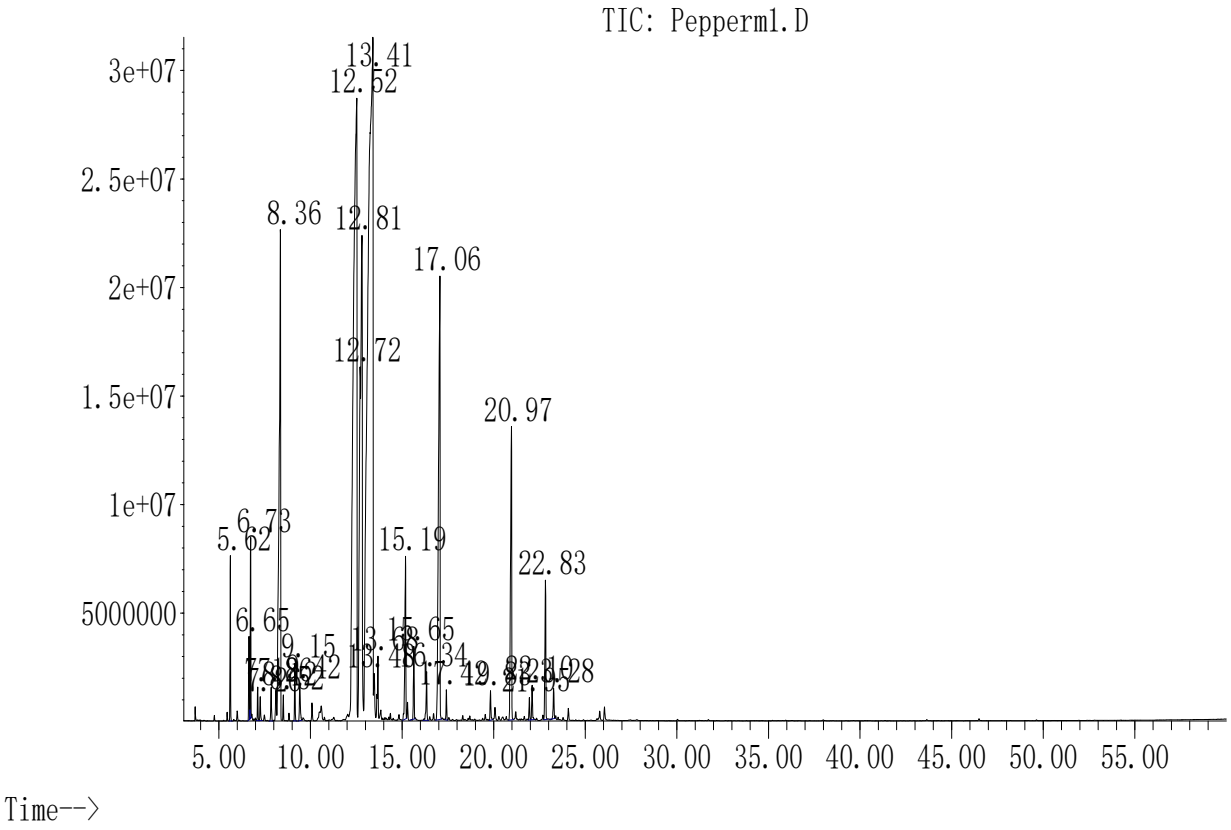
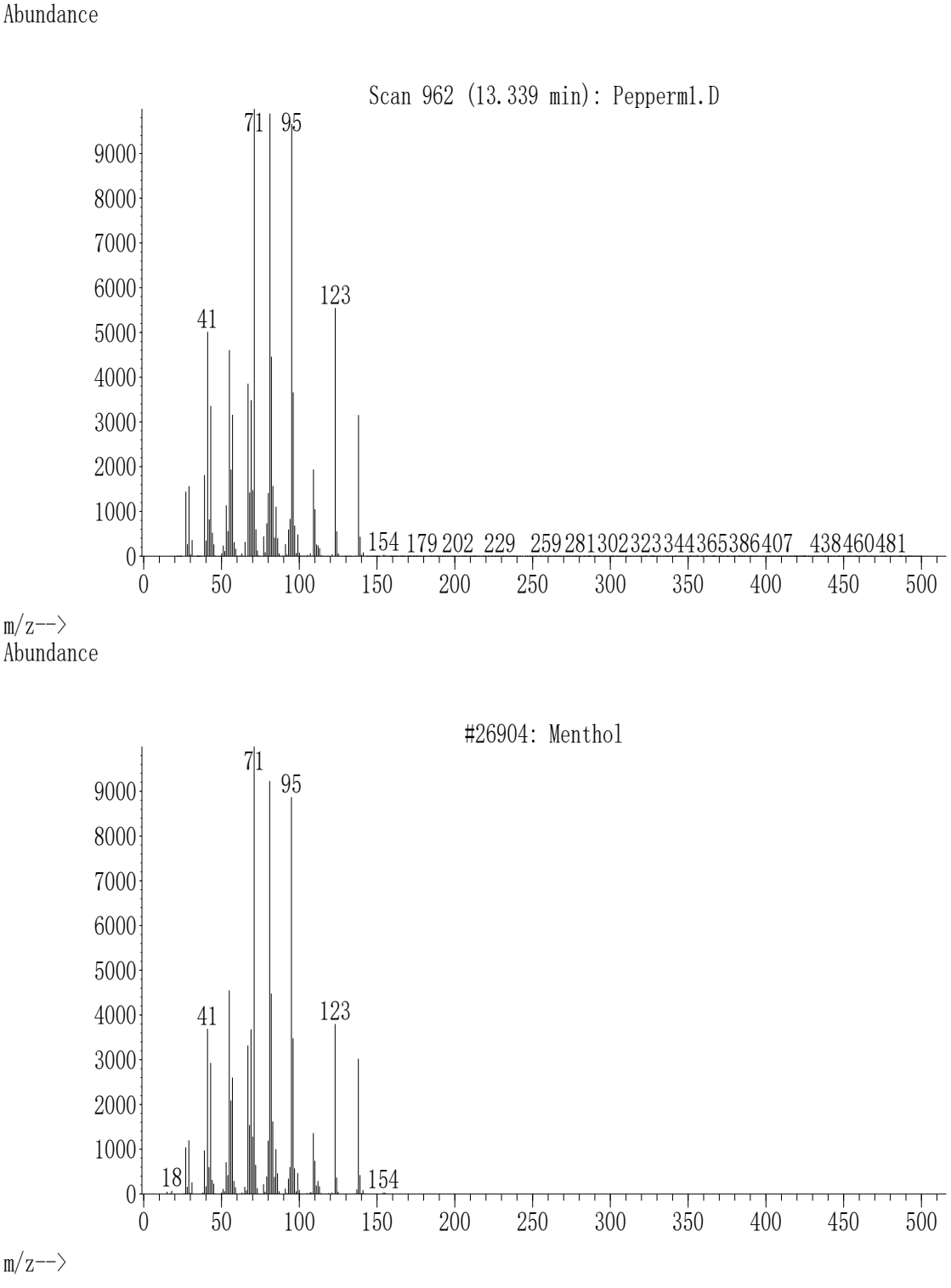
Supplementary Material

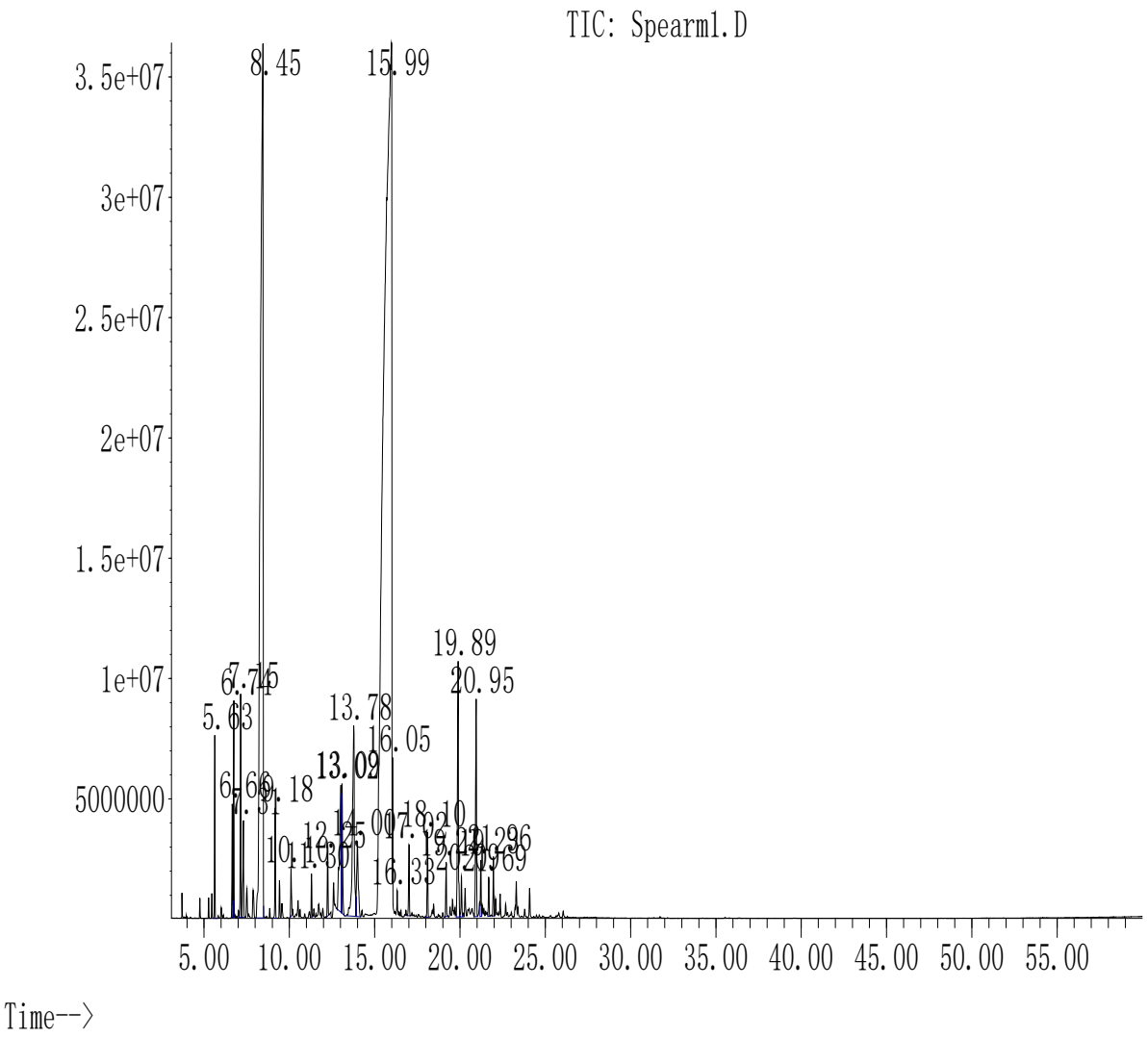
Supplementary Figure S1. Total Ion Chromatogram of *Mentha piperita* (peppermint) essential oil obtained by GC-MS method.



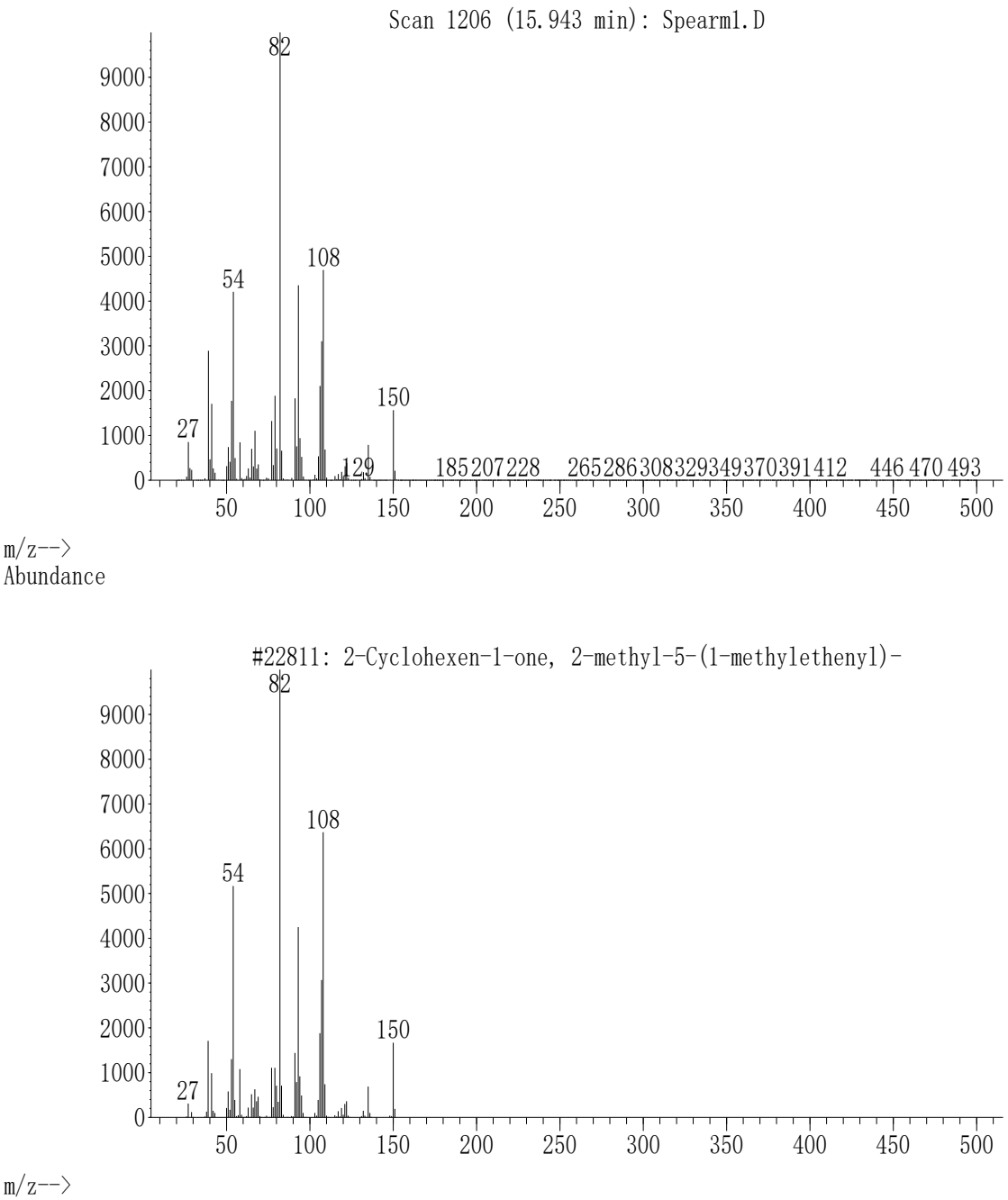
Supplementary Figure S2. Mass spectrum of menthol present in *Mentha piperita* (peppermint) essential oil, compared with menthol standard mass spectrum from NIST 04 library.



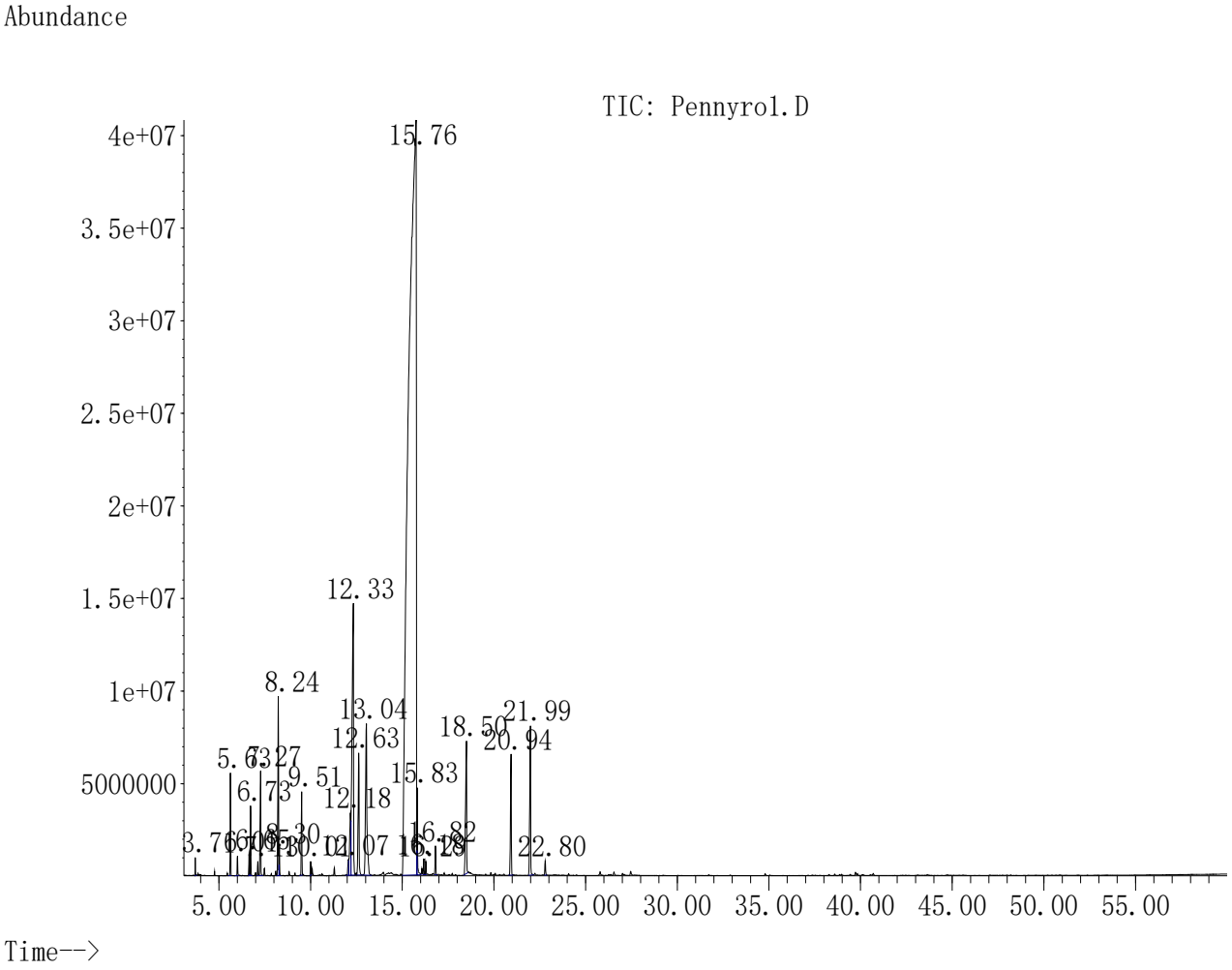
Supplementary Figure S3. Total Ion Chromatogram of *Mentha spicata* (spearmint) essential oil obtained by GC-MS method.



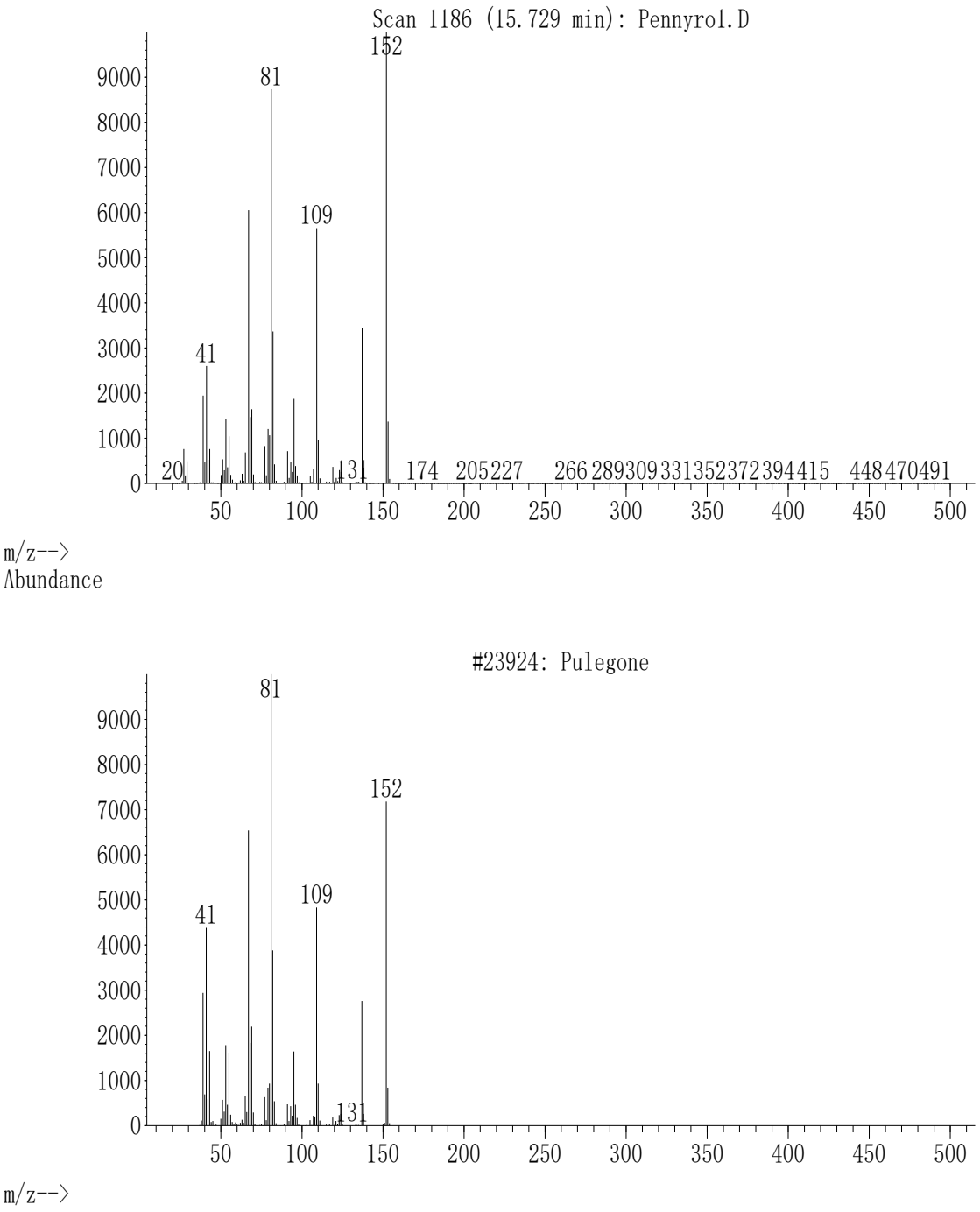
Supplementary Figure S4. Mass spectrum of carvone present in *Mentha spicata* (spearmint) essential oil, compared with carvone standard mass spectrum from NIST 04 library.



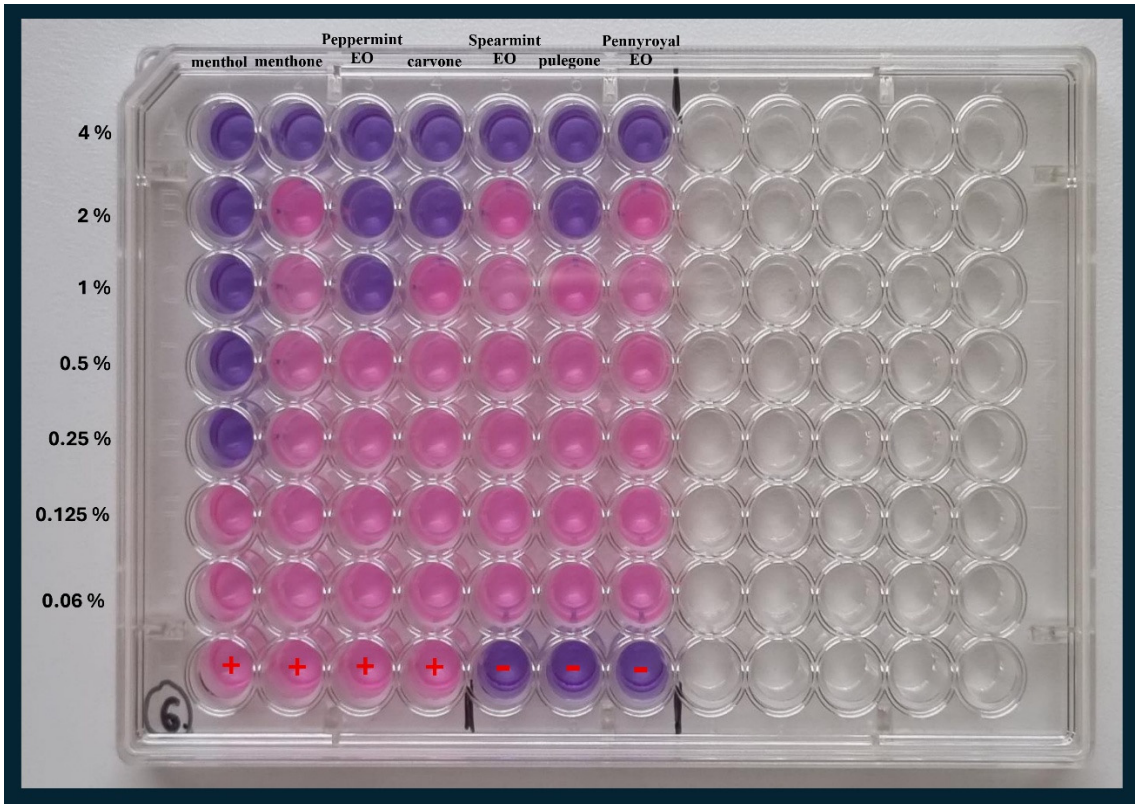
Supplementary Figure S5. Total Ion Chromatogram of *Mentha pulegium* (pennyroyal) essential oil obtained by GC-MS method.

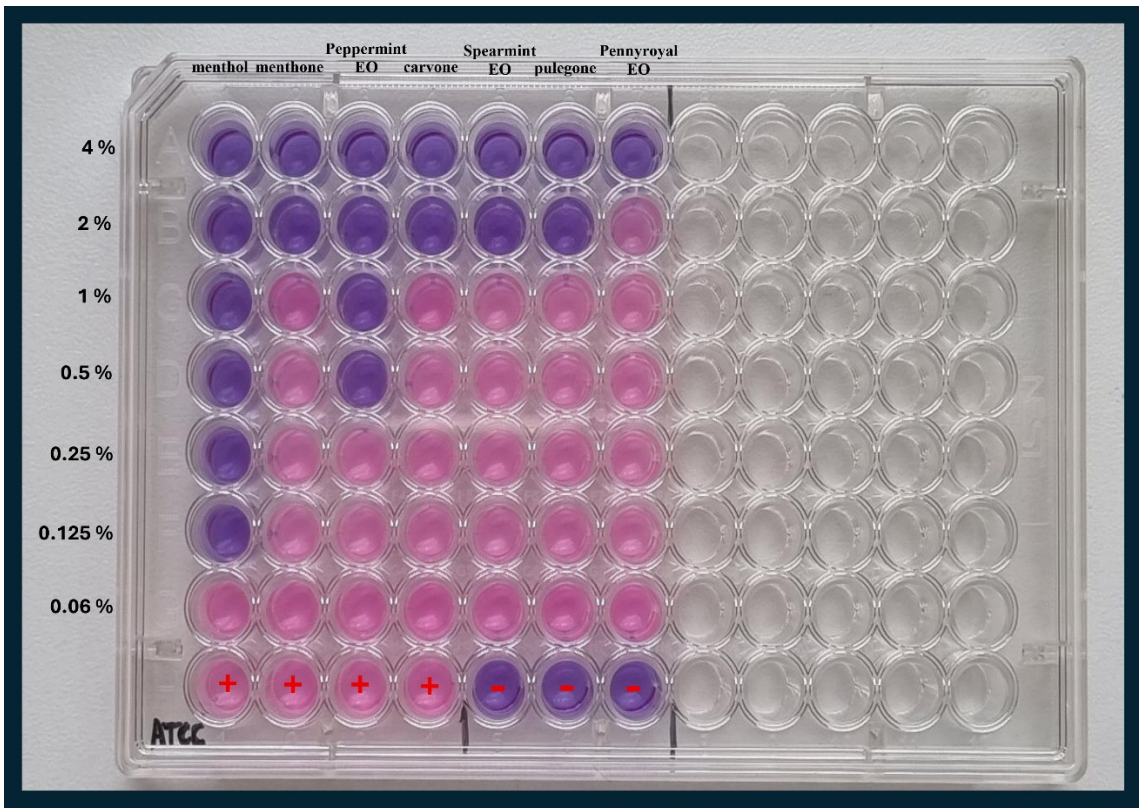


Supplementary Figure S6. Mass spectrum of pulegone present in *Mentha pulegium* (pennyroyal) essential oil, compared with pulegone standard mass spectrum from NIST 04 library



Supplementary Figure S7. Example of plates after a total of 24 hours of incubation and addition of resazurin for the drug-resistant (No. 6) and the antibiotic-sensitive (ATCC 25922) strains.





Supplementary Table S1. Drug susceptibility of selected isolates of *Escherichia coli* (n=19) and the ATCC 25922 reference strain (source: official test reports; disk-diffusion method)

No.	*E. coli* strain No.	antimicrobial agent								
		AMX	AMC	ENR	SXT	DO	OT	FFC	CT	LS
1.	1	R	R	R	R	R	R	R	S	R
2.	2	R	R	R	R	R	R	R	S	R
3.	3	R	S	R	R	R	R	R	S	R
4.	4	R	R	R	R	R	R	S	S	R
5.	5	R	R	R	R	R	R	S	S	R
6.	6	R	S	R	R	R	R	R	S	S
7.	7	R	S	R	R	R	R	S	S	R
8.	8	R	S	R	R	R	R	S	S	S
9.	9	R	S	R	R	R	R	S	S	S
10.	10	R	S	R	R	R	R	S	S	S
11.	11	R	S	I	S	I	R	S	S	S
12.	12	R	S	I	R	S	S	S	S	S
13.	13	R	S	S	S	S	S	S	S	S
14.	14	S	S	S	S	S	S	S	S	S
15.	15	S	S	S	S	S	S	S	S	S
16.	16	S	S	S	S	S	S	S	S	S
17.	17	S	S	S	S	S	S	S	S	S
18.	18	S	S	S	S	S	S	S	S	S
19.	19	S	S	S	S	S	S	S	S	S
20.	ATCC 25922	S	S	S	S	S	S	S	S	S

R resistant I intermediate S susceptible

AMX – amoxicillin
AMC – amoxicillin/clavulanic acid
ENR – enrofloxacin
SXT – sulfamethoxazole/trimethoprim
DO – doxycycline
OT – oxytetracycline
FFC – florfenicol
CT – colistin
LS – lincomycin/spectinomycin

Supplementary Table S2. Susceptibility of *E. coli* strains isolated from poultry to essential oils (EOs) from various *Mentha* species and their main constituents, as determined by the minimum inhibitory concentration (MIC).

***Escherichia coli* strain**	**MIC of main constituents or essential oil (mg/mL)**						
	menthol	**menthone**	**Peppermint**	**carvone**	**Spearmint**	**pulegone**	**Pennyroyal**
Multidrug-resistant strains							
1	1.1	17.9	9	19.2	18.5	18.7	37.1
2	2.2	71.6	9	38.4	37	37.4	37.1
3	2.2	71.6	18	38.4	37	37.4	37.1
4	2.2	71.6	9	38.4	37	37.4	37.1
5	1.1	35.8	4.5	19.2	18.5	9.3	37.1
6	2.2	35.8	9	19.2	37	18.7	37.1
7	2.2	71.6	9	19.2	18.5	18.7	37.1
8	4.4	71.6	18	38.4	37	37.4	37.1
9	4.4	71.6	18	38.4	37	18.7	37.1
10	1.1	71.6	9	38.4	37	18.7	37.1
Susceptible strains							
11	1.1	35.8	4.5	19.2	37	18.7	37.1
12	1.1	17.9	4.5	19.2	18.5	18.7	37.1
13	1.1	17.9	4.5	19.2	18.5	18.7	37.1
14	1.1	17.9	4.5	19.2	18.5	18.7	37.1
15	2.2	71.6	9	38.4	37	37.4	37.1
16	2.2	17.9	4.5	19.2	18.5	18.7	37.1
17	1.1	17.9	9	19.2	37	37.4	37.1
18	1.1	8.9	4.5	19.2	18.5	18.7	37.1
19	1.1	35.8	18	38.4	37	37.4	37.1
ATCC 25922	1.1	17.9	4.5	19.2	18.5	18.7	37.1
Density (g/mL)	0.890	0.896	0.901	0.960	0.924	0.935	0.927