

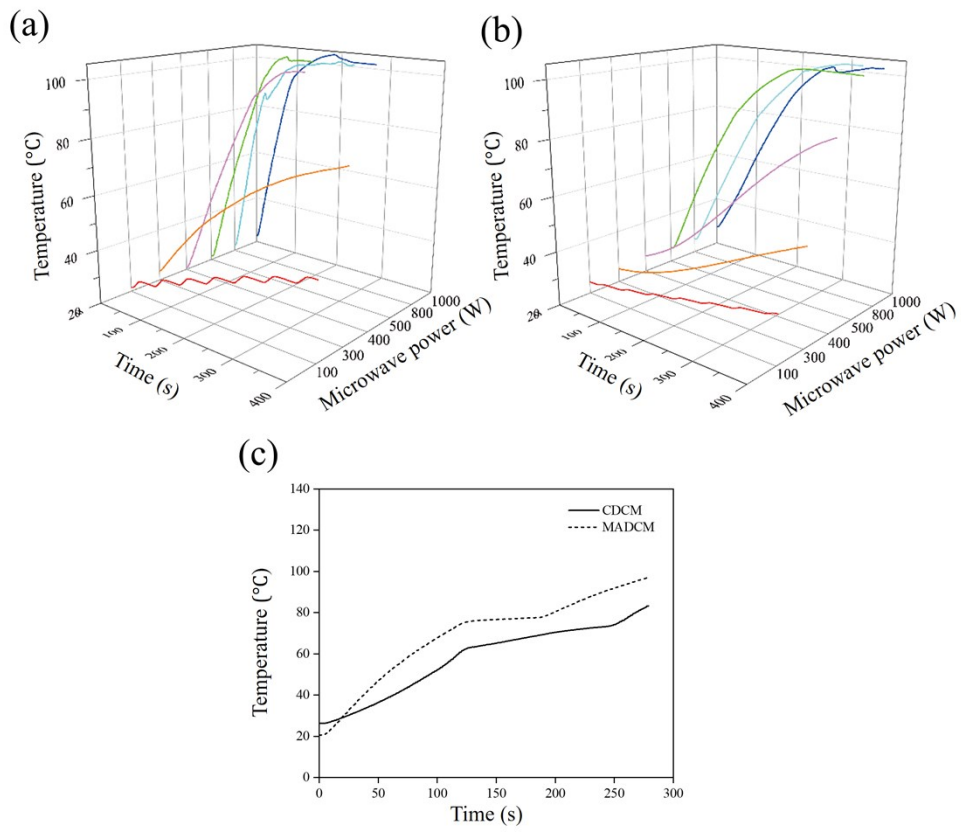
**Flavor and Texture Characteristics of Microwave Cooked Kung Pao Chicken by Different Heat Conduction and Further Aroma Improvement through Moderate Enzymatic Hydrolyzed Chicken Fat**

Supplementary data

**Figure Captions**

**Fig. S1** Temperature curves of microwave cooked chicken at different microwave power in the ceramic dish (a), the microwave absorption dish (b) and the optimal microwave cooking processes (c)

**Fig. S1**



**Table S1** Sensory evaluation standards of Kung Pao Chicken

Item	Scoring Criteria	Score
Color (25 points)	Uniform color, clear ingredients, brown red chicken	20-25
	Uneven color, clear ingredients, lighter or darker chicken	15-20
	Uneven color, unclear raw materials, light or dark color of chicken	10-15
Fragrance (25 points)	Rich aroma	20-25
	General aroma	15-20
	Very light aroma or no scent	10-15
Taste (25 points)	Salty, fresh, sweet, sour, slightly spicy, soft and delicious	20-25
	One or more of the salty, sweet and sour tastes are too prominent, not soft enough and delicious	15-20
	Without any prominent taste	10-15
Texture (25 points)	Chicken tender and peanut crisp	20-25
	Chicken is tender, but peanuts are not crispy	15-20
	Chicken is tough and peanuts are soft	10-15

**Table S2** Relaxation time and distribution of water of Kung Pao Chicken in different cooking methods

Relaxation peak	CDCM		MADCM		TCM	
	Relaxation time (s)	Proportion (%)	Relaxation time (s)	Proportion (%)	Relaxation time (s)	Proportion (%)
$T_{21}$	0.34	2.17±0.01	0.37	2.75±0.01	0.21	3.69±0.02
$T_{22}$	11.10	96.28±0.15	11.90	94.87±0.14	14.65	93.26±0.12
$T_{23}$	117.58	1.54±0.00	144.81	2.38±0.02	178.34	3.05±0.02

**Table S3** Relative concentration of major volatile compounds in the samples of MCKPC in CDCM with different oil combination and amount

Volatile compounds	Relative concentration of major volatile compounds ( $\mu\text{g}/100 \text{ g}$ ).									
	MC0	MC1	MC2	MC3	MC4	MC5	MC6	MC7	MC8	MC9
Hexanal	41.57 $\pm$ 3.44 <sup>ab</sup>	45.78 $\pm$ 0.65 <sup>bc</sup>	58.66 $\pm$ 1.66 <sup>d</sup>	31.53 $\pm$ 0.89 <sup>a</sup>	64.77 $\pm$ 3.66 <sup>d</sup>	54.81 $\pm$ 3.88 <sup>cd</sup>	172.56 $\pm$ 4.88 <sup>e</sup>	81.16 $\pm$ 5.74 <sup>e</sup>	153.13 $\pm$ 9.83 <sup>f</sup>	198.19 $\pm$ 5.61 <sup>h</sup>
Heptanal	4.65 $\pm$ 0.33 <sup>a</sup>	ND	ND	ND	ND	3.95 $\pm$ 0.11 <sup>a</sup>	19.08 $\pm$ 1.35 <sup>b</sup>	3.79 $\pm$ 0.11 <sup>a</sup>	16.24 $\pm$ 0.46 <sup>c</sup>	27.74 $\pm$ 1.96 <sup>d</sup>
Nonanal	24.58 $\pm$ 1.04 <sup>b</sup>	29.86 $\pm$ 2.11 <sup>cd</sup>	15.03 $\pm$ 1.06 <sup>a</sup>	31.79 $\pm$ 0.90 <sup>d</sup>	15.43 $\pm$ 0.44 <sup>a</sup>	14.93 $\pm$ 0.21 <sup>a</sup>	56.72 $\pm$ 1.60 <sup>g</sup>	28.01 $\pm$ 1.58 <sup>c</sup>	38.28 $\pm$ 1.08 <sup>e</sup>	45.78 $\pm$ 0.65 <sup>f</sup>
( <i>E</i> )-2-Octenal	2.22 $\pm$ 0.06 <sup>b</sup>	2.58 $\pm$ 0.07 <sup>b</sup>	2.55 $\pm$ 0.18 <sup>b</sup>	4.26 $\pm$ 0.30 <sup>d</sup>	0.89 $\pm$ 0.06 <sup>a</sup>	3.43 $\pm$ 0.19 <sup>c</sup>	4.55 $\pm$ 0.32 <sup>d</sup>	3.4 $\pm$ 0.10 <sup>c</sup>	7.66 $\pm$ 0.54 <sup>e</sup>	8.22 $\pm$ 0.23 <sup>f</sup>
( <i>E</i> )-2-Nonenal	ND	ND	ND	ND	1.7 $\pm$ 0.02 <sup>a</sup>	ND	ND	2.01 $\pm$ 0.03 <sup>b</sup>	2.67 $\pm$ 0.08 <sup>c</sup>	3.42 $\pm$ 0.15 <sup>d</sup>
( <i>E</i> )-2-Decenal	ND	ND	ND	ND	ND	2.8 $\pm$ 0.08 <sup>a</sup>	4.8 $\pm$ 0.07 <sup>c</sup>	ND	3.95 $\pm$ 0.28 <sup>b</sup>	5.94 $\pm$ 0.08 <sup>d</sup>
2,4-Decadienal	ND	ND	ND	ND	0.62 $\pm$ 0.04 <sup>ab</sup>	2.46 $\pm$ 0.03 <sup>f</sup>	1.52 $\pm$ 0.11 <sup>c</sup>	0.7 $\pm$ 0.05 <sup>b</sup>	0.58 $\pm$ 0.02 <sup>a</sup>	1.71 $\pm$ 0.05 <sup>d</sup>
1-Octen-3-ol	17.1 $\pm$ 0.24 <sup>c</sup>	12.5 $\pm$ 0.53 <sup>c</sup>	15.2 $\pm$ 0.43 <sup>d</sup>	9.4 $\pm$ 0.13 <sup>ab</sup>	10 $\pm$ 0.28 <sup>ab</sup>	8.3 $\pm$ 0.59 <sup>a</sup>	23.4 $\pm$ 1.65 <sup>g</sup>	10.7 $\pm$ 0.30 <sup>b</sup>	21 $\pm$ 0.59 <sup>f</sup>	29.8 $\pm$ 1.26 <sup>h</sup>

The means in a row with different letters were significantly different ( $p < 0.05$ ); ND: not detected.