

OLEORESIN CAPSICUM

Term: Oleoresin
Function: Noun
Definition: A naturally occurring mixture of oil and a resin extracted from various plants.

Term: Capsicum
Function: Noun
Definition: A genus of plants, the ripe fruit of the capsicum mimum (or frutescans), contains the active principal capsaicin.

Term: Capsaicin
Function: Noun
Definition: A colorless, pungent crystalline compound that is derived from capsicum and is a strong irritant to skin and mucous membranes.

Some defense spray manufacturers that use OC in their formula will tell you that the “active ingredient” in their pepper spray is Oleoresin Capsicum. In fact, some manufacturers even go as far to actually include that statement right on their canisters label.

CQB defense spray labels DO NOT have that statement on its labels because it is not accurate. The fact is, most people tend to use the terms capsaicin and oleoresin capsicum interchangeably and they are not the same. Chemists & Toxicologists would agree that the definition of an “active ingredient” or “active principal” is *“the ingredient in a formulation that actually performs the intended function of the formula”*. In view of the definitions provided above, the active ingredient in a pepper spray that contains OC is in fact Capsaicin. The word Capsaicin actually describes a complex of related components ($C_{18}H_{27}NO_{31}$) named Capsaicinoids that all work together to produce the “pungency” or burning sensation upon contact to the skin or mucous membranes.

All hot peppers contain Capsaicinoids. Capsaicin, the strongest and most commonly mentioned of the Capsaicinoid family, is so hot that single drop diluted in 100,000 drops of water will produce a blistering of the tongue.

Capsaicin In pure form it is a white powder and has a Scoville Heat Rating of 16,000,000.

