

0015 - Cayenne for Capsaicins by HPLC

Botanical Name: *Capsicum annuum*

Common Names: Cayenne Pepper, Mississippi Sport Pepper, Black Pearl

Plant Description:

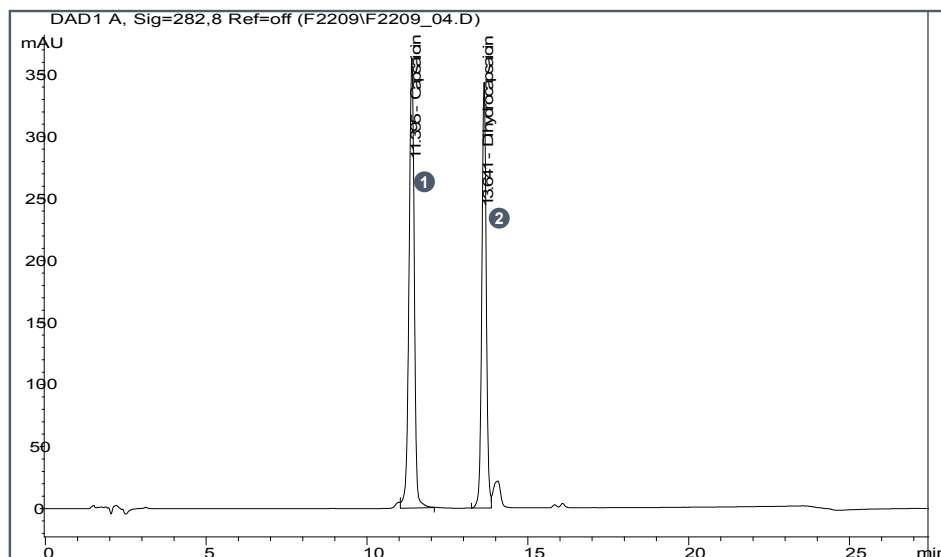
Capsicum annuum belongs to the North and South American genus of *Capsicum*. The plants demand warm weather and don't respond well to disturbances in their roots. They are small bushes with dark green leaves. They have small flowers that appear in white, cream or purple varieties. The flowers develop into variably shaped and colored that are commonly known as peppers. These peppers have a large amount of capsaicin within their flesh, and no detectable amount in their seeds.



Therapeutic Use Overview:

The active component capsaicin, present in large amount in *Capsicum annuum*, is an irritant for mammals and produces a burning sensation in tissues. This compound has found use in modern medicine in the form of topical ointments. These ointments act as anesthetics through selective binding on proteins that bind to heat and pain sensing neurons. Research is also beginning to emerge that suggests that capsaicin containing compounds may be able to kill prostate cancer cells by causing them to undergo apoptosis.

Representative HPLC Analysis: Mixed Standard Solution



Analytes:

① Capsaicin, ② Dihydrocapsaicin

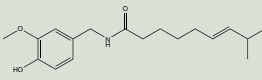
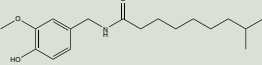
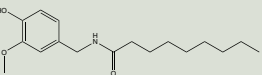
Instrument Parameters

Column: Phenomenex Luna C18(2), 150 x 3.0 mm, 3 μ m
Detection: UV-Vis @ 282 nm
Flow Rate: 0.5 mL/min
Injection Volume: 10 μ L
Temperature: 30° C
Mobile Phase A: H₂O
Mobile Phase B: ACN

Gradient Program

Time (min)	%A	%B
0.0	55	45
4.0	50	50
7.5	45	55
20.0	10	90
22.5	55	45
27.5	55	45

Phytochemical Reference Standards

Product Description And Details	Product ID	Qty
 <p>CAPSAICIN(METHYL-N-VANILLYL-6-NONENEAMIDE) Grade: P CAS#: [404-86-4] Chemical Formula: C₁₈H₂₇NO₃ FW: 305.42</p>	ASB-00003135-005	5mg
	ASB-00003135-010	10mg
	ASB-00003135-025	25mg
 <p>DIHYDROCAPSAICIN Grade: P CAS#: [19408-84-5] Chemical Formula: C₁₈H₂₉NO₃ FW: 307.43</p>	ASB-00004452-010	10mg
	ASB-00004452-025	25mg
 <p>PSEUDOCAPSAICIN(NONIVAMIDE) Grade: P CAS#: [2444-46-4] Chemical Formula: C₁₇H₂₇NO₃ FW: 293.4</p>	ASB-00003137-010	10mg
	ASB-00003137-025	25mg
	ASB-00003137-100	100mg

Reference Standard Kits

Product Name	Contents	Product ID	Qty
CAYENNE(CAPSAICINS) STANDARDS KIT	CAPSAICIN(METHYL-N-VANILLYL-6-NONENEAMIDE)(P) DIHYDROCAPSAICIN(P) PSEUDOCAPSAICIN(NONIVAMIDE)(P)	KIT-00003329-010	3 x 10mg vials

Botanical Reference Materials

Product Description	Grade	Product ID	Qty
CAYENNE (CAPSICUM ANNUUM) FRUIT	RGBRM	ASB-00030855-005	5g

Additional Related Compounds

Product Description And Details	Product ID	Qty
APIGENIN Grade: P CAS#: [520-36-5] Chemical Formula: $C_{15}H_{10}O_5$ FW: 270.24	ASB-00001900-005 ASB-00001900-010 ASB-00001900-025 ASB-00001900-100	5mg 10mg 25mg 100mg
APIIN Grade: P CAS#: [26544-34-3] Chemical Formula: $C_{26}H_{28}O_{14}$ FW: 564.49	ASB-00001930-005 ASB-00001930-010	5mg 10mg
CAPSAICIN MIXTURE Grade: RG CAS#: [] Chemical Formula: $C_{18}H_{27}NO_3$ FW: 305.42	ASB-00003130-010 ASB-00003130-100	10mg 100mg
LUTEOLIN-7-O-GLUCOSIDE(CYNAROSIDE) Grade: P CAS#: [5373-11-5] Chemical Formula: $C_{21}H_{20}O_{11}$ FW: 305.42	ASB-00003130-010 ASB-00003130-100	10mg 100mg
SCOPOLETIN Grade: SH CAS#: [92-61-5] Chemical Formula: $C_{10}H_8O_4$ FW: 192.17	ASB-00019091-010 ASB-00019091-025 ASB-00019091-100	10mg 25mg 100mg
SINIGRIN POTASSIUM SALT Grade: P CAS#: [3952-98-5] Chemical Formula: $C_{10}H_{16}NO_9S_2 \cdot K$ FW: 397.46	ASB-00019270-010 ASB-00019270-025	10mg 25mg