



ACCREDITED
ISO/IEC 17025 #AT-1773
ISO 17034 #AR-1774

- Primary Constituents
- Clinical Metabolites
- Acids & Neutrals
- THC Isomers
- CBD & THC Homologs
- Degradants

PHYTOCANNABINOID GUIDE
BIOSYNTHESIS, NUMBERING, AND NUMBERING CONVENTIONS

NAMING CONVENTIONS

Phytocannabinoids are named based on the number of carbon atoms in the side chain. The number of carbon atoms in the side chain is indicated by a number followed by the suffix "cannabinol". For example, the number of carbon atoms in the side chain of Δ⁹-THC is 21, so it is named Δ⁹-THC (21:0).

CLASSIC OLIVETOL SERIES

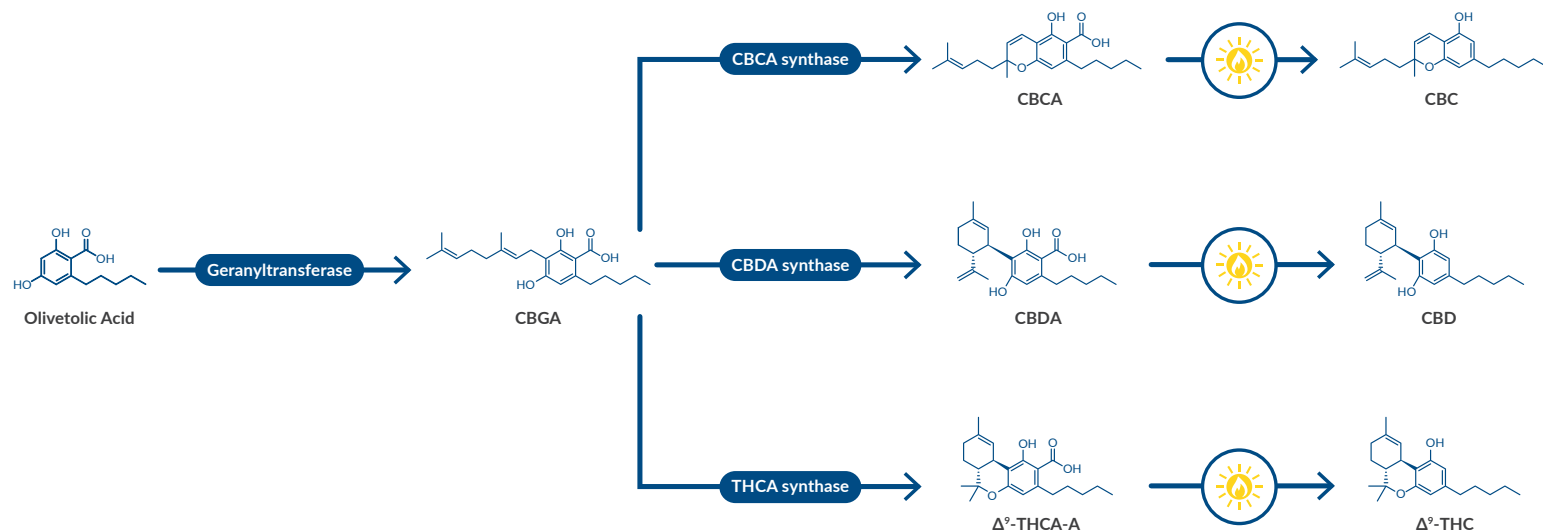
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Acidic & Neutral (Decarboxylated) Phytocannabinoids



Synthesis and decarboxylation of phytocannabinoid acids into their neutral forms.

			Available as Item No.	
Phytocannabinoid Acids		Neutral Phytocannabinoids	Acid	Neutral
Cannabigerovarinic Acid (CBGVA)	— —>	Cannabigerovarin (CBGV)	29787	29117
(±)-Cannabichromevarinic Acid (CBCVA)	— —>	(±)-Cannabichromevarin (CBCV)	32718	21974
Cannabidivarinic Acid (CBDVA)	— —>	Cannabidivarin (CBDV)	30245	20165
Δ^9 -Tetrahydrocannabivarinic Acid A (Δ^9 -THCVA-A)	— —>	Δ^9 -Tetrahydrocannabivarin (Δ^9 -THCV)	21259	18091
Δ^8 -Tetrahydrocannabivarinic Acid A (Δ^8 -THCVA-A)	— —>	Δ^8 -Tetrahydrocannabivarin (Δ^8 -THCV)	28580	27322
		Cannabivarin (CBV)		21664
Cannabidibutolic Acid (CBDDBA)	— —>	Cannabidibutol (CBDDB)	29032	32719
		Δ^9 -Tetrahydrocannabutol (Δ^9 -THCB)		33078
Cannabigerolic Acid (CBGA)	— —>	Cannabigerol (CBG)	20019	20164
(±)-Cannabichromenic Acid (CBCA)	— —>	(±)-Cannabichromene (CBC)	37558	ISO60163
Cannabidiolic Acid (CBDA)	— —>	Cannabidiol (CBD)	18090	ISO60156
Δ^9 -Tetrahydrocannabinolic Acid A (Δ^9 -THCA-A)	— —>	Δ^9 -Tetrahydrocannabinol (Δ^9 -THC)	ISO60175	ISO60157
Δ^8 -Tetrahydrocannabinolic Acid A (Δ^8 -THCA-A)	— —>	Δ^8 -Tetrahydrocannabinol (Δ^8 -THC)	25271	ISO60158
Cannabinolic Acid (CBNA)	— —>	Cannabinol (CBN)	21734	ISO60183
		Cannabinodiol (CBND)		9002479
		Cannabicitran (CBT)		21295
(±)-Cannabicyclolic Acid (CBLA)	— —>	(±)-Cannabicyclol (CBL)	35745	22036
Cannabidiphlorolic Acid (CBDPA)	— —>	Cannabidiphlorol (CBDP)	36237	33611
Δ^9 -Tetrahydrocannabiphlorolic Acid (Δ^9 -THCPA-A)	— —>	Δ^9 -Tetrahydrocannabiphlorol (Δ^9 -THCP)	36239	33691

Explore CRM Mixtures To Differentiate Acids & Neutrals On The Next Page

Phytocannabinoid Acids Mixture 6 - *Item No. 35470*

Phytocannabinoid Neutrals Mixture 8 - *Item No. 34043*

Which Pre-made Mixture is Right for You?

Quantify Up to 11 Prevalent Phytocannabinoids

Analytes Included in Mixtures	Mixture 11 (Item Nos. 21306, 32841, 32842)	Mixture 10 (Item No. 21305)	Mixture 6 (Item No. 25077)	Mixture 5 (Item No. 25076)	Mixture 3 (Item No. 23251)
CBD	✓	✓	✓	✓	✓
Δ^9 -THC	✓	✓	✓	✓	✓
CBN	✓	✓	✓	✓	✓
Δ^9 -THCA-A	✓	✓	✓	✓	
CBDA	✓	✓	✓	✓	
CBG	✓	✓	✓		
CBC	✓	✓			
CBDV	✓	✓			
CBGA	✓	✓			
Δ^8 -THC	✓	✓			
Δ^9 -THCV	✓				

Our Phytocannabinoid Mixture 11 (CRM) is available in three different concentrations to simplify your calibration protocol

Differentiate Acids & Neutrals

Analytes Included in Mixtures		Acids Mixture 6 (Item No. 35470)	Neutrals Mixture 8 (Item No. 34043)
Acids	Neutrals		
CBDA	CBD	✓	✓
CBGA	CBG	✓	✓
CBCA	CBC	✓	✓
CBDVA	CBDV	✓	✓
Δ^9 -THCVA	Δ^9 -THCV	✓	✓
Δ^9 -THCA-A	Δ^9 -THC	✓	✓
	Δ^8 -THC		✓
	CBN		✓

Quantify THC Metabolites

Analytes Included in Mixture	Δ^9 -THC Metabolite Mixture (Item No. 33167)
Δ^9 -THC	✓
(\pm)-11-hydroxy- Δ^9 -THC	✓
(\pm)-11-nor-9-carboxy- Δ^9 -THC	✓

Explore our range of CRM mixtures designed to simplify testing workflows at www.caymanchem.com/phytomix

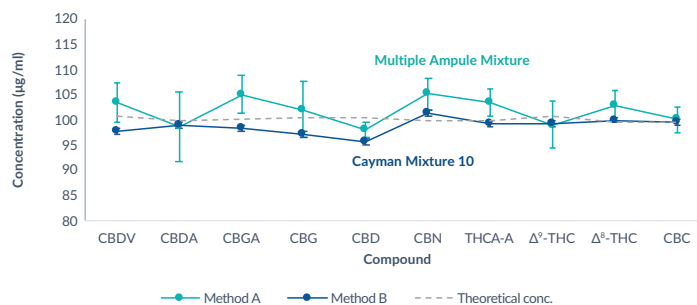
Improve Quantitation Accuracy & Reproducibility Using Pre-made, Multi-component Mixtures

We compared two methods to generate a standard curve to quantitate 10 phytocannabinoids and found pre-made CRM mixtures improve efficiency and eliminate pipetting errors.



Download the App Note:
www.caymanchem.com/accuratemix

100 μ g/ml Method Comparison



Primary Constituents & Related Novel Phytocannabinoids

Primary Constituents

Item No.	Product Name
ISO60156	Cannabidiol (CRM)
ISO60158	Δ^8 -THC (CRM)
ISO60157	Δ^9 -THC (CRM)

See all deuterated standards, acetates, and methyl esters at www.caymanchem.com

Hydrogenated Phytocannabinoids

Item No.	Product Name
27500	9(R)-Hexahydrocannabinol
27501	9(S)-Hexahydrocannabinol
36346	9(R)-Hexahydrocannabiphorol
36347	9(S)-Hexahydrocannabiphorol
36350	1(R)-THD (1(R)-H4-CBD)
36351	1(S)-THD (1(S)-H4-CBD)



Learn how our standards were used to characterize products resulting from Δ^8 - or Δ^9 -THC hydrogenation at www.caymanchem.com/HHCposter

Phytocannabinoid Acetates

Item No.	Product Name
36412	Cannabinol Acetate
35368	9(R)-Hexahydrocannabinol Acetate
36743	Δ^8 -THC Acetate (exempt preparation)
33784	Δ^9 -THC Acetate (exempt preparation)

Metabolites & Degradants

CBD & CBN Metabolites

Item No.	Product Name
27576	(-)-6 α -hydroxy Cannabidiol
33076	(-)-7-hydroxy Cannabidiol (CRM)
36661	Cannabielsoin (CRM)
34591	11-hydroxy Cannabinol

THC Metabolites

Item No.	Product Name
34023	(-)-11-hydroxy- Δ^8 -THC (CRM)
34024	(-)-11-nor-9-carboxy- Δ^8 -THC (CRM)
37635	8 β -hydroxy- Δ^9 -THC
21667	(\pm)-11-hydroxy- Δ^9 -THC (CRM)
20754	(\pm)-11-nor-9-carboxy- Δ^9 -THC (CRM)

THC Isomers

Item No.	Product Name
33011	(6aR,9R)- Δ^{10} -THC (CRM)
33012	(6aR,9S)- Δ^{10} -THC (CRM)
33013	9(R)- $\Delta^{6a,10a}$ -THC (CRM)
33014	9(S)- $\Delta^{6a,10a}$ -THC (CRM)
36898	exo-THC (CRM)
34076	9(R)- Δ^7 -THC
34077	9(S)- Δ^7 -THC
37046	(9,10a)- <i>anti</i> - $\Delta^{6a,7}$ -THC
37047	(9,10a)- <i>syn</i> - $\Delta^{6a,7}$ -THC
27074	(\pm)- <i>cis</i> - Δ^9 -THC
33864	Δ^8 - <i>iso</i> -THC
33863	$\Delta^{4(8)}$ - <i>iso</i> -THC

CBD & THC Homologs

Item No.	Product Name	Alkyl Chain Length
20165	CBDV (CRM)	3
32719	CBDB (CRM)	4
34185	CBDH (CRM)	6
33611	CBDP (CRM)	7
18091	THCV (CRM)	3
33078	Δ^9 -THCB (CRM)	4
34186	Δ^9 -THCH (CRM)	6
33691	Δ^9 -THCP (CRM)	7

See all CBD & THC homologs at www.caymanchem.com

Δ^9 -THC Metabolite Mixture (CRM)

Item No. 33167

A mixture of Δ^9 -THC metabolites in a methanolic solution intended for HPLC-UV or LC- or GC-MS applications

Degradants/Oxidative Byproducts

Item No.	Product Name
30846	(\pm)-CBCQ
36872	CBDVQ
31772	CBGAQ
30862	CBGQ
30863	CBNQ
10005673	HU-331