

Supplementary Materials

Thymocid[®], A Standardized Black Cumin (*Nigella sativa*) Seeds Extract, Modulates Collagen Cross-Linking, Collagenase and Elastase Activities, and Melanogenesis in Murine B16F10 Melanoma Cells

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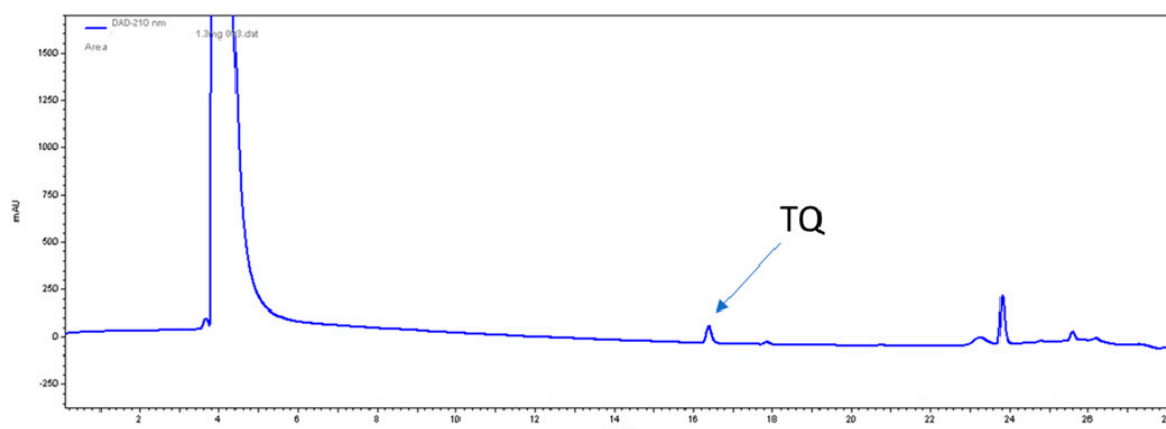
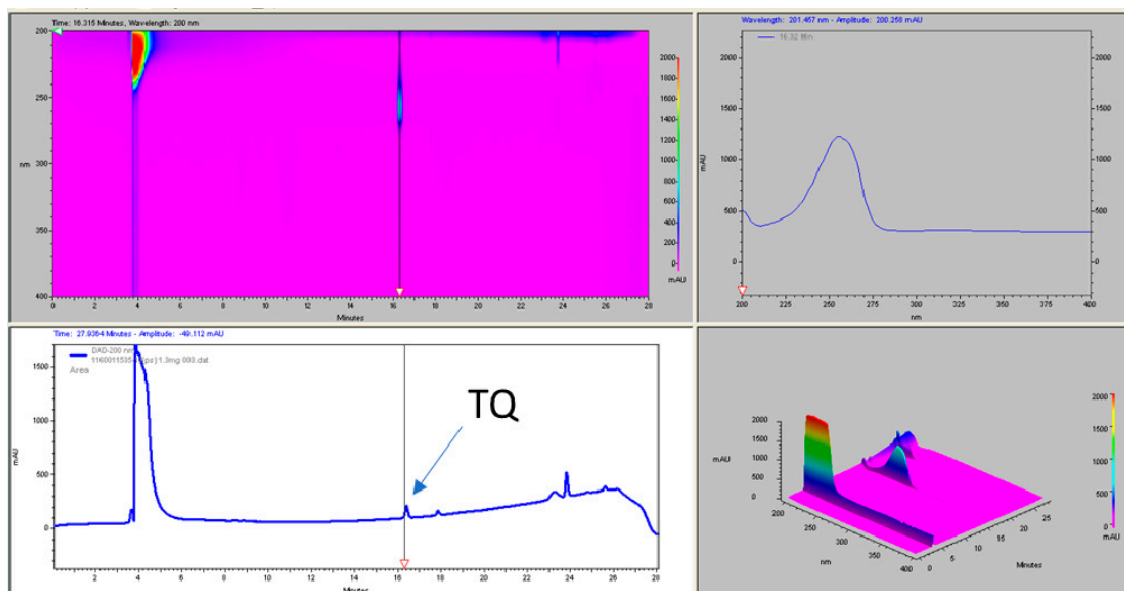
A**B**

Figure S1. HPLC chromatograms of Thymocid® and TQ was monitored at the wavelength of 210 nm (A) and a mixed wavelength ranging from 200-400 nm (B)

Concentration ($\mu\text{g/mL}$)	AUC
1	126011
5	2106298
10	4472913
50	34805071
100	67556237

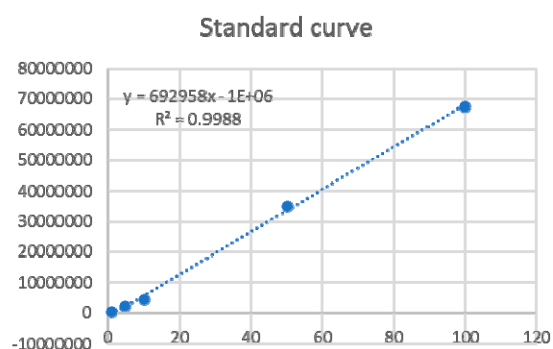


Figure S2. Standard curve used for the quantification of TQ in Thymocid®.

Table S1. Inhibitory activity of TQ on collagenase enzyme.

Sample	Concentration ($\mu\text{g/mL}$)	Enzyme activity (%)
TQ	1000	30.0 \pm 7.6
	500	18.7 \pm 5.0
	250	14.7 \pm 7.1
	125	21.7 \pm 11.1
	62.5	18.0 \pm 5.7
phen ^a	10	98.4 \pm 4.5

^aPositive control.

Table S2. Inhibitory activity of TQ on elastase enzyme.

Sample	Concentration ($\mu\text{g}/\text{mL}$)	Inhibition rate (%)	
		Type-I	Type-III
TQ	1000	30.2 \pm 0.1	45.3 \pm 1.9
	500	27.1 \pm 2.0	36.6 \pm 5.3
	250	20.2 \pm 2.8	26.9 \pm 1.4
	125	18.1 \pm 3.3	19.3 \pm 5.3
	62.5	16.1 \pm 1.0	12.9 \pm 2.9
EGCG ^a	92	73.0 \pm 1.8	75.2 \pm 4.0

^aPositive control.

Table S3. Inhibitory effect of TQ on tyrosinase enzyme.

Sample	Concentration ($\mu\text{g}/\text{mL}$)	Enzyme activity (%)	
		L-tyrosine	L-DOPA
TQ	1000	110.8 \pm 1.7	117.7 \pm 9.3
	500	113.3 \pm 1.8	115.2 \pm 6.3
	250	119.8 \pm 9.7	123.8 \pm 8.7
	125	124.5 \pm 8.5	114.8 \pm 16.5
	62.5	120.7 \pm 8.6	100.8 \pm 4.8
Kojic acid ^a	10	49.5 \pm 3.0	66.2 \pm 13.2

^aPositive control.