

## Supplementary Material 2

Specimen: **Radix Sophorae Flavescentis (Sophora flavescens Alt, Leguminosae)**

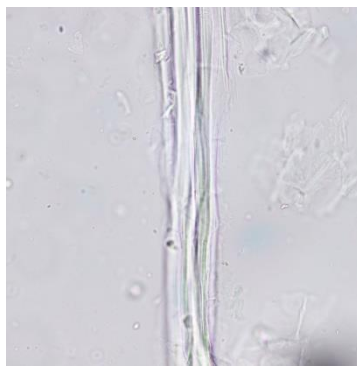
Batch number: 181003011

Inspection item:

1. Morphological identification: meet the specification.
2. Microscopic identification:



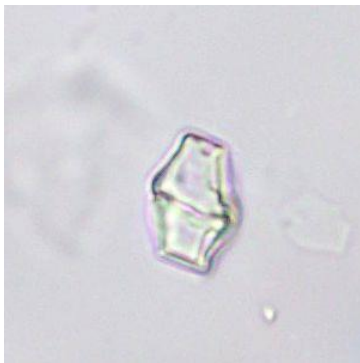
cork cell



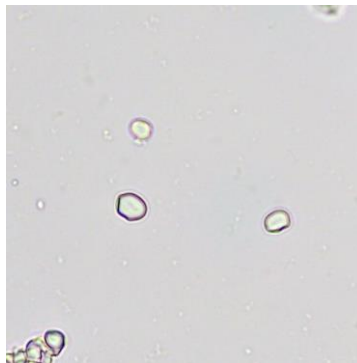
fiber



crystal fiber



Calcium oxalate square crystal  
granules



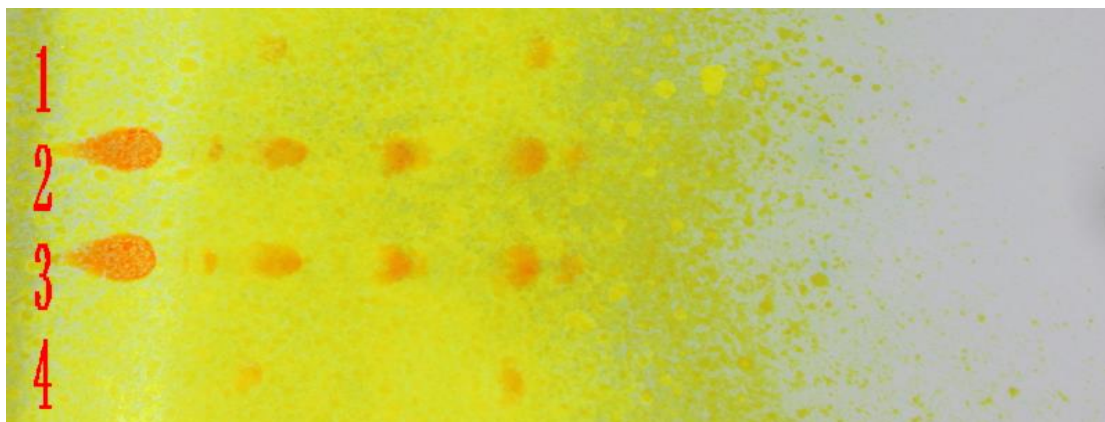
starch grain



Starch granules are compound

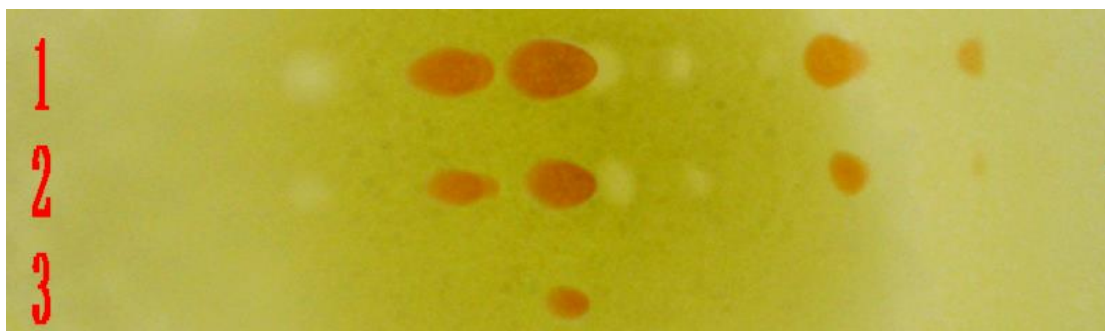
3. Thin-layer chromatography:

(1) method1:



Thin layer diagram information	1,4---- Mixed solution of matrine and sophoridine	Point sample: 4 $\mu$ l
	2,3---- sample	Point sample: 4 $\mu$ l
Thin laminate information	Silica gel G thin laminate prepared by 2% sodium hydroxide solution	
Developing solvent	Toluene - acetone - methanol (8: 3: 0.5) + Toluene - ethyl acetate - methanol - water (2: 4: 2: 1)	
Chromogenic agent	Bismuth iodide potassium test solution and sodium nitrite ethanol test solution	
Viewing	white light	

(2) method 2:



Thin layer diagram information	1 ,2---- sample	Point sample: 4 $\mu$ l
	3---- oxymatrine	Point sample: 4 $\mu$ l
Thin laminate information	Silica gel G thin laminate prepared by 2% sodium hydroxide solution	
Developing solvent	Trichloromethane - methanol - concentrated ammonia solution (5: 0.6: 0.3)	
Chromogenic agent	Bismuth iodide potassium test solution and sodium nitrite ethanol test solution	
Viewing	white light	

#### 4. chemical identification:

- ①inspection item: Water content  
inspection provisions: < 10.5%  
result: 8.58%
- ②inspection item: total ash  
inspection provisions: < 8.0%  
result: 4.8%

③inspection item: Residual sulfur dioxide

inspection provisions: < 130mg/kg

result: 0mg/kg

• ④inspection item: Extract

inspection provisions: > 20.0%

result: 32.1%

• ⑤inspection item: content determination

inspection provisions: The total content of matrine (C<sub>15</sub>H<sub>24</sub>N<sub>2</sub>O) and oxymatrine (C<sub>15</sub>H<sub>24</sub>N<sub>2</sub>O<sub>2</sub>) shall not be less than 1.3% as calculated by dry product

result: 2.2%

**Conclusion:** Conformed to the quality standards of Chinese pharmacopoeia.

**Quality supervisor:** An Luo

**Specimen:** *Poria* (*Poria cocos* (Schw.) Wolf, Polyporaceae)

**Batch number:** 18110671

**Inspection item:**

1. Morphological identification: meet the specification.
2. Microscopic identification:

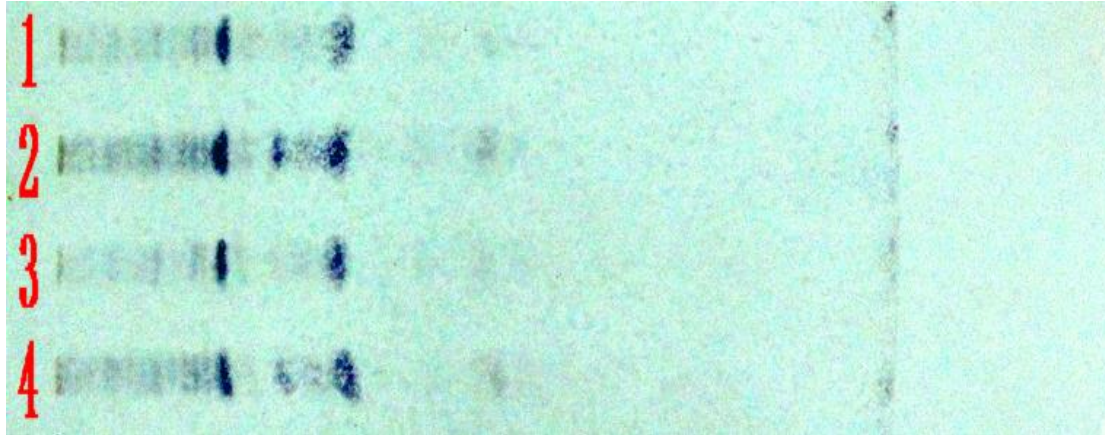


Irregular granular mass



hypha

### 3. Thin-layer chromatography:



Thin layer diagram information	1,3---- Poria control herb	Point sample: 2 $\mu$ l
	2,4---- sample	Point sample: 2 $\mu$ l
Thin laminate information	Silicon G thin laminate	
Developing solvent	Toluene - ethyl acetate - formic acid (20:5:0.5)	
Chromogenic agent	2% Vanillin sulfuric acid solution - ethanol (4:1)	
Viewing	white light	

### 4. chemical identification:

- ①inspection item: Water content  
 inspection provisions: < 17.5%  
 result: 16.1%

②inspection item: The total ash content

inspection provisions: < 2.0%

result: 0.41%

③inspection item: Residual sulfur dioxide

inspection provisions: < 130mg/kg

result: 0mg/kg

• ④inspection item: extractum

inspection provisions: > 3.0%

result: 4.8%

**Conclusion:** Conformed to the quality standards of Chinese pharmacopoeia.

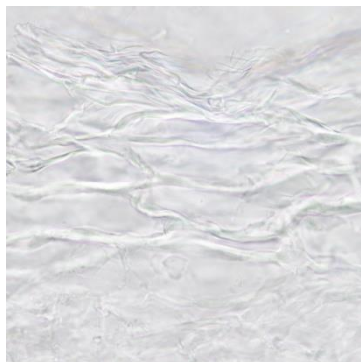
**Quality supervisor:** An Luo

**Specimen: Fructus Citri Sarcodactylis (Citrus medica Linn. var. sarcodactylis (Noot.) Swingle, Rutaceae)**

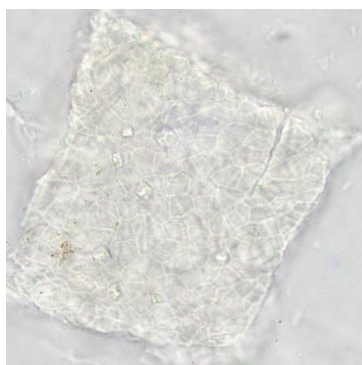
Batch number: 180902031

Inspection item:

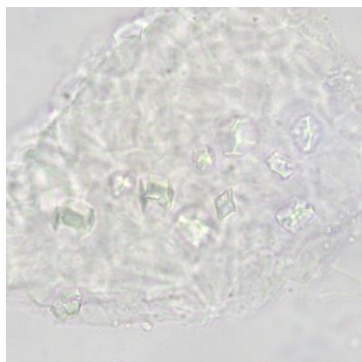
1. Morphological identification: meet the specification.
2. Microscopic identification:



Pericarp parenchyma

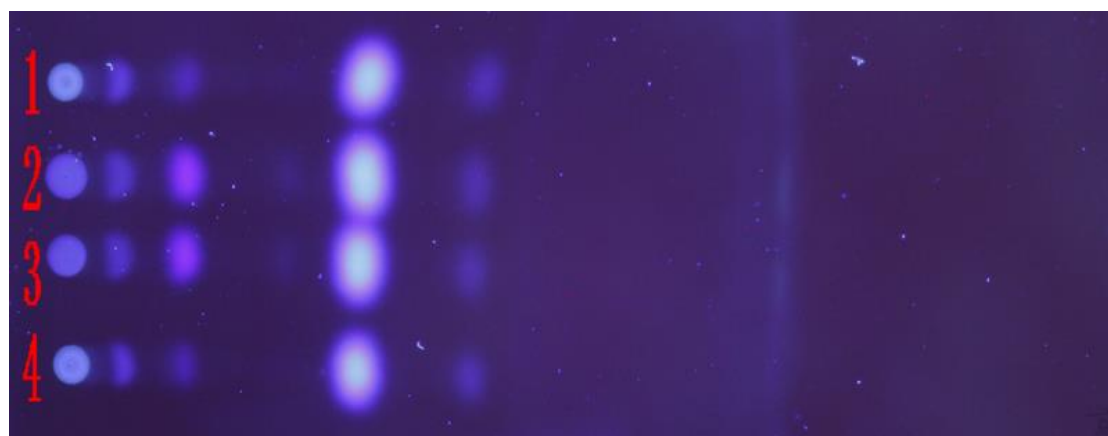


Surface appearance of epidermal cells in pericarp



Calcium oxalate square crystal

3. thin-layer chromatography:



Thin layer diagram information	1,4---- Fructus Citri Sarcodactylis control herbs	Point sample: 2 $\mu$ l
	2,3---- sample	Point sample: 2 $\mu$ l

Thin laminate information	Silicon G thin laminate
Developing solvent	Ethyl cyclohexane-acetate (3: 1)
Chromogenic agent	/
Viewing	UV365nm

### 3. chemical identification:

- ①inspection item: Water content  
inspection provisions: < 14.5%  
result: 13.3%
- ②inspection item: Residual sulfur dioxide  
inspection provisions: < 130mg/kg  
result: 0mg/kg
- ③inspection item: extractum  
inspection provisions: > 10.0%  
result: 33.3%
- ④inspection item: content determination  
inspection provisions: For dried products, the content of hesperidin (C<sub>28</sub>H<sub>34</sub>O<sub>15</sub>) shall not be less than 0.030%.  
result: 0.037%

**Conclusion:** Conformed to the quality standards of Chinese pharmacopoeia.



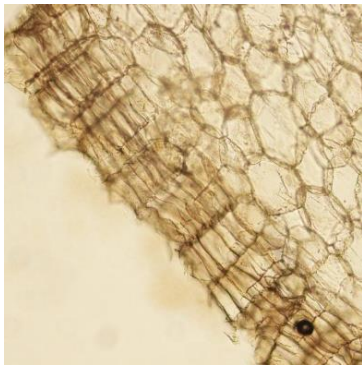
**Quality supervisor:** An Luo

**Specimen:** **Rhizoma Curcumae** (**Curcuma zedoaria** (Christm.) Rose,  
**Zingiberaceae**)

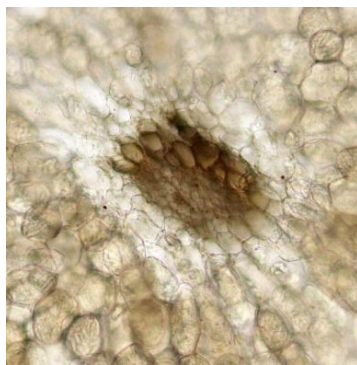
**Batch number:** 181202941

**Inspection item:**

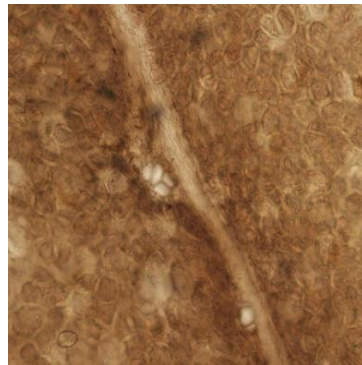
1. Morphological identification: meet the specification.
2. Microscopic identification:
  - (1) Rhizome transection:



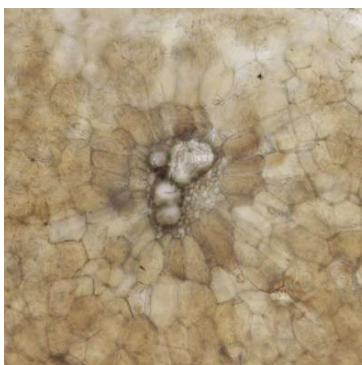
suberized cell



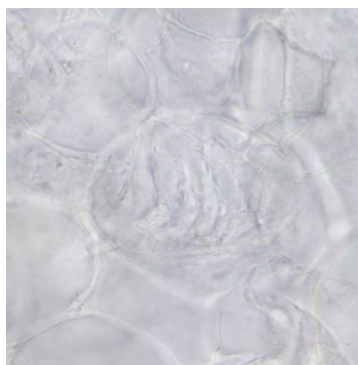
Cortical trace vascular bundles

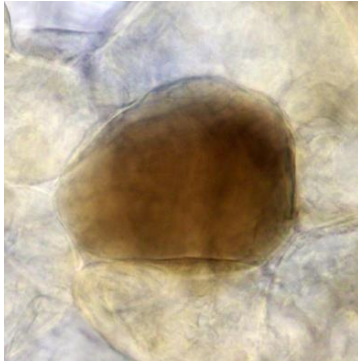


endothelial cells



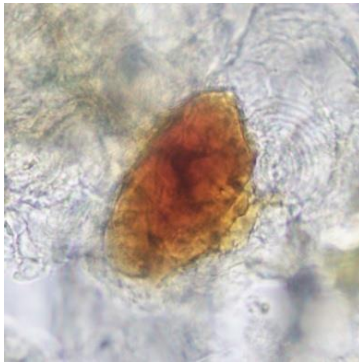
Central column external tough vascular bundl



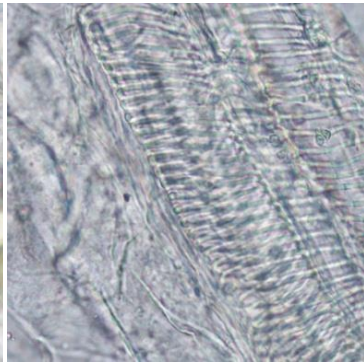


cell containing a golden, oily substance

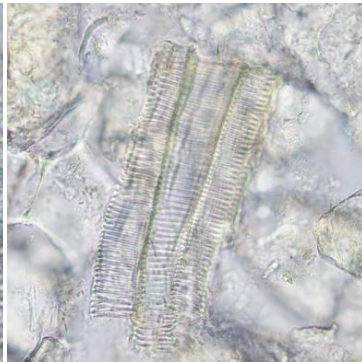
(2) powder:



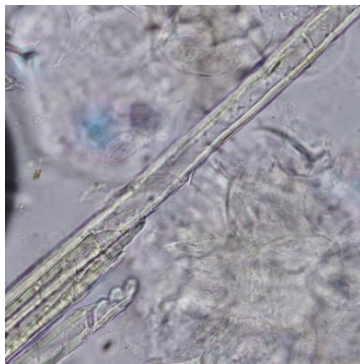
aleocyst



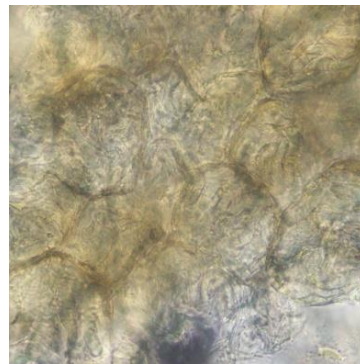
spiral duct



scalariform vessel

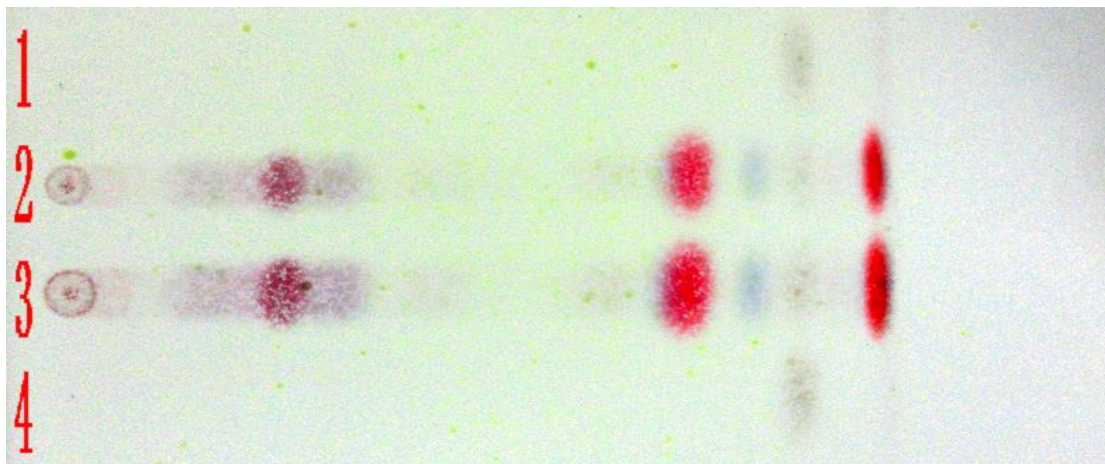


fiber



Starch grains are mostly gelatinized

3. Thin-layer chromatography:



Thin layer diagram information	1,4----Germacrone	Point sample: 10 μl
	2,3---- sample	Point sample: 10 μl
Thin laminate information	Silicon G thin laminate	
Developing solvent	Petroleum ether (30~60℃) - Acetone - ethyl acetate (94:5:1)	
Chromogenic agent	1% Vanillin sulfuric acid solution	
Viewing	white light	

- 
- 4. Chemical identification:
  - ①inspection item: absorbance
    - inspection provisions: > 0.45
    - result: 1.1
  - ②inspection item: Water content

inspection provisions: < 13.5%

result: 10.2%

- ③inspection item: total ash

inspection provisions: < 7.0%

result: 4.0%

- ④inspection item: acid-insoluble ash

inspection provisions: < 2.0%

result: 1.2%

- ⑤inspection item: Residual sulfur dioxide

inspection provisions: < 130mg/kg

result: 0mg/kg

- ⑥inspection item: extractum

inspection provisions: > 7.0%

result: 13%

- ⑦inspection item: content determination

inspection provisions: Contain not less than 1.6% volatile oil (ml/g)

result: 1.7% (ml/g)

**Conclusion:** Conformed to the quality standards of Chinese pharmacopoeia.

**Quality supervisor:** An Luo

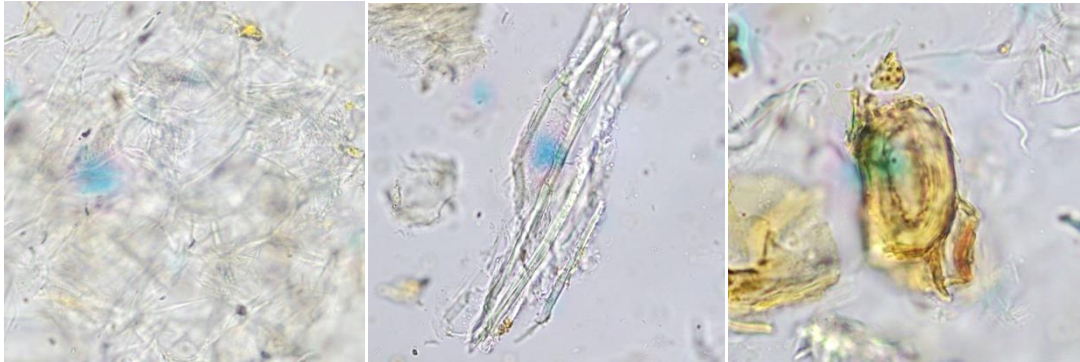


Specimen: **Rhizoma Atractylodis Macrocephalae (Atractylodes macrocephala Koidz, Compositae)**

Batch number: 181003941

Inspection item:

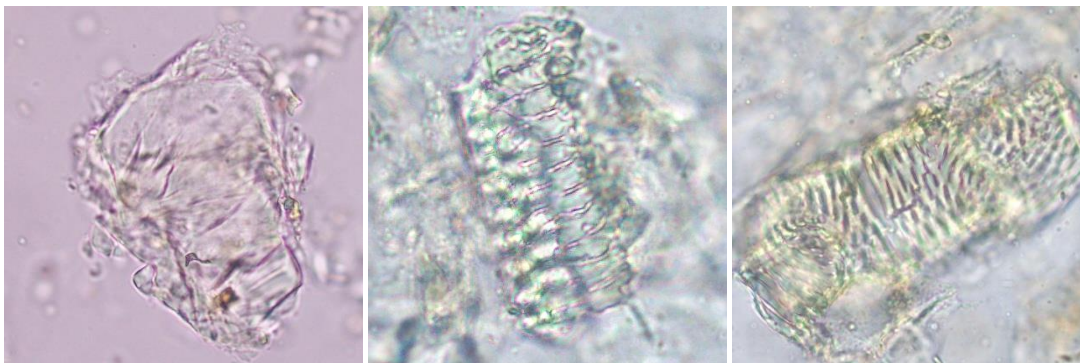
1. Morphological identification: meet the specification.
2. Microscopic identification:



calcium oxalate crystal

fiber

stone cell

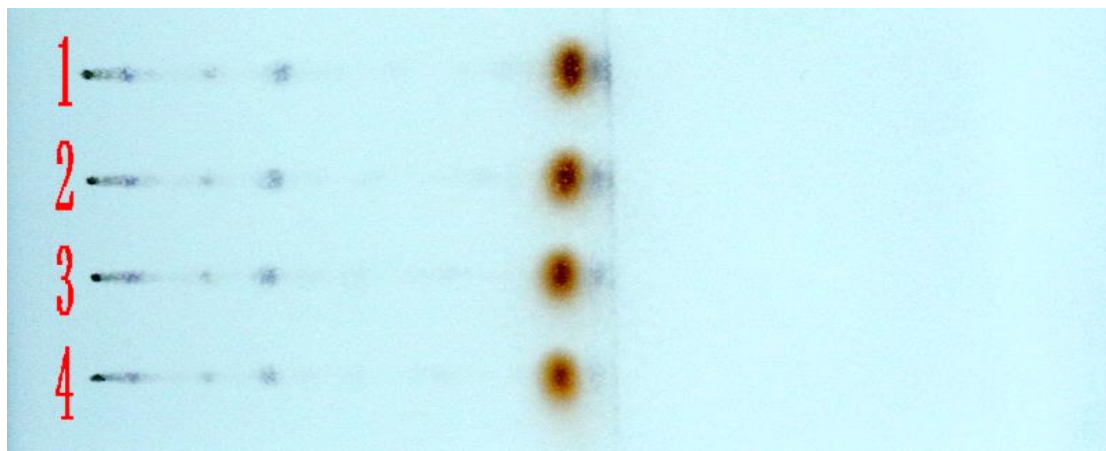


synanthrin

reticulate vessel

bordered pit vessel

3. Thin-layer chromatography:



Thin layer diagram information	1, 4---- Rhizoma Atractylodis Macrocephalae control herbs	Point sample: 10 μl
	2, 3----sample	Point sample: 10 μl
Thin laminate information	Silicon G thin laminate	
Developing solvent	petroleum ether (60~90℃) - ethyl acetate (50: 1)	
Chromogenic agent	5% Vanillin sulfuric acid solution	
Viewing	white light	

#### 4. Chemical identification:

① inspection item: Water content

inspection provisions: < 14.5%

result: 13.6%

②inspection item: The total ash content

inspection provisions: < 5.0%

inspection result: 3.6%

③inspection item: Residual sulfur dioxide

inspection provisions: < 350mg/kg

inspection result: 248 mg/kg

④inspection item: chromaticity

inspection provisions: According to the solution color test method, compared with the yellow no. 9 standard color solution, should not be deeper.

inspection result: meet the specification

| ⑤inspection item: extractum

inspection provisions: > 35.0%

inspection result: 39.8%

**Conclusion:** Conformed to the quality standards of Chinese pharmacopoeia.

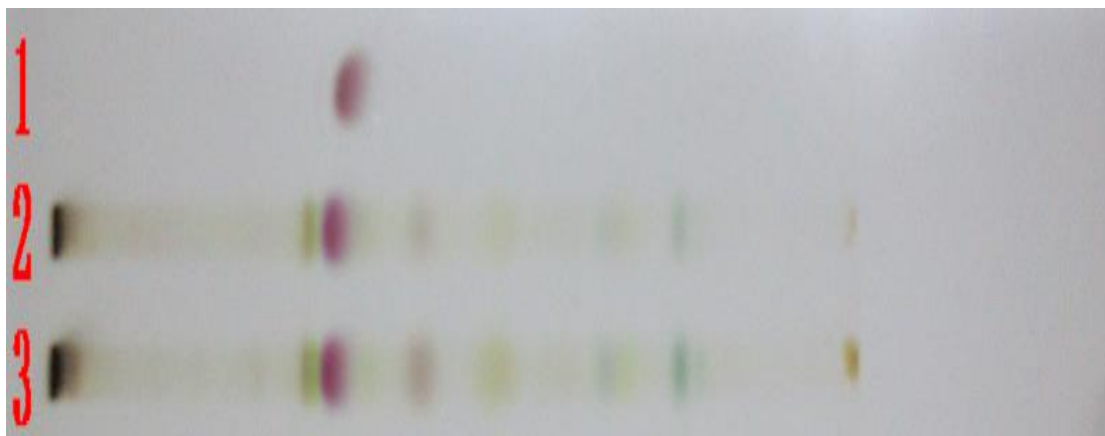
**Quality supervisor:** An Luo

Specimen: **Hedyotis diffusa (Hedyotis diffusa Willd. Var. Longipes Nakai, Rubiaceae)**

Batch number: 181103361

Inspection item:

1. Morphological identification: meet the specification.
2. Thin-layer chromatography:



Thin layer diagram information	1---- Oleanolic acid reference	Point sample: <u>  5  </u> $\mu$ l
	2---- Hedyotis diffusa reference	Point sample: <u>  5  </u> $\mu$ l
	3---- sample	Point sample: <u>  5  </u> $\mu$ l
Thin laminate information	Silicon G thin laminate	
Developing solvent	petroleum ether (30~60°C) - Toluene - ethyl acetate - glacial acetic acid (20:40:14:1)	
Chromogenic agent	10% Sulfuric acid ethanol solution	
Viewing	white light	

## 3. Chemical identification:

① inspection item: Water content

inspection provisions: &lt;12.5%



Result: 10.1%

②inspection item: Residual sulfur dioxide

inspection provisions: < 130mg/kg

Result: 0mg/kg

③inspection item: Extractum

inspection provisions: > 6.0%

inspection result: 9.8%

④inspection item: Content determination

inspection provisions: For dry products, the total amount of Oleanolic acid (C<sub>30</sub>H<sub>48</sub>O<sub>3</sub>) and Ursolic acid (C<sub>30</sub>H<sub>48</sub>O<sub>3</sub>) shall not be less than 0.15%.

Result: 0.037%

**Conclusion:** Conformed to the quality standards of Chinese pharmacopoeia.

**Quality supervisor:** An Luo