ALISMA ORIENTALIS

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 spherical, elliptical or oval, 2 to 7 cm long and 2 to 6 cm in diameter. The surface is light yellow to light yellow-brown, with irregular transverse annular shallow grooves and many small protruding root marks, and some have tumor-like bud marks on the bottom. The texture is solid, the cross section is yellow-white, powdery, and has many pores. The smell is slight and the taste is slightly bitter.

【IDENTIFICATION】

(1) The powder of this product is light yellow-brown. There are many starch granules. Single granules are long oval, spherical or elliptical, with a diameter of 3 to 14 μm, and the umbilicus is herringbone, short slit or trident; compound granules are composed of 2 to 3 granules. The thin-walled cells are spherical, with many elliptical pits, which are integrated into pit groups. The pericytes of the endodermal cells are wavy, thick, lignified, and have sparse pore grooves. The oil chambers are mostly broken, and the intact ones are spherical with a diameter of 54 to 110 μm. Oil droplets can sometimes be seen in the secretory cells.

(2) Take 2g of the powder of this product, add 20ml of 70% ethanol, ultrasonically treat for 30 minutes, filter, evaporate the filtrate until there is no alcohol taste, pass it through a HP20 macroporous adsorption resin column (inner diameter 1cm, column height 5cm, 30% ethanol wet column), elute with 15ml of 30% ethanol, discard the eluent, elute with 15ml of 70% ethanol, collect the eluent, evaporate to dryness, add 1ml of methanol to dissolve the residue, and use it as the test solution. Take another 2g of the control medicinal material of Alisma orientalis and prepare the control medicinal material solution in the same way. Then take the 23-acetyl alisma alcohol B reference substance and the 23-acetyl alisma alcohol C reference substance, add methanol to prepare a solution containing 1mg per 1ml, and use it as the reference solution. According to the thin layer chromatography method (General Rule 0502), 10μ1 of each of the above four solutions was taken and spotted on the same silica gel GF254 thin layer plate, and developed with dichloromethane-methanol (15:1) as the developing solvent, developed, taken out, dried, sprayed with a mixed solution of 2% vanillin sulfuric acid solution-ethanol 1:9), heated at 105°C until the spots were clearly colored, and inspected under sunlight and ultraviolet light (365nm). In the chromatogram of the test sample, spots of the same color or fluorescent spots appeared at the corresponding positions of the chromatogram of the reference medicinal material and the chromatogram of the reference substance.

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【INSPECTION】

The moisture content shall not exceed 14.0% (General Rule 0832 Method 2).
Total ash content shall not exceed 5.0% (General Rule 2302).

【EXTRACT】

According to the hot leaching method under the determination method of alcohol-soluble extract (General Rule 2201), ethanol is used as the solvent, and the content shall not be less than 10.0%.

【CONTENT DETERMINATION】

Determine according to high performance liquid chromatography (General Rule 0512). Chromatographic conditions and system suitability test Use octadecylsilane bonded silica gel as filler; acetonitrile as mobile phase A, water as mobile phase E, and perform gradient elution according to the provisions in the table below. The detection wavelength of 23-acetyl alismatol B is 208nm, and the detection wavelength of 23-acetyl alismatol C is 246nm. The number of theoretical plates calculated based on the 23-acetyl alismatol B peak should not be less than 3000.

TIME (MINUTES)	MOBILE PHASE A (%)	MOBILE PHASE B (%)
0~5	45	55
5~30	45→84	55→16
30~40	84	16

Preparation of reference solution Take appropriate amount of 23-acetyl alismatol E reference and 23-acetyl alismatol C reference, weigh accurately, add acetonitrile to make a mixed solution containing 23-acetyl alismatol B 35Mg and 23-acetyl alismatol C 5Mg per 1ml, and obtain.
Preparation of test solution Take about 0.5g of the powder of this product (passed through No. 5 sieve), weigh accurately, put it in a stoppered conical bottle, add 25ml of acetonitrile accurately, stopper it, weigh it, ultrasonically treat it (power 250W, frequency 50kHz) for 30 minutes, let it cool, weigh it again, make up the lost weight with acetonitrile, shake it well, filter it, and take the filtrate to obtain.
Determination method Accurately aspirate 20 hours of reference solution and test solution respectively, inject them into liquid chromatograph, and determine them to obtain. Calculated on the basis of dry product, the total amount of 23-acetyl alismatol B (C32H5oO5) and 23-acetyl alismatol C (C32 H48 O6) contained in this product shall not be less than 0.10%.

【EXTRACT】

According to the hot leaching method under the determination method of alcohol-soluble extract (General Rule 2201), ethanol is used as the solvent, and the content shall not be less than 10.0%.

MEDICINAL PIECES

【PROCESSING】

Alismatis: Remove impurities, soak slightly, moisten thoroughly, cut into thick slices, and dry.

【PROPERTIES】

This product is in round or oval thick slices. The outer skin is light yellow to light yellow brown, with small protruding root marks visible. The cut surface is yellowish white to light yellow, powdery, with many pores. Slight odor, slightly bitter taste.

【INSPECTION】

Water content: Same as medicinal materials, not more than 12.0%.

【IDENTIFICATION]|INSPECTION】(TOTAL ASH)【EXTRACT】【CONTENT DETERMINATION】

Same as medicinal materials.
Salt alismatis: Take alismatis slices and fry them dry according to the salt water roasting method (General Rule 0213).

【PROPERTIES】

This product is shaped like alismatis slices, with a light yellow brown or yellow brown surface, and occasionally burnt spots. Taste is slightly salty.

【INSPECTION】

Water content: Same as medicinal materials, not more than 13.0%.
Total ash: Same as medicinal materials, not more than 6.0%.

【EXTRACT】

Same as medicinal materials, not less than 9.0%.

【IDENTIFICATION】(EXCEPT FOR MICRO POWDER)【CONTENT DETERMINATION】

Same as medicinal materials.

【NATURE AND FLAVOR AND MERIDIANS】

Sweet, light, cold. Enters kidney and bladder meridians.

【FUNCTIONS AND INDICATIONS】

Promote diuresis and eliminate dampness, relieve heat, remove turbidity and reduce fat. Used for urinary incontinence, edema, diarrhea, oliguria, phlegm and dizziness, hot stranguria, and hyperlipidemia.

【USAGE AND DOSAGE】

6~10g.

【STORAGE】

Place in a dry place to prevent moths.

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