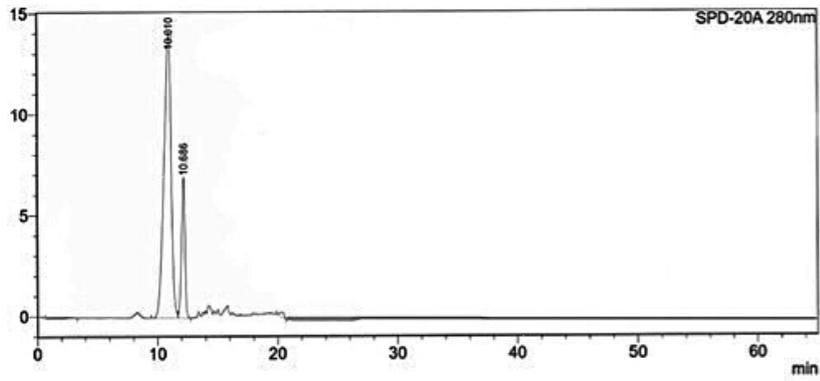
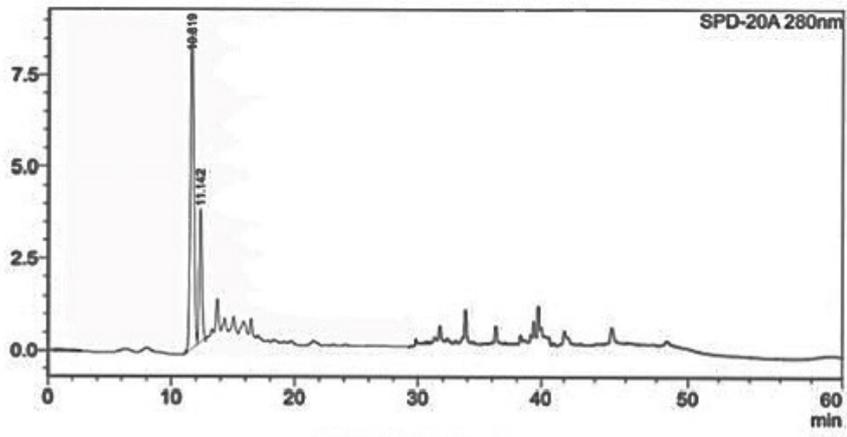


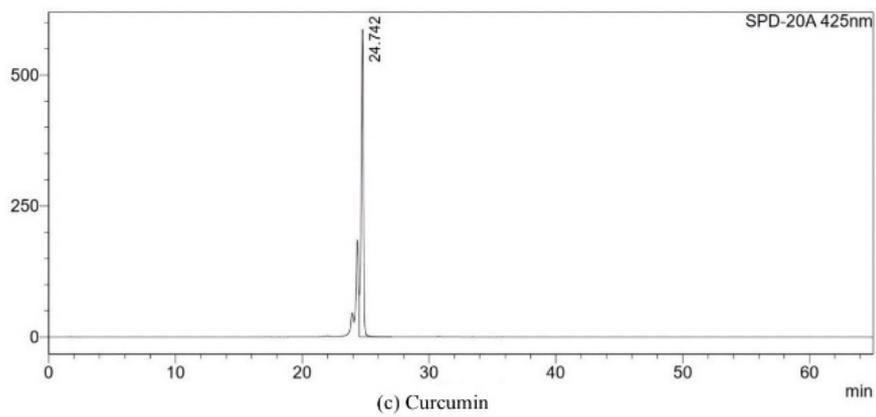
Supplementary Materials:



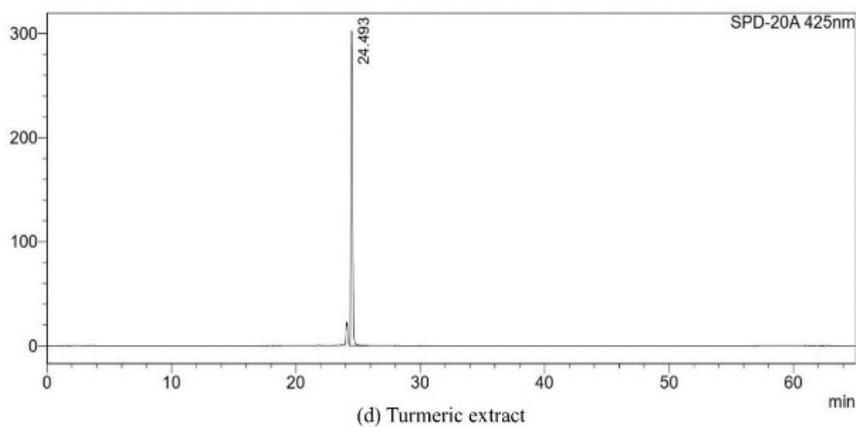
(a) Capsaicin



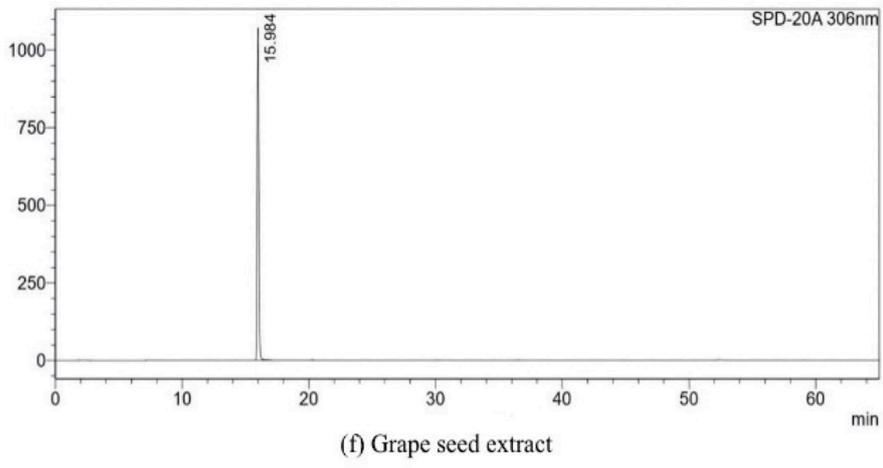
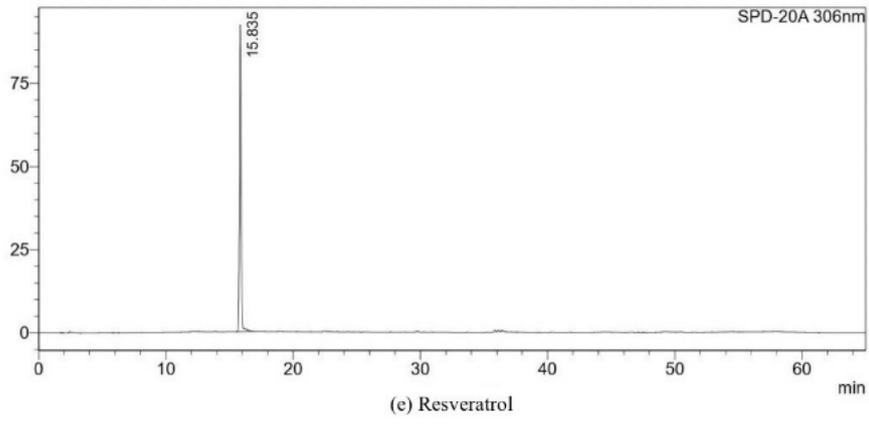
(b) Chili extract

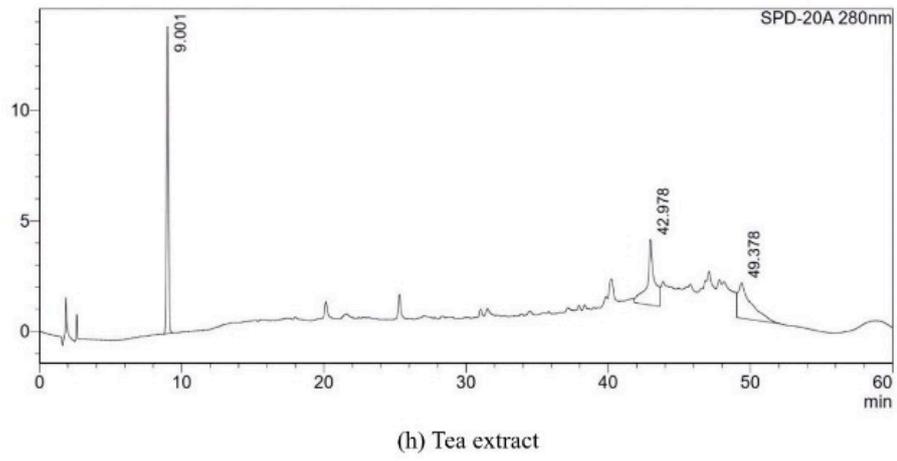
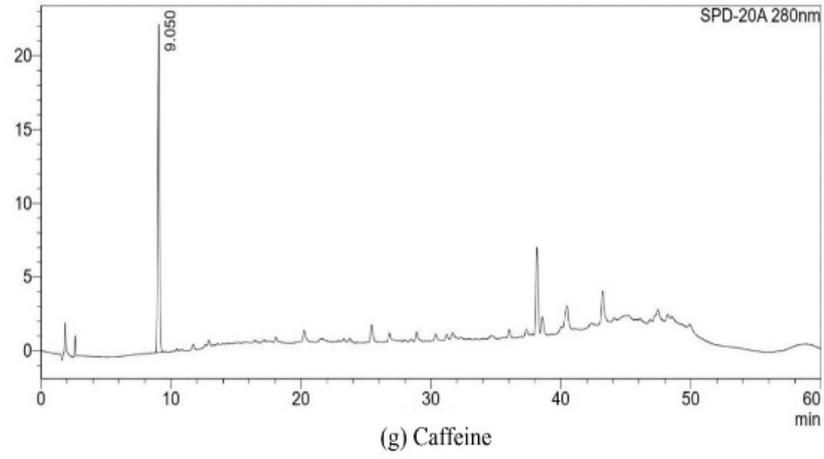


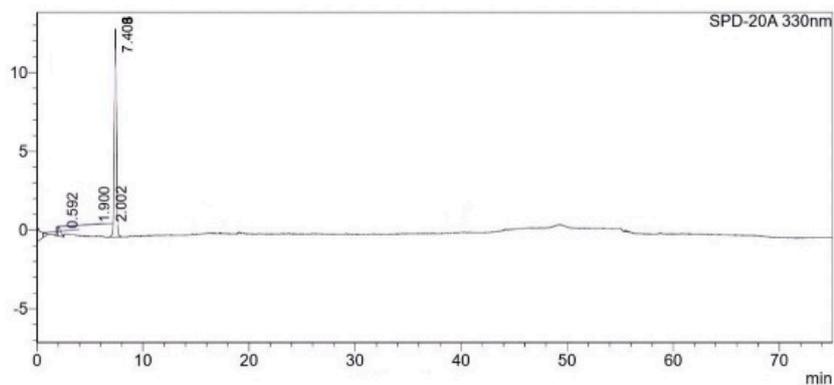
(c) Curcumin



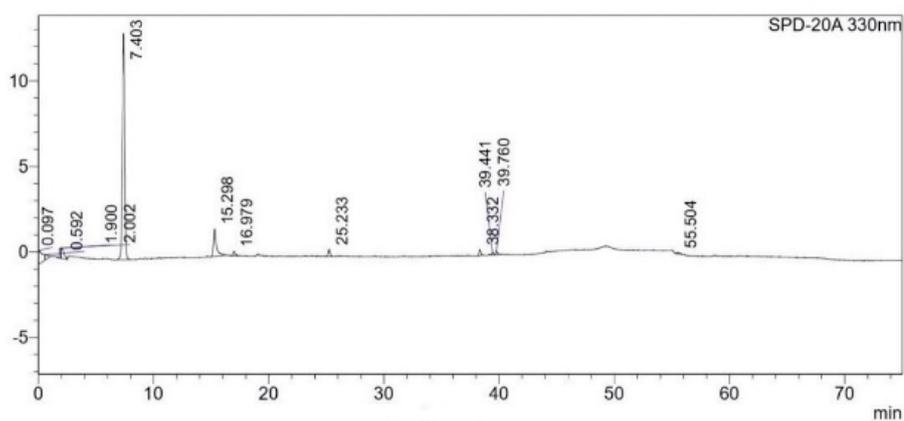
(d) Turmeric extract







(i) Chlorogenic acid Standard



(j) Chlorogenic acid

**Figure S1.** HPLC chromatograms of capsaicin (a), chili extract (b), curcumin (c), turmeric extract (d), resveratrol (e), grape seed extract (f), caffeine (g), tea extract (h), chlorogenic acid standard (i) and chlorogenic acid (j).

**Table S1** Solubility of extracts in natural oils.

Extract/Compound	Oil	Volume (mL) of solvent that can dissolve 0.0010 g of solute	Solubility
Turmeric		1	Freely soluble
Chili		1	Freely soluble
Tea	Sunflower oil	5	Sparingly soluble
Chlorogenic acid		1	Freely soluble
Grape seed		1	Freely soluble
Turmeric		1	Freely soluble

Chili		1	Freely soluble
Tea	Olive oil	5	Sparingly soluble
Chlorogenic acid		2	Soluble
Grape seed		1	Freely soluble
Turmeric		5	Sparingly soluble
Chili		5	Sparingly soluble
Tea	Coconut oil	5	Sparingly soluble
Chlorogenic acid		5	Sparingly soluble
Grape seed		1	Freely soluble

**Table S2** Characterizations of extract mixtures loaded NLCs.

Extract mixtures loaded NLCs	Mean $\pm$ SD		
	Size (nm)	PDI	Zeta potential (mV)
Day 0	153.73 $\pm$ 1.97	0.25 $\pm$ 0.00	-104.33 $\pm$ 2.52
Day 30	152.63 $\pm$ 2.41	0.21 $\pm$ 0.00	-60.27 $\pm$ 1.56*

Asterisk (\*) is significantly different at  $p < 0.05$  when compared between day 0 and Day 30 that calculated by Paired sample T-test by the SPSS program.

**Table S3** Percent entrapment efficiency and percent loading capacity (%LC) of extract mixtures loaded NLCs.

Compound	%EE $\pm$ SD	%LC $\pm$ SD
Capsaicin	95.94 $\pm$ 0.05	0.56 $\pm$ 0.00
Curcumin	97.79 $\pm$ 0.36	0.29 $\pm$ 0.00