

# SELECT BOTANICAL

## *BUTCHER'S BROOM* *Technical-Scientific report*

### GENERAL INFORMATION

Select Botanical, SL manufactures highest quality extracts following strictest Quality Management System in compliance with the "Good Manufacturing Practices" requirements, carrying on the last manufacturing steps in classified areas (Clean Rooms).

Select Botanical, SL assures the traceability with rigorous analysis from raw material to finished product.

### REGISTRY NUMBERS

**CAS:** 84012-38-4  
**EINECS:** 281-682-9  
**INCI/ UE:** RUSCUS ACULEATUS ROOT EXTRACT

### INFORMATION ABOUT PLANT ORIGIN

#### SPECIFICATIONS/ TECHNICAL CHARACTERISTICS

##### Raw material

**Definition:** Rhizome and root of *Ruscus aculeatus* L.  
**Description:**  
- Macroscopic: Complies Ph. Eur. current Ed.  
- Microscopic: Complies Ph. Eur. current Ed.  
**Loss on drying:** ≤ 12 % w/w  
**Pesticides:** According to Ph. Eur. current ed.  
**Assay (UV/Vis):** Total saponinins, expressed as ruscogenins

##### Composition of Extract Preparation

Native dry extract  
Maltodextrin  
Colloidal silicon dioxide

##### Extract Specifications

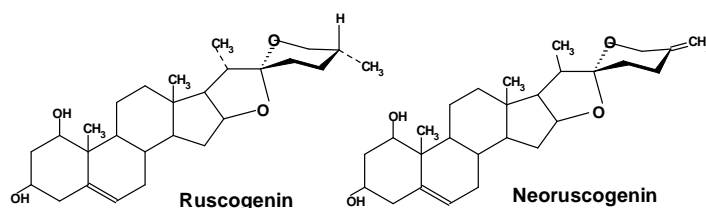
**Loss on drying:** ≤ 6 % w/w  
**Total ash:** ≤ 10 % w/w  
**Heavy metals:** Analysis of Pb,Hg,Cd and As  
**Microbiological assay:** According to Ph. Eur. current Ed "5.1.8. Point B"  
**Residual solvents:** According to guidelines CPMP/ICH/283/95  
**Assay (UV/Vis):** Total saponinins, calculated as Ruscogenin

#### Botanical Description

Evergreen shrubs plant that is a member of the lily family. The plant has rigid, branched, and spiny leaflike stems, which bear a greenish flower and red berries. Native to Mediterranean Europe and Africa from Azores islands. <sup>(5)</sup>

#### Analytical marker / Active principle

**Saponins:** Ruscogenin and Neoruscogenin



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### PHARMACOLOGICAL STUDIES

- sb *Venoconstricting properties:* venoconstricting properties of Ruscus extract have shown *in vitro* and *in vivo* models. Activity is attributed to result of  $\alpha$ -adrenergic activation. <sup>(8)</sup>
- sb *Effects on lymphatic vessels:* In *in vivo* studies, administration of Ruscus extract improved the contractility of peripheral lymph vessels. <sup>(8)</sup>
- sb *Effects on vascular permeability:* antiedema effect reported for Ruscus extract has confirmed *in vitro* and *in vivo* studies. <sup>(8)</sup>

### PHYTOTHERAPY

#### Activities

- sb Vasoconstrictor <sup>(6,8)</sup>
- sb Increase the tone of the venous. <sup>(4,5,6)</sup>
- sb Capillary protective. <sup>(6,8)</sup>
- sb Anti-inflammatory <sup>(6,8)</sup>
- sb Refreshing. <sup>(4)</sup>

#### Indications:

##### Oral use:

- sb Indicated as a supportive therapy for symptoms of chronic venous insufficiency, such as painful, tired and heavy legs, tingling and swelling. <sup>(6)</sup>
- sb Traditional herbal medicinal product to relieve symptoms of discomfort and heaviness of legs related to minor venous circulatory disturbances. <sup>(7)</sup>
- sb Traditional herbal medicinal product for symptomatic relief of itching and burning associated with haemorrhoids. <sup>(7)</sup>

##### Topical use:

- sb Indicated in edemas, varicose veins, hemorrhoids, capillary fragility, erythemas and in post-phlebitis recoveries. <sup>(2)</sup>
- sb Used in cases slowness sensation and legs fatigue and to alleviate the congested feet. <sup>(4)</sup>

#### Undesirable effects:

There are no reported toxic effects or intolerance phenomenon to normal use doses.

Nausea, gastrointestinal complaints, diarrhea, lymphocytic colitis may occur. <sup>(5)</sup>

#### Dosage and administration:

##### Oral use:

Butcher's Broom Dry Extract may be found formulated in liquid and solid preparations.

Recommendations given for dried powdered root or dry extracts is 7-11 mg daily of quantified ruscogenins as determined by the total amount of ruscogenin and neoruscogenin. <sup>(6,7)</sup>

##### Topical use:

The Butcher's Broom Dry Extract may be found formulated in creams, lotions, emulsions, shampoo and ointment, among others.

### BIBLIOGRAPHY AND OTHER REFERENCES SOURCES

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