

Phytochemical profile, extraction and characterization of bioactive compounds from industrial hemp (*Cannabis sativa* L.) Felina 32 variety

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Table S1. Volatile organic compounds identified in the extract of Felina 32 hemp variety.

Compound	LRI		Content range min - max [%]
	exp ¹	LRI lit ²	
α-Pinene	933	933	0.01-1.16
Benzaldehyde	960	960	0.24-2.93
Myrcene	991	991	0.64-5.54
α-Phellandrene	1005	1007	T ³
unknown terpene	1010		0.08-1.14
α-Terpinene	1017	1018	0.04-0.16
o-Cymene	1024	1025	0.59-3.89
Sylvestrene	1028	1031	0.49-1.52
Eucalyptol	1031	1032	0.06-0.16
γ-Terpinene	1058	1058	0.39-2.16
cis-Sabinene hydrate	1067	1069	0.01-0.08
unknown terpene	1072		0.05-0.14
p-Cymenene	1090	1093	0.28-0.76
trans-Sabinene hydrate	1099	1099	0.09-0.95
Linalool	1101	1101	0.15-1.83
Fenchol	1114	1119	0.09-0.52
trans-Pinene hydrate	1122	1121	0.03-0.20
trans-p-Mentha-2,8-diene-1-ol	1136	1140	0.02-0.10
trans-Pinocarveol	1139	1141	0.09-0.59
Ipsdienol	1147	1146	0.02-0.14
unknown terpene	1158		T
Borneol	1166	1173	0.35-1.14
p-Cymen-8-ol	1186	1189	1.16-2.30
α-Terpineol	1192	1195	0.46-1.30
unknown terpene	1198		0.05-0.36
Citronellol	1229	1232	0.01-0.12
α-Ylangene	1374	1371	0.06-0.21
α-Copaene	1378	1375	0.04-0.22

β -Longipinene	1410	1407	1.07-2.15
α - <i>cis</i> -Bergamotene	1419	1416	0.05-0.95
<i>E</i> -Caryophyllene	1425	1424	18.37-30.07
β - <i>cis</i> -Farnesene	1435	1440	0.05-0.20
α - <i>trans</i> -Bergamotene	1440	1432	3.52-7.30
Azulene	1448	1444	0.07-0.52
Alloaromadendrene	1455	1458	0.15-0.27
α -Humulene	1458	1454	28.54-31.27
Sesquisabinene	1461	1455	3.54-9.21
9- <i>epi</i> -(<i>E</i>)-Caryophyllene	1466	1464	0.91-1.52
γ -Gurjunene	1481	1476	0.35-0.46
α -Amorphene	1484	1482	0.23-0.58
β -Chamigrene	1488	1479	0.81-1.17
β -Selinene	1490	1492	0.28-3.59
unknown sesquiterpene	1494		0.07-1.51
α -Selinene	1499	1501	2.52-3.49
β -Bisabolene	1512	1508	0.59-0.92
β -Curcumene	1515	1511	0.52-0.76
γ -Cadinene	1518	1512	0.31-0.43
7- <i>epi</i> - α -Selinene	1523	1518	0.07-0.21
β -Guaiane	1526	1523	0.19-0.26
unknown sesquiterpene	1528		0.82-1.33
Selina-4(15),7(11)-diene	1541	1540	0.35-1.07
unknown sesquiterpene	1543		T
Selina-3,7(11)-diene	1548	1546	0.47-1.21
(<i>E</i>)-Nerolidol	1567	1561	0.27-0.60
Caryophyllene oxide	1589	1587	2.41-6.39
Humulene epoxide I	1592	1605	0.71-2.03
Humulene epoxide II	1615	1613	1.25-3.65
unknown sesquiterpene	1657		0.01-1.32

LRI_{exp}¹ – experimentally calculated LRI; LRI_{lit}²– LRI available in library; T³ – trace (<0.05 %)

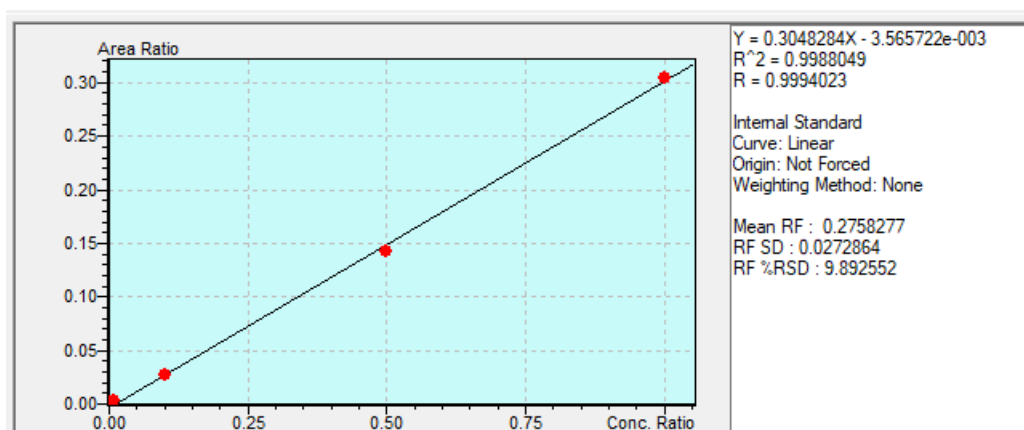


Figure S1. Calibration curve for Δ^9 -tetrahydrocannabinol (Δ^9 -THC). Linear regression equation:

$y = 0.3048x - 0.0036$; coefficient of determination $R^2 = 0.9999$.

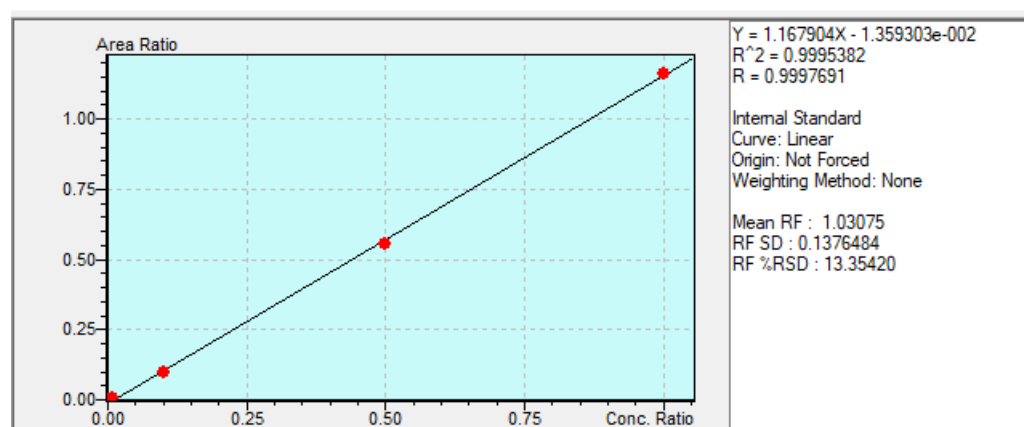


Figure S2. Calibration curve for cannabidiol (CBD). Linear regression equation:

$y = 1.1679x - 0.0136$; coefficient of determination $R^2 = 0.9995$.

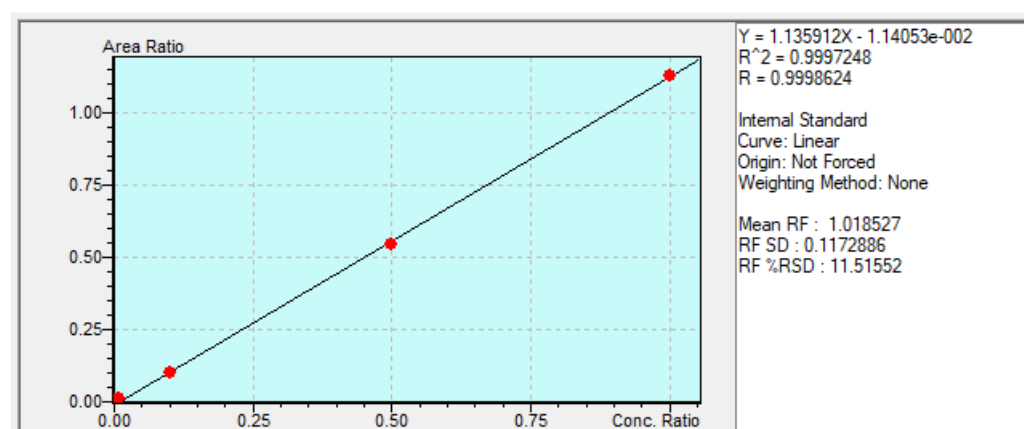


Figure S3. Calibration curve for cannabigerol (CBG). Linear regression equation:

$y = 1.1359x - 0.0114$; coefficient of determination $R^2 = 0.9997$.

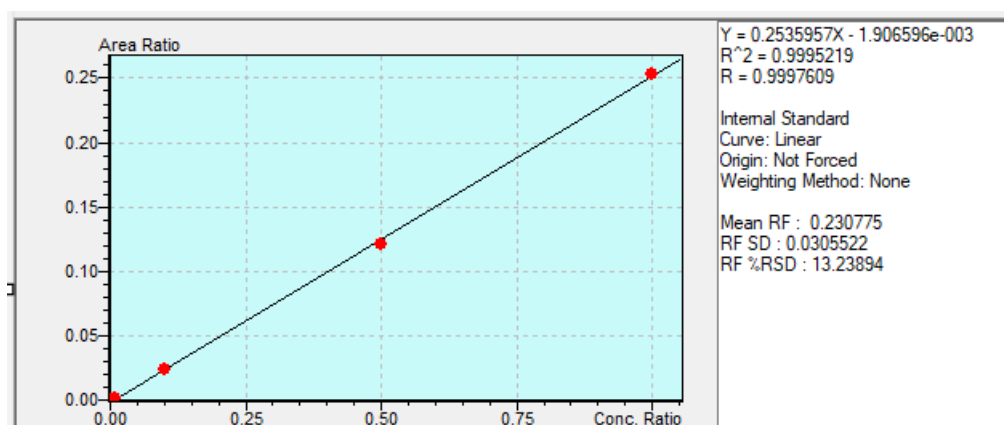


Figure S4. Calibration curve for cannabichromene (CBC). Linear regression equation:

$$y = 0.2536x - 0.0019; \text{coefficient of determination } R^2 = 0.9995.$$

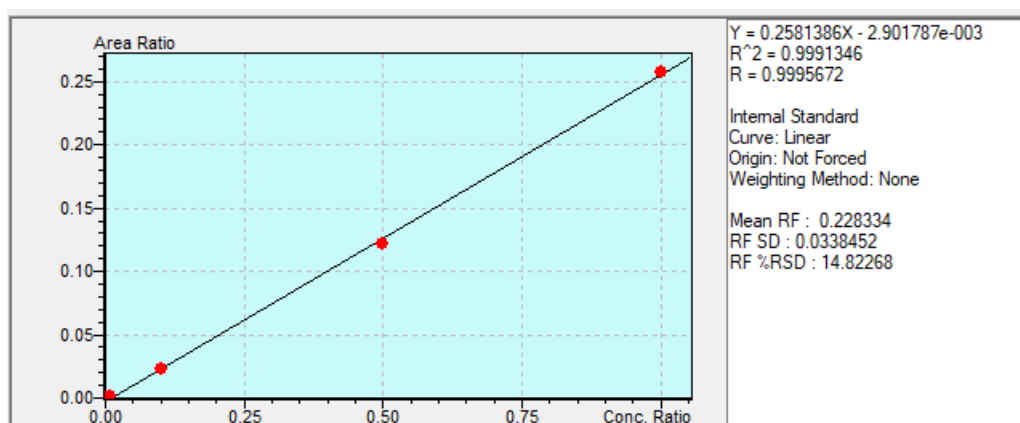


Figure S5. Calibration curve for cannabinalol (CBN). Linear regression equation:

$$y = 0.2581x - 0.0029; \text{coefficient of determination } R^2 = 0.9991.$$