

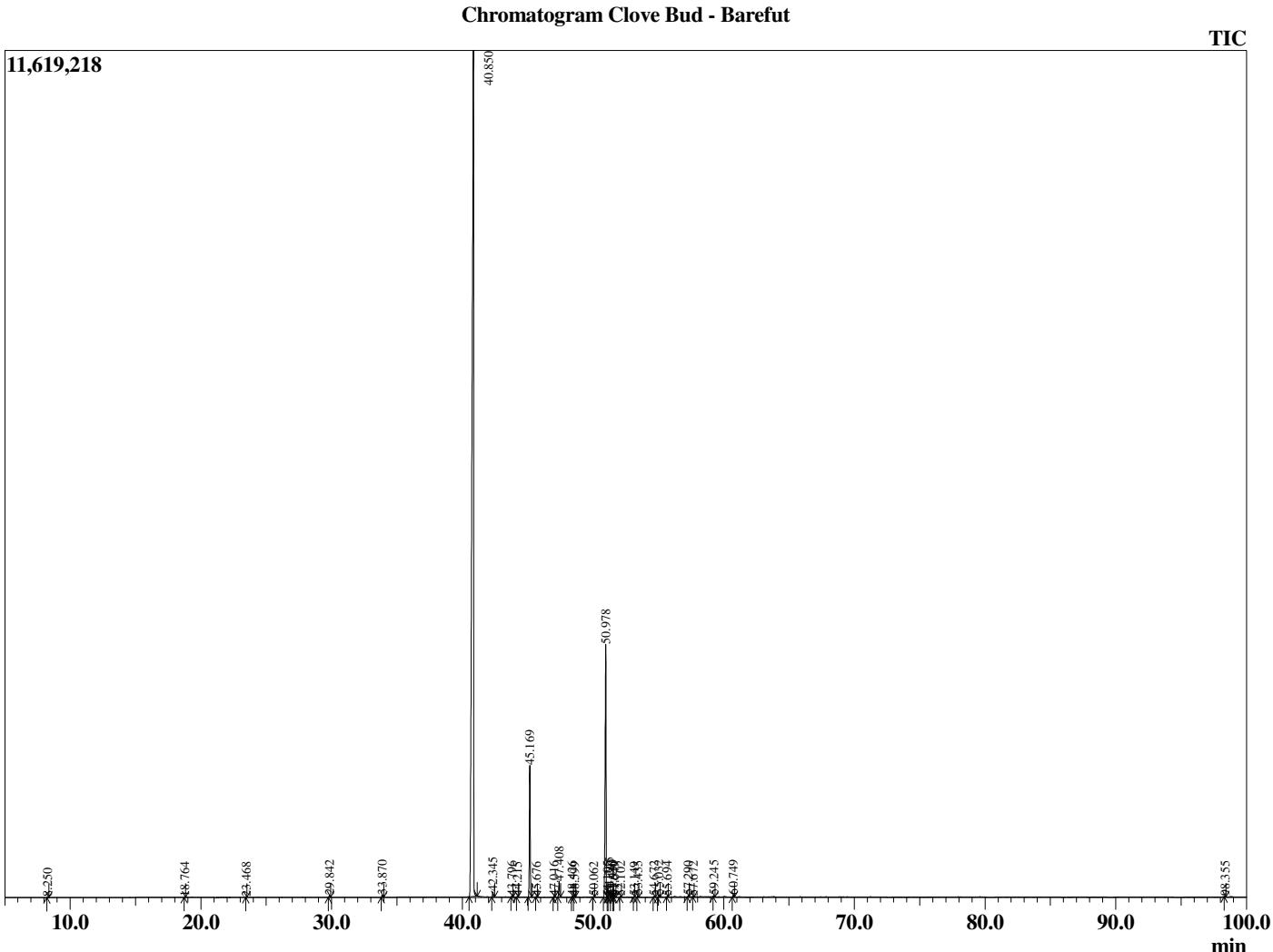
### Sample Information

Analyzed by : Dr. Robert S. Pappas  
 Analyzed : 5/16/2020 2:36:24 AM  
 Sample Type : Essential Oil  
 Sample Name : Clove Bud - Barefut  
 Sample ID : 0112  
 Injection Volume : 0.10  
 Instrument ID: : GC-3



### Peak Report TIC

R.Time	Name	Area%
4.238	3-Methylbutanal	0.01
4.352	2-Methylbutanal	0.01
8.250	Furfural	0.03
18.764	Limonene	0.01
23.468	Linalool	0.01
29.842	Methyl salicylate	0.08
33.870	Chavicol	0.10
40.850	Eugenol	78.35
42.345	alpha-Copaene	0.23
43.796	Methyleugenol	0.05
44.215	cis-beta-Caryophyllene	0.02
45.169	beta-Caryophyllene	6.20
45.676	Unidentified	0.02
47.016	Aromadendrene	0.03
47.408	alpha-Humulene	0.71
48.426	10-beta-H-Cadina-1(6),4-diene	0.05
48.599	trans-Cadina-1(6),4-diene	0.02
50.062	alpha-Muurolene	0.01
50.978	Eugenyl acetate	13.11
51.105	Unidentified	0.03
51.245	delta-Cadinene	0.24
51.440	trans-Calamenene	0.11
51.530	Zonarene	0.02
51.649	Unidentified	0.02
52.102	trans-Cadine-1,4-diene	0.02
53.149	Unidentified	0.01
53.435	Unidentified	0.06
54.672	Caryophyllene alcohol	0.05
55.032	Caryophyllene oxide	0.11
55.694	Unidentified	0.02
57.290	Unidentified	0.05
57.672	1-epi-Cubenol	0.02
59.245	14-Hydroxy-9-epi-Z-Caryophyllene	0.06
60.749	Unidentified	0.09
98.355	Eugenol dimer	0.03
		100.00



### Comments:

The analysis of this Clove Bud batch sample meets the expected chemical profile for authentic essential oil of *Eugenia caryophyllata*. No contamination or adulteration was detected. The results provided in this GCMS quality analysis reflect the chemical composition of the oil and lot referenced above on the date of analysis.