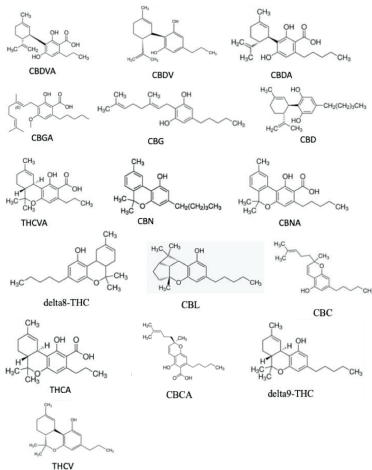


# DYAD LABS CBD METHODS QUANTIFY 60% MORE CANNABINOIDS, IN A GREATER VARIETY OF PRODUCT MATRICES THAN ANY OTHER METHOD AVAILABLE.



*The need to accurately measure individual cannabinoid levels (CBDs) in both raw materials and finished goods is more acute than ever. There are more than 100 CBDs isolated from cannabis. Dyad Labs developed new UPLC-PDA and UPLC-MS/MS methods to quantify products with differing specifications and matrices -- including CBD oil, dietary supplement powders and botanical powders.*



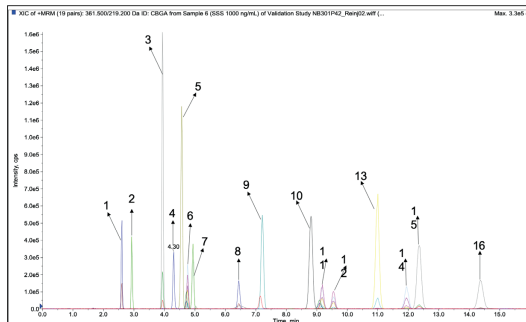
## The specific CBDs measured by the new Dyad Methods

Analyte and IS	Abbreviation	Analyte and IS	Abbreviation
Cannabidivarinic acid	CBDVA	Cannabinolic Acid	CBNA
Cannabidivarin	CBDV	Delta-9-Tetrahydrocannabinol	delta9-THC
Cannabidiolic acid	CBDA	Delta-8-Tetrahydrocannabinol	delta8-THC
Tetrahydrocannabinolic Acid	THCA	Cannabicyclol	CBL
Cannabigerolic acid	CBGA	Cannabichromene	CBC
Cannabigerol	CBG	Cannabichromenic Acid	CBCA
Cannabidiol	CBD	Cannabidiol-D3 (IS)	CBD-d3
Tetrahydrocannabivarin	THCV	Cannabinol-D3 (IS)	CBN-d3
Tetrahydrocannabivarinic acid	THCVA	Delta-9-Tetrahydrocannabinol-D3 (IS)	delta9-THC-d3
Cannabinol	CBN		

## THE METHODS

The benefits of the new Dyad Labs CBD quantification method are several:

- ⊙ A 60% increase in CBDs measured over the existing AOAC method.
- ⊙ Utilizing both LC-MS/MS and UPLC-PDA technologies, the Dyad methods can quantify extremely low concentration levels.
- ⊙ The methods cover raw materials and a variety of finished good applications.
- ⊙ By going beyond the current AOAC requirements, the Dyad Labs method allows brands and manufacturers to build in the testing data that will be required in the future.
- ⊙ THC testing to meet FDA regulations.



## The Representative Chromatogram of 16 CBDs

Peak #	Analyte	RT (min)
1	CBDVA	2.65
2	CBDV	2.98
3	CBDA	3.96
4	CBGA	4.21
5	CBG	4.57
6	CBD	4.76
7	THCV	4.94
8	THCVA	6.39
9	CBN	7.15
10	CBNA	8.78
11	delta9-THC	9.07
12	delta8-THC	9.43
13	CBL	11.03
14	CBC	11.90
15	THCA	12.15
16	CBCA	14.38