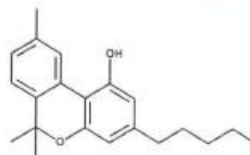


## CERTIFICATE OF TESTING



<b>Product Name</b>	Cannabinol, 98 %
<b>Product Code</b>	SN03I
<b>Batch Number</b>	SN03I220954
<b>CAS Number</b>	521-35-7
<b>Molecular formula</b>	C <sub>21</sub> H <sub>26</sub> O <sub>2</sub>
<b>Molecular Weight</b>	310.4 g/mol
<b>Date of Analysis</b>	25/10/2022
<b>Date of Manufacture</b>	10/10/2022
<b>Storage conditions</b>	20 °C ± 5 °C, protected from light and air
<b>Expiry (re-test) date</b>	10/2023

ASSAY	ACCEPTANCE CRITERIA	LOQ	RESULT
Appearance	White to yellowish	N/A	White
Appearance (form at RT)	Crystalline powder	N/A	Conforms
Proton NMR spectrum	Conforms to structure	N/A	Conforms
Cannabinoids (HPLC, 228 nm)			
- CBC	N/A	0.17 %	ND
- CBD	N/A	0.17 %	ND
- CBDV	N/A	0.17 %	ND
- CBG	N/A	0.17 %	ND
- CBN	≥ 98.00 %	0.17 %	98.86 %
- THCV	N/A	0.17 %	ND
- Δ8-THC	≤ 0.05 %	0.05 %	ND
- Δ9-THC	≤ 0.05 %	0.05 %	ND
Residual solvents <sup>1</sup>			
- ∑ Acetone, ethanol, ethyl acetate, heptane, pentane, propan-2-ol	≤ 5000 ppm	200 ppm	ND
- Dichloromethane	≤ 600 ppm	0.5 ppm	ND
- Methanol	≤ 3000 ppm	200 ppm	ND
- n-Hexane	≤ 290 ppm	200 ppm	ND
Heavy metals <sup>1</sup>			
- Arsenic (As)	< 0.1 ppm	0.04 ppm	< 0.04 ppm
- Cadmium (Cd)	< 0.1 ppm	0.01 ppm	< 0.01 ppm



- Lead (Pb)	< 0.1 ppm	0.02 ppm	0.064 ppm
- Mercury (Hg)	< 0.01 ppm	0.01 ppm	< 0.01 ppm
Aflatoxins <sup>1,3</sup>			
- B1	≤ 8.98 µg/kg	8.98 µg/kg	ND
- Aflatoxins sum	≤ 20 µg/kg	N/A	ND
- Ochratoxin A	≤ 13.37 µg/kg	13.37 µg/kg	ND
Pesticides <sup>1,3</sup>			
- Pesticides	< 0.03-0.181 <sup>2</sup> mg/kg	0.03-0.181 <sup>2</sup> mg/kg	ND
Microbiology <sup>1</sup>			
- TAMC	≤ 2000 CFU/g	10 CFU/g	14 CFU/g
- TYMC	≤ 200 CFU/g	10 CFU/g	< 10 CFU/g
- Bile-tolerant gram-negative bacteria	Absent/ 1 g	Detected / Not detected	ND
- <i>Escherichia coli</i>	Absent/ 1 g	Detected / Not detected	ND
- <i>Salmonella spp.</i>	Absent/ 25 g	Detected / Not detected	ND

<sup>1</sup>Performed in ISO 17025 certified contract testing laboratory

<sup>2</sup> Depends on the pesticide and matrix of the sample

<sup>3</sup> Tested in raw materials

N/A – Not Applicable

ND – Not Detected

Approved by:



Chemist Analyst  
2022.10.25  
  
Date, signature

Head of Quality  
2022.10.25  
  
Date, signature



## SPECIFICATION

<b>Name of material</b>	Cannabinol, CBN
<b>Product ID / SKU</b>	SN03I
<b>Origin</b>	Synthetic
<b>Purity</b>	≥ 98 %
<b>CAS</b>	521-35-7
<b>Appearance</b>	Crystalline powder
<b>Solubility</b>	Not soluble in water. Soluble in oils and organic solvents
<b>Color</b>	White to yellowish
<b>Long-term storage conditions</b>	20 ± 5 °C, store in a cool, dry place, away from light and air
<b>Packaging</b>	HDPE container, aluminium container
<b>Shelf life</b>	12 months after production, in unopened original packaging maintained under correct storage conditions.

### Material image reference



	ANALYSIS	ACCEPTANCE CRITERIA
<b>Cannabinoid profile</b> (HPLC at 228 nm and LCMS)	Cannabinol (CBN)	≥ 98.0 %
	delta-8-Tetrahydrocannabinol (Δ8-THC)	≤ 0.05 %
	delta-9-Tetrahydrocannabinol (Δ9-THC)	≤ 0.05 %
<b>Proton NMR spectrum</b>	Proton NMR spectrum	Conforms
<b>Residual Solvents</b>	∑ Acetone, 1-butanol, 2-butanol, butyl acetate, diethyl ether, ethanol, ethyl acetate, ethyl methyl ketone, methyl acetate, pentane, propan-2-ol, 1-propanol, heptane	≤ 5000 ppm
	Cyclohexane	≤ 3880 ppm
	Methanol	≤ 3000 ppm
	Dichloromethane	≤ 10 ppm
	n-hexane	≤ 290 ppm
<b>Heavy metals</b>	Arsenic (As)	< 0.1 ppm
	Cadmium (Cd)	< 0.1 ppm
	Lead (Pb)	< 0.1 ppm
	Mercury (Hg)	< 0.01 ppm
<b>Mycotoxins</b>	Aflatoxin B1	≤ 2 µg/kg
	Aflatoxins sum	≤ 4 µg/kg
	Ochratoxin A	≤ 2 µg/kg
<b>Pesticides</b>	Pesticide residues	< 0.01 mg/kg
<b>Microbiology</b>	Total aerobic microbial count (TAMC)	≤ 100 CFU/g
	Total yeast/mold count (TYMC)	≤ 100 CFU/g
	Bile-tolerant gram-negative bacteria	Absent/ 1g
	<i>Candida albicans</i>	Absent/ 1g
	<i>Pseudomonas aeruginosa</i>	Absent/ 1g
	<i>Salmonella</i> spp.	Absent/ 25g
<i>Escherichia coli</i>	Absent/ 1g	