

CERTIFICATE OF ANALYSIS

CLIENT DETAILS: Vape Element
DATE STARTED: 02-Aug-2022
CERTIFICATE NUMBER: CA22387
STUDY REFERENCE: PN22045

SAMPLE DETAILS

SAMPLE DESCRIPTION: Cuban 20mg/ml
BATCH NUMBER: CUS20722-1
USN: D273

RESULTS (AEROSOL)

Aerosol mass

ANALYTE	TEST METHOD	UNIT	RESULT	STANDARD DEVIATION
E-liquid vaporised mass (EVM) ^N	TM 11.16.1	mg/10 inhalations	29.8	7.418

Aldehydes and ketones

ANALYTE	TEST METHOD	UNIT	RESULT	STANDARD DEVIATION
Formaldehyde ^A	TM 11.11.3	ug/10 inhalations	<1.27	-
Acetaldehyde ^A	TM 11.11.3	ug/10 inhalations	nd	-
Acrolein ^A	TM 11.11.3	ug/10 inhalations	nd	-
Crotonaldehyde ^A	TM 11.11.3	ug/10 inhalations	nd	-
Diacetyl ^A	TM 11.15.1	ug/50 inhalations	nd	-
Acetyl propionyl ^A	TM 11.15.1	ug/50 inhalations	nd	-

Nicotine

ANALYTE	TEST METHOD	UNIT	RESULT	STANDARD DEVIATION
Nicotine ^A	TM 11.12.1	mg/g	17.22	2.866
	TM 11.12.1	mg/10 inhalations	0.51	-

Propylene glycol and glycerin

ANALYTE	TEST METHOD	UNIT	RESULT
Propylene glycol ^A	TM 11.12.1	mg/g	280.8
Glycerin ^A	TM 11.12.1	mg/g	453.3

RESULTS (LIQUID)

ANALYTE	TEST METHOD	UNIT	RESULT
Density ^A	OP 11.67.1	g/ml	1.1776

^A Accredited to ISO 17025

^N Not accredited to ISO 17025

nd Not detected

REPORTING LIMITS

Compound	Unit	Limit of detection	Limit of quantification
Formaldehyde	ug/10 inhalations	0.454	1.27
Acetaldehyde	ug/10 inhalations	0.932	2.30
Acrolein	ug/10 inhalations	1.09	4.99
Crotonaldehyde	ug/10 inhalations	2.12	9.49
Diacetyl	ug/50 inhalations	0.2	0.4
Acetyl propionyl	ug/50 inhalations	1.0	1.1

ADDITIONAL INFORMATION

Puffing carried out using the standard puffing regime

- 55ml volume
- 3 second duration
- 30 second inter-inhalation duration

Aerosol generation carried out using Cerulean CET18 and MV Sabre ENDS system

TM 11.11.3

Sample aerosol was vaped through an impinger solution of 2,4 DNPH (dinitrophenylhydrazine) where analytes were derivatised. Analysis of standards and samples was carried out using high performance liquid chromatography with UV detection (HPLC-UV Agilent 1260 Infinity II) and the Thermo Scientific Acclaim Carbonyl C18 column 5um x 4.6 x 250mm.

TM 11.15.1

Sample aerosol was captured using ORBO charcoal tubes. Analytes were desorbed using carbon disulphide and methanol. Analysis of standards and samples was then carried out using gas chromatography with mass spectrometry (GC/MS Agilent 7890B/5977B) and a DB-624 column 60m x 0.250mm x 1.40um.

TM 11.12.1

Sample aerosol was captured on Cambridge Filter Pads before being extracted using propan-2-ol. Standards and samples were analysed using gas chromatography with flame ionisation detection (GC-FID Agilent 7890B) and a DB-ALC1 column 30m x 0.320mm x 1.80um.

CONDITIONS OF CERTIFICATE

This Certificate of Analysis relates only to the samples supplied to the laboratory. All samples have been provided by the Client. The results in this certificate should only be reproduced in full. All testing is carried out at the laboratory's permanent facilities.

CERTIFICATE APPROVAL

Laboratory Manager



Rachael Davis (Aug 15, 2022 12:20 GMT+1)

Rachael Davis

Quality Manager



David Lawson (Aug 15, 2022 10:17 GMT+1)

David Lawson

Date: 15-Aug-2022

CHEMICAL CAS BREAKDOWN

Chemical Name	CAS Number	Concentration (%)	Volume (mg/ml)
Propylene Glycol	57-55-6	18.3	150
Glycerol	56-81-5	76.212	189.9
Nicotine	54-11-5	3.5	35
Vanillin	121-33-5	0.459	12.9
Benzaldehyde	121-32-4	0.349	21.9
Ethyl Maltol	4940-11-8	1.06	10
Benzyl Benzoate	120-51-4	0.06	1
Piperonal	120-57-0	0.06	1
Total		100	









Vape Element_ CA22387_ V1.0 (Cuban 20mg)

Final Audit Report

2022-08-15

Created:	2022-08-15
By:	Jasmine Leather (jasmine.leather@inter-scientific.com)
Status:	Signed
Transaction ID:	CBJCHBCAABAAmKkoRWw8tyqkP8-qj2l79yL3ftW8LR7E

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