

## Certificate of Analysis

Product information		Batch information	
Product name	<b>Coptis Root Extract</b>	Batch no.	4342606
Botanical name	Coptis chinensis	Production date	September 2018
OHI product code	HECOPTROOT	Best Before End	November 2020
Plant part	Root		
Country of origin	P.R.CHINA		

Analysis item	Specification	Result	Analysis test method
Assay	10% Berberine	<b>10.25%</b>	Titration
<b>Organoleptic properties</b>			
Appearance <sup>1</sup>	Fine Yellow powder	Conform to specification	Visual
Taste	Typical to botanical	Conform to specification	Gustatory
Odor	Typical to botanical	Conform to specification	Olfactory
<b>Physical properties</b>			
Sieve analysis	80	Conform to specification	Mesh screen or equivalent
Moisture content	≤5%	3.36%	IR balance or equivalent
Ash	≤5%	3.17%	2g/525°C/5hrs or equivalent
<b>Heavy metals<sup>2</sup></b>			
Arsenic (As)	≤ 1 ppm	Conform to specification	AA or equivalent
Cadmium (Cd)	≤ 1 ppm	Conform to specification	AA or equivalent
Lead (Pb)	≤ 3 ppm	Conform to specification	AA or equivalent
Mercury (Hg)	≤ 0.1 ppm	Conform to specification	AA or equivalent
Total heavy metals	≤ 10 ppm	Conform to specification	Colorimetry or equivalent
<b>Microbiology</b>			
Total plate count	≤10000cfu/g	Conform to specification	AOAC or equivalent
Yeasts & Molds	≤1000cfu/g	Conform to specification	AOAC or equivalent
Salmonella	Absent/10g	Conform to specification	AOAC or equivalent
E.Coli	Absent/1g	Conform to specification	AOAC or equivalent
Identification	Positive	Conform to specification	TLC

**Additional information**

**Sterilization method High Temperature & High Pressure Short time (5" - 10")**

**Re-test date 24 months from production date in original packaging and qualified storage conditions.**

**Storage Store product in tightly sealed containers in dry and dark environment at room temperature.**

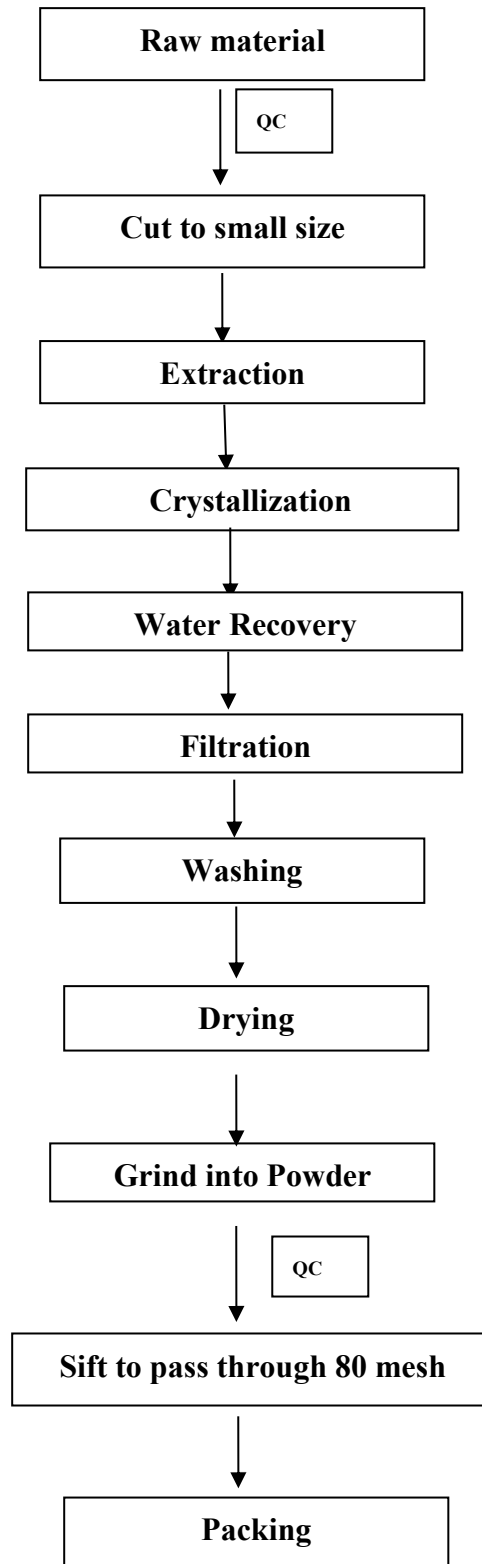
**Avoid exposure to air pollution, heat, sunshine and moisture. Reclose containers tightly after use.**

**1 This is a natural product; color variations may appear between extraction batches due to crop, harvest and seasonal fluctuations.**

**2 Individual and total heavy metals are not being tested for each batch. Random analyses are being regularly performed minimum once a year.**

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## Manufacturing Flow Chart Coptis Extract 10% Berberine





## Material Safety Data Sheet

<b>Product Name: Coptis Extract 10%</b>
<b>1.1 Chemical Properties</b> :with typical properties of coptis root <b>1.2 Form</b> :Fine powder <b>1.3 Color</b> : Fine yellow to yellow green powder <b>1.4 Odor</b> :Characteristic
<b>2. Physical Properties</b> PH Value           N/A Melting point       N/A Boiling Point       N/A Igniting point       N/A Flash Point          N/A Explosion Point     N/A Bulk Density        0.4-0.8g/ml Solubility           Soluble in hydro-alcoholic solution
<b>3. Transport information</b> Far from away humidity, sunshine, high-temp., and acidic, alkaline substance.
<b>4. Stability and Reactivity</b> <b>4.1. Condition to be avoided</b> Humidity, sunshine, high-temp. <b>4.2. Substances to be avoided</b> Acidic, alkaline substance <b>4.3. Hazardous decomposition</b> Acid, base.



## **5. Protection, handling and storage**

### **5.1. Safety technical measure:**

Far away from fire, humidity and other hazardous chemicals

### **5.2. Personal Equipment**

**Respiratory Protection:** to use respirator when mesh the powder.

**Eye Protection:** to use special glasses when mesh the powder.

**Hand protection:** no need special protection measure, when contact hands, use water to wash.

**Other Information:** no more available

### **5.3. Industrial Hygiene**

To avoid the powder contact eye and respiratory system.

### **5.4. Explosion and fire fighting measures**

Use quantity water

### **5.5. Disposal condition**

Disposal properly

## **6. Accidental release measures/Fire fighting measures**

### **6.1. Accidental release measures**

Washing up the attached area with water

### **6.2. Suitable extinguishing media**

### **6.3. First aid measures**

In case of eye and skin contacted: rinse out with water

### **6.4. Other information**

No more information available.

## **7. Toxicological information**

**Coptis Extract 10%** has high safety coefficient. It belongs to actual nontoxicity determined

By acute toxicity experiment.

## **8. Ecological Information**

No ecological problems are to be expected when the product is handled and used with care and attention.

## **9. Other Information**

No more information available.



## Specification Sheet

<b>Product Name</b>	<b>Coptis Extract</b>	<b>Plant Part Used</b>	<b>Root(Dried, 100% Natural)</b>
<b>Specification</b>	<b>10%</b>	<b>Active Ingredient Markers</b>	<b>Berberine</b>
<b>Latin Name</b>	<i>Coptis chinensis Franch.</i>	<b>Country of Origin</b>	P. R. China

Analysis Items	Specifications	Test Methods
<b>Organoleptic</b>		
Appearance & Color	Fine yellow to yellow green powder	Visual
Odor & Taste	Characteristic	Organoleptic
Solubility	Soluble in hydro-alcoholic solution	Visual
<b>Marker Compounds</b>		
Assay	NLT 10% Berberine	HPLC
<b>Physical Characteristics</b>		
Mesh Size	NLT 90% through 80 mesh	80 Mesh Screen
Moisture Content	NMT 8.0%	GB.5009.3
Ash Content	NMT 10.0%	GB.5009.4
<b>Heavy metals</b>		
Total Heavy Metals	NMT 20ppm	CP2015
Arsenic (As)	NMT 2ppm	GB.5009.11
Lead (Pb)	NMT 2ppm	GB.5009.12
<b>Microbiological Tests</b>		
Total Plate Count	NMT 10,000cfu/g	GB.4789.2
Total Yeast & Mold	NMT 1000cfu/g	GB.4789.15
E. Coli	Negative	GB.4789.3
Salmonella	Negative	GB.4789.4
Staphylococcus	Negative	GB.4789.10
<b>Packing and Storage</b>		
	Store in a well-closed container away from moisture.	
Shelf Life	2 years if sealed and store away from direct sun light.	