

Capsaicin

CAS # 404-86-4

EXIM-INDIS INC
EVOLVING CHEMISTRY

Product In Focus

Capsaicin

INTRODUCTION

Capsaicin is a naturally occurring, lipophilic alkaloid and the primary pungent compound in chili peppers, acting as a potent TRPV1 receptor agonist. As a crystalline, colorless, and odorless compound, it is characterized by high heat stability, fat solubility, and the ability to cause localized sensory neuron excitation followed by desensitization (pain relief).

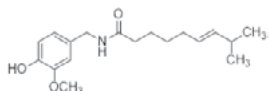
MANUFACTURE

Industrial synthesis often involves industrial fatty acids and amines at 140–170 °C, while specialized synthesis can utilize Novozym 435 in di-isopropyl ether, refluxed with a Dean-Stark trap to collect water, resulting in high-purity capsaicin.

KEY DETAILS

CAS Number	404-86-4
Molecular Formula	C ₁₈ H ₂₇ NO ₃
Molecular Weight	305.42 g/mol
Common Name	8-methyl-N-vanillyl-6-nonenamide
Application	It is a well-known chemical irritant used in research and pharmaceutical applications, such as pain relief creams, due to its interaction with sensory neurons

Structure



APPLICATION:

Pharmaceutical

- Used as an active ingredient in topical pain relief formulations
- Helps relieve muscle pain, joint pain, arthritis pain, and nerve-related pain
- Used in patches, creams, gels, and ointments for localized pain management
- Works by reducing pain signal transmission over repeated application

Food & beverage

- Used as a pungency & flavoring agent in spicy food products
- Provides heat intensity in sauces, seasonings, snacks, and processed foods
- Used in controlled quantities to enhance taste and sensory profile

Cosmetic / personal care

- Used in topical warming products and massage formulations
- Helps provide a warming sensation on the skin
- Used in specialty body care and wellness products

Agriculture / animal deterrent

- Used as a natural repellent in certain agricultural and outdoor applications
- Helps deter animals and pests due to its strong pungent effect
- Used in formulations where a plant-derived deterrent is preferred

Research / analytical use

- Used as a reference compound in pharmacological and sensory studies
- Used in pain, inflammation, and TRPV1 receptor research
- Applied in analytical testing and formulation development



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SPECIFICATIONS

Test	Specification
Description	Solid
Purity	97%

STORAGE & PRECAUTION

Store at ambient conditions

PACKING

Custom packing available upon request

GMP STATUS

Manufactured under cGMP or non GMP conditions based on customer specifications and intended application.

Exim-Indis offers Capsaicin on commercial scales and welcomes enquiries. No matter the quantity you need, our exceptional quality and service will make Exim-Indis your supplier of choice. If you need any additional information or SDS, please contact us.