate to 5-6 with dilute hydrochloric acid, shake and extract with 15ml of ethyl acetate, separate the ethyl acetate solution, filter with filter paper covered with an appropriate amount of anhydrous sodium sulfate, and evaporate the filtrate to dryness. Add 1ml of ethyl acetate to dissolve the residue as the test solution. Take another 2g of Astragalus control medicinal material and prepare the control medicinal material solution in the same way. According to the thin layer chromatography method (General Rule 0502), take 100ml of each of the above two solutions and spot them on the same silica gel G thin layer plate, use chloroform-methanol (10:1) as the developing solvent, develop, take out, dry, fumigate with ammonia vapor, and examine under ultraviolet light (365nm). In the chromatogram of the test product, at the corresponding position of the chromatogram of the control medicinal material, a main fluorescent spot of the same color appears.

Phone / WeChat / WhatsApp: +8618633640012
Mail: 277605659@qq.com Website: www.cn-qihuikang.com

【EXTRACT】

Determined according to the cold leaching method under the water-soluble extract determination method (General Rule 2201), it shall not be less than 17.0%.

【CONTENT DETERMINATION】

Astragalus membranaceus was determined according to the high performance liquid chromatography method (General Rule 0512). Chromatographic conditions and system suitability test: Octadecylsilane bonded silica gel was used as filler; acetonitrile-water (32:68) was used as mobile phase; evaporative light scattering detector was used for detection. The theoretical plate number calculated based on the Astragalus membranaceus peak should not be less than 4000.
Preparation of reference solution: Take an appropriate amount of Astragalus membranaceus reference substance, weigh it accurately, and add 80% methanol to make a solution containing 0.5 mg per 1 ml. Preparation of test solution Take about 1g of the powder of this product (passed through No. 4 sieve), weigh accurately, place in a stoppered conical flask, accurately add 50ml of 80% methanol solution containing 4% concentrated ammonia test solution (take 4ml of concentrated ammonia test solution, add 80% methanol to 100ml, shake well), stopper, weigh, heat and reflux for 1 hour, cool, weigh again, make up the lost weight with 80% methanol solution containing 4% concentrated ammonia test solution, shake well, filter, accurately measure 25ml of the filtrate, evaporate to dryness, dissolve the residue with 80% methanol, transfer to a 5ml volumetric flask, add 80% methanol to the scale, shake well, filter, take the filtrate, and get it. Determination method Accurately aspirate 20 (or 50) and 10 of the reference solution, respectively, and 10~200 of the test solution, inject into the liquid chromatograph, determine, and calculate with the external standard two-point method logarithmic equation to get it. This product, calculated on a dry basis, contains not less than 0.080% astragalus membranaceus methyl ester (C41 H68 O14).

The determination of calycosin glucosin is carried out according to the high performance liquid chromatography method (General Rule 0512). Chromatographic conditions and system suitability test: Octadecylsilane bonded silica gel is used as filler; acetonitrile is used as mobile phase A, 0.2% formic acid solution is used as mobile phase B, and gradient elution is performed according to the provisions in the following table; the detection wavelength is 260nm.
The theoretical plate number calculated based on the calycosin glucosin peak should not be less than 3000.

TIME (MIN)	MOBILE PHASE A (%)	MOBILE PHASE B (%)
0~20	20→40	80→60
20~30	40	60

Preparation of reference solution Take an appropriate amount of calycosin glucosides reference, weigh accurately, add methanol to make a solution containing 50% of calycosin per 1ml, and you have it. Preparation of test solution Take about 1g of the powder of this product (passed through a No. 4 sieve), weigh accurately, put it in a round-bottom flask, accurately add 50ml of methanol, weigh the weight, heat and reflux for 4 hours, cool, weigh again, make up the lost weight with methanol, shake well, filter, accurately measure 25ml of the filtrate, recover the solvent to dryness, dissolve the residue in methanol, transfer to a 5ml volumetric flask, add methanol to the scale, shake well, and you have it. Determination method Accurately aspirate 10% of the reference solution and the test solution, inject them into a liquid chromatograph, and determine them.
This product, calculated as a dry product, contains no less than 0.020% of calycosin glucosides (C22H22).

DECOCTION PIECES

【PROCESSING】

Remove impurities, separate by size, wash, moisten, cut into thick slices, and dry.

【PROPERTIES】

This product is a thick round or oval slice, with yellow-white to light brown outer skin, visible longitudinal wrinkles or grooves. The cut surface is yellow-white, the wood is light yellow, with radial textures and cracks, and some are occasionally rotten in the center, dark brown or hollow. Slight smell, slightly sweet taste, chewing with bean smell.

【IDENTIFICATION】 (EXCEPT THE CROSS SECTION) 【INSPECTION】 【EXTRACT】 【CONTENT DETERMINATION】

Same as medicinal materials.

【PROPERTIES AND MERIDIANS】

Sweet, slightly warm. Enter the lung and spleen meridians.

【FUNCTIONS AND INDICATIONS】

Tonify qi and raise yang, consolidate the surface and stop sweating, promote diuresis and reduce swelling, promote fluid and nourish blood, relieve stagnation and relieve numbness, support toxins and discharge pus, and heal sores and regenerate muscles. It is used for qi deficiency and fatigue, poor appetite and light stool, sinking of qi in the middle, chronic diarrhea and prolapse of the anus, bloody stool and metrorrhagia, spontaneous sweating due to deficiency of the surface, edema due to deficiency of qi, internal heat and thirst, sallow complexion due to deficiency of blood, hemiplegia, pain and numbness of numbness, carbuncle that is difficult to heal, and long-term heal.

【USAGE AND USAGE】

9~30g.

【STORAGE】

Place in a ventilated and dry place, moisture-proof and moth-proof. 3.5cm, thickness 0.1~0.4cm. The outer skin is light brown or light brown, slightly shiny, with visible longitudinal wrinkles or grooves. The cut surface of the skin is yellowish white, the wood is light yellow, with radial texture and cracks, and some of them are occasionally rotten in the center, black brown or hollow. It has a honey aroma, sweet taste, slightly sticky, and a slight bean smell when chewed.

【IDENTIFICATION】

The same results are shown in the tests of [Identification] (2) and (3) under the Huangfu item.

【INSPECTION】

Moisture content shall not exceed 100 % (General Rule 0832 Method 2).
Total ash content shall not exceed 4.0% (General Rule 2302).

Phone / WeChat / WhatsApp: +8618633640012
Mail: 277605659@qq.com Website: www.cn-qihuikang.com

【CONTENT DETERMINATION】

Take about 1g of the powder of Huangyi Jiaxi (passed through a No. 4 sieve), weigh accurately, and determine according to the method under the Huangfu [Content determination] item.This product, calculated on a dry basis, contains not less than 0.060% of flavonoids ($C_{41}H_{68}O_{14}$). Take about 2g of this product powder (passed through a No. 4 sieve), weigh accurately, and determine according to the method under Astragalus

【CONTENT DETERMINATION】

This product, calculated on a dry basis, contains not less than 0.020% of flavonoids ($C_{41}H_{68}O_{14}$).

【NATURE AND FLAVOR AND MERIDIANS】

Sweet, warm. Enters the lung and spleen meridians.

【FUNCTIONS AND INDICATIONS】

Replenishes qi and nourishes the middle. Used for qi deficiency, fatigue, poor appetite, and light stools.

【USAGE AND USE】

9~30g.

【STORAGE】

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