

# Report: COA Evaluation Summary

OLCC License No. 10087092BDA | ORELAP ID. 4147

545 SW 2nd Street, Corvallis OR. 97333 | 541.257.5002 | services@preelab.com | Preelab.com

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## Product Description

Client: **Arcadia Biosciences**

Product Name: **Santiam**

n/a

Matrix: Hemp Plant

Metrc Source ID: n/a

Metrc Package ID: n/a

License Number: n/a

Report ID: A2248-01

Date Collected: 2020-09-30

Date Received: 2020-09-30

Report Date: 2020-10-08

Tests Requested: Moisture Analysis  
Cannabinoid Potency Analysis

**Santiam**

## Evaluation Summary

Moisture Analysis

Tested Value (%)

**9.80 %**

Cannabinoid Potency Analysis

**Total THC \***

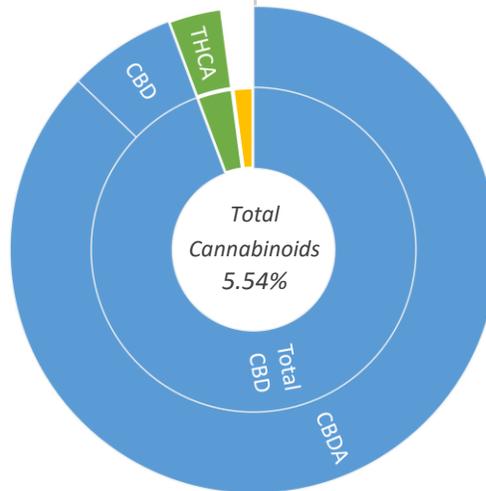
**0.18 %**

**1.8 mg/g**

**Total CBD \***

**4.63 %**

**46.3 mg/g**



Abv. Dry Wt. % Dry Wt. mg/g

THCA	0.20 %	2.0 mg/g
Δ-9-THC	< LOQ	< LOQ
Δ-8-THC	< LOQ	< LOQ
THCV	< LOQ	< LOQ
CBDA	4.83 %	48.3 mg/g
CBD	0.39 %	3.9 mg/g
CBGA	0.12 %	1.2 mg/g
CBG	< LOQ	< LOQ
CBDVA	< LOQ	< LOQ
CBDV	< LOQ	< LOQ
CBN	< LOQ	< LOQ
CBL	< LOQ	< LOQ
CBC	< LOQ	< LOQ

\* moisture compensated & adjusted for the loss of carboxylic acid group - OAR 333-064-0100

# Report: Case Narrative

*This certificate of analysis is prepared for...*

**Arcadia Biosciences**

This report presents the analytical findings for the sample collected on 2020-09-30 by Madeline Tomka and received by PREE Laboratory on 2020-09-30. The sample was assigned a laboratory ID of A2248-01. The results in this report only apply to sample A2248-01.

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The testing methods used are of sufficient sensitivity to meet the compliance criteria set in OAR 333-007. However, it is the responsibility of the client to utilize the data to comply with standards set in OAR 333-007.

All analyses were performed in accordance with PREE Laboratory's NELAP/TNI approved quality control system and all quality control data was within the laboratory's predefined acceptance criteria unless otherwise noted in the case narrative of this report. General comments are also recorded below.

**Notes:**

No special conditions were noted during the processing and testing of the sample.



Sardar, Tamzid M. | Laboratory Director  
Corvallis, Oregon



*If you have any questions regarding the information in this report, please feel free to call 541-257-5002 or email PREE at services@preelab.com.*

# Report: Evaluation Detail

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<b>Moisture Analysis</b>	<b>Evaluation Detail</b>		
Product Name: <b>Santiam</b>	Moisture Analysis	Tested Value (Moisture %)	LOQ (%)
Analysis Date: 2020-09-30		9.80 %	0.01 %
Testing Batch ID: V834,833,832,831,830			
Testing Method: LSOP #301 Moisture Analysis			

<b>Cannabinoid Potency Analysis</b>	<b>Evaluation Detail</b>					
Product Name: <b>Santiam</b>	Cannabinoid Potency Analysis	Compound	Abrv.	Dry Wt. (%)	Dry Wt. (mg/g)	RL (%)
Analysis Date: 2020-10-05	<b>Total THC *</b>	Tetrahydro-cannabinolic acid	THCA	0.20 %	2.0	0.1 %
Testing Batch ID: V837,834,833,829,827,826,823	0.18 %	Delta9 Tetrahydro-cannabinol	Δ-9-THC	< LOQ	< LOQ	0.1 %
Testing Method: LSOP #303 Cannabinoid Quantification	1.8 mg/g	Delta8 Tetrahydro-cannabinol	Δ-8-THC	< LOQ	< LOQ	0.1 %
		Tetrahydrocannabivarin	THCV	< LOQ	< LOQ	0.1 %
	<b>Total CBD *</b>	Cannabidiolic acid	CBDA	4.83 %	48.3	0.1 %
	4.63 %	Cannabidiol	CBD	0.39 %	3.9	0.1 %
	46.3 mg/g	Cannabigerolic acid	CBGA	0.12 %	1.2	0.1 %
		Cannabigerol	CBG	< LOQ	< LOQ	0.1 %
		Cannabidivarinic acid	CBDVA	< LOQ	< LOQ	0.1 %
		Cannabidivarin	CBDV	< LOQ	< LOQ	0.1 %
		Cannabinol	CBN	< LOQ	< LOQ	0.1 %
		Cannabicyclol	CBL	< LOQ	< LOQ	0.1 %
		Cannabichromene	CBC	< LOQ	< LOQ	0.1 %

Note: Accreditation for Δ-8-THC, THCV, CBGA, CBG, CBDVA, CBDV, CBL, CBC, CBN is not offered by ORELAP and therefore are not accredited tests.

\* moisture compensated & adjusted for the loss of carboxylic acid group - OAR 333-064-0100

# Report: Quality Check



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<b>Moisture Analysis</b>	<b>Quality Control Detail</b>						
Analysis Date: 2020-09-30	Moisture Analysis		MB	LCS	Expected Value (%)	Tested Value (%)	Pass Criteria
Testing Batch ID: V834,833,832,831,830			○		0.0%	0.2%	± 2.5%
				●	100.0%	100.0%	± 2.5%

<b>Cannabinoid Potency Analysis</b>	<b>Quality Control Detail</b>						
Analysis Date: 2020-10-05	Cannabinoid Potency Analysis		MB	LCS	Expected Value (%)	Tested Value (%)	Pass Criteria
Testing Batch ID: V837,834,833,829,827,826,823	Tetrahydro-cannabinolic acid		○		< 0.1%	< 0.1%	< 0.1%
	Delta9 Tetrahydro-cannabinol		○		< 0.1%	< 0.1%	< 0.1%
	Cannabidiolic acid		○		< 0.1%	< 0.1%	< 0.1%
	Cannabidiol		○		< 0.1%	< 0.1%	< 0.1%
	Tetrahydro-cannabinolic acid			●	100.0%	97.3%	80-120%
	Delta9 Tetrahydro-cannabinol			●	100.0%	96.2%	80-120%
	Cannabidiolic acid			●	100.0%	94.6%	80-120%
	Cannabidiol			●	100.0%	97.8%	80-120%

*Note: Accreditation for Δ-8-THC, THCV, CBGA,CBG, CBDVA, CBDV, CBL, CBC, CBN is not offered by ORELAP and therefore are not accredited tests.*

## Definitions

- Limit of Quantitation (LOQ): The minimum level, concentration, or quantity of a target analyte that can be reported with a specific degree of confidence.
- Method Blank (MB): A quality control sample that is free of the analyte being measured.
- Laboratory Control Sample (LCS): A quality control sample with a known amount of the analyte used to demonstrate accuracy.
- Field Duplicate: A second sample collected in the field using the same sampling method as the primary sample.
- Action Limit: Analyte levels set by the state of Oregon (OAR 333-007) indicating that follow-up action is necessary.
- ppm: parts per million, equivalent to 1 µg/g and 1 µg/L or 0.001 mg/g and 0.001 mg/L
- COA: Certificate of Analysis.

## Calculations

- Cannabinoid Potency :  
Wet WT% = (Exported concentration ppm) x (Dilution) x (Extraction Vol./Wet wt mg) x 100  
Total THC% = (%THCA) x 0.877 + (%THC)  
Total CBD% = (%CBDA) x 0.877 + (%CBD)  
Total THC (Dry WT)% = % total THC(wet) / [1-(% moisture/100)]  
Total CBD (Dry WT)% = % total CBD(wet) / [1-(% moisture/100)]
- Percentage Recovery :  
% Rec. = [(Amount measured) / (Known amount)] \* 100