

## CAPSINE

Capsicum Extract Standardised at 10 % Capsaicin

Ref.: CO10

### ► DEFINITION

CAPSINE is a concentrated oil-soluble extract of Capsicum (*Capsicum frutescens*) fruits with a standardised content of 10 % Capsaicin.

### ► PRESENTATION OF THE PLANT

Capsicum, also called red pepper, cayenne pepper, or chillies, is an annual herbaceous native to tropical America. The plant can reach one meter high. Its leaves are oval and lanceolate. The white or yellowish flowers are solitary, regular, star-shaped with a five-lobed calyx and a one-piece deciduous corolla. The fruit is a fleshy yellow-brown to red or red-brown drupe, cone-shaped and pointed, containing many seeds. It is smooth, shiny, little odorous though its taste is very hot. The name Capsicum was probably derived from the Greek word « kapso » meaning to bite and referring to the pungency of its fruits. This pungent taste has now been explained on the basis of the thermogenic properties of capsaicin, one of the fruit's active ingredients, that is the property to increase body heat production. The ancient Mayan folk-healers used capsicum for the treatment of toothache and general body pain. In modern Western medicine, capsaicin has been used to treat pain associated with arthritis, post-operative pain and neuralgia.



### ► ACTIVITY

CAPSINE is standardised for 10 % Capsaicin, which, when appropriately applied to the skin, produces a sensation of heat and acts as a topical analgesic providing pain relief. The mechanism is as follows: when applied on the skin, the capsaicin may inhibit the synthesis, transport and release of substance P, a neurotransmitter of pain.

The fact that capsaicin has no side effects, toxicity or interaction with other drugs prompted a research group from the Department of Clinical Research in Cleveland to suggest that topical capsaicin should be used as a safe and effective analgesic. In a double-blind study, 32 elderly patients with chronic post-herpetic neuralgia were treated with either capsaicin cream or placebo cream alone for a six-week period. Based on statistical evaluation of self-assessment questionnaires, significantly greater relief in the capsaicin-treated group was observed (Watson, C.P.N. & al. *Post-herpetic neuralgia and topical capsaicin. Pain* 33; 333-340; 1988).

Capsaicin is also a vasodilator which may favour the penetration of other ingredients.

### ► SPECIFICATIONS

Appearance	Free-flowing viscous liquid
Colour	Orange red
Odour	Characteristic
Solubility	Soluble in oils, alcohol 95°, and ether

Dosage of Capsaicin (HPLC) 10.0 - 10.5 %

Density	0.92 ± 0.05
Colour intensity	< 6,000 c.u.
Water content	< 1 %
Residual solvent	< 25 ppm
Heavy metals	≤ 15 ppm
Total germs	< 1000 cfu/g
Yeasts and moulds	< 100 cfu/g
Pathogens	Absence

#### ► COSMETIC APPLICATIONS

CAPSINE has warming, analgesic, and vasodilating properties that may found applications in:

- Massage oils and lotions for aching muscles.
- Warming masks.
- All kinds of « heating » products.

Use level: 0.01 to 0.2 %. Up to 0.5 % in pharmaceutical preparations.

CAPSINE should be added in your preparation at a temperature that does not exceed 40°C.

#### ► TOXICITY

Oral toxicity:	Not considered as toxic if used in normal concentrations.
Skin irritation:	Very irritant at full strength – <b>MUST BE USED WITHIN RECOMMENDED CONCENTRATIONS</b>

#### ► PRODUCT IDENTIFICATION

<i>INCI Name (EU)</i>	<i>INCI Name (US)</i>	<i>CAS no.</i>	<i>Einecs no.</i>
Capsicum Frutescens Resin	Capsicum Frutescens Resin	8023-77-6	288-920-0

Custom tariff no. (EU): 1302198000

#### ► STORAGE

Keep in the original tightly-closed container, at room temperature (20°C), away from light, heat, and humidity sources.

#### ► REFERENCES

- (1) J. Bruneton. *Pharmacognosy, Phytochemistry, Medicinal Plants*. Lavoisier, Paris, 1995.
- (2) S. Gupta. *The Role of Phytopharmaceuticals in Topical Pain Relief*. Happi, Dec. 2001.
- (3) M. Wichtl & R. Anton. *Plantes Thérapeutiques*. Technique & Documentation, Paris, 1999.