

## Quality grade evaluation and related antioxidant activity research of different medicinal parts of Catalpa fruit

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**Table S1** Grading criteria of TCM by SQFM.

Para.	I	II	III	IV	V	VI	VII	VIII
$S_m \geq$	0.95	0.90	0.85	0.80	0.70	0.60	0.50	$S_m < 0.5$
$P_m / \% =$	95-105	90-110	85-115	80-120	70-130	60-140	50-150	$0 \sim \infty$
$\alpha \leq$	0.05	0.10	0.15	0.20	0.30	0.40	0.50	$> 0.50$
Grade	1	2	3	4	5	6	7	8

**Table S2** The  $P_i$ ,  $P_{2c}$  values and correlation coefficient ( $r$ ) of pericarp and seed samples.

No.	Pericarp				Seed			
	PHA $P_i$	CPE $P_i$	$P_{2c}$	$P_m$	PHA $P_i$	CPE $P_i$	$P_{2c}$	$P_m$
S1	130.1	74.6	102.3	119.1	134.7	206.3	170.5	104.5
S2	70.0	36.9	53.5	73.9	135.5	79.1	107.3	112.8
S3	102.6	90.7	96.7	124.9	144.8	119.7	132.3	131.7
S4	155.8	469.0	312.4	155.7	99.3	133.7	116.5	111.4
S5	120.3	56.1	88.2	102.7	80.1	79.7	79.9	93.2
S6	51.4	40.2	45.8	58.6	89.7	76.9	83.3	92.5
S7	114.5	56.6	85.6	88.1	121.5	178.7	150.1	116.3
S8	112.6	377.8	245.2	137.4	102.1	161.2	131.6	125.0
S9	112.8	50.0	81.4	106.3	113.0	136.6	124.8	106.1
S10	95.9	40.5	68.2	118.6	87.0	78.8	82.9	98.1
S11	67.6	29.2	48.4	73.4	92.3	102.0	97.2	99.4
S12	101.8	36.7	69.2	84.4	35.0	13.1	24.0	53.3
S13	136.5	118.9	127.7	136.0	95.4	94.3	94.9	111.5
S14	42.6	7.0	24.8	46.6	46.5	10.4	28.4	51.4
S15	85.9	13.8	49.8	67.0	123.8	29.2	76.5	82.7
$r$		0.8124				0.8544		

**Table S3** The results of antioxidant activity assayed by DPPH method of 15 batches of Catalpa fruit pericarp or seed.

No.	Pericarp		Seed	
	Regression equation	<i>r</i>	Regression equation	<i>r</i>
S1	$y = 29.43x + 13.84$	0.9982	$y = 45.90x + 7.287$	0.9972
S2	$y = 26.63x + 2.295$	0.9974	$y = 39.91x + 2.634$	0.9970
S3	$y = 33.37x + 4.619$	0.9945	$y = 39.87x + 4.251$	0.9976
S4	$y = 36.82x + 13.59$	0.9967	$y = 42.11x + 5.454$	0.9959
S5	$y = 24.26x + 0.877$	0.9965	$y = 38.57x + 3.783$	0.9988
S6	$y = 26.44x + 7.733$	0.9954	$y = 36.97x + 4.042$	0.9971
S7	$y = 28.23x + 5.605$	0.9972	$y = 43.39x + 5.916$	0.9969
S8	$y = 65.35x + 7.199$	0.9964	$y = 44.98x + 6.000$	0.9975
S9	$y = 27.64x + 8.201$	0.9945	$y = 36.95x + 5.287$	0.9968
S10	$y = 27.58x + 7.534$	0.9978	$y = 39.38x + 3.457$	0.9977
S11	$y = 29.33x + 5.822$	0.9942	$y = 40.89x + 4.400$	0.9939
S12	$y = 22.47x + 4.945$	0.9981	$y = 23.49x + 0.186$	0.9969
S13	$y = 33.00x + 9.315$	0.9926	$y = 42.20x + 2.400$	0.9904
S14	$y = 19.17x + 4.734$	0.9957	$y = 23.69x + 2.128$	0.9940
S15	$y = 21.98x + 2.633$	0.9979	$y = 26.30x + 3.397$	0.9982

**Table S4** The results of bivariate correlation analysis (BCA) method of pericarp and seed samples.

Peak No.	Pericarp		Peak No.	Seed	
	$r_p$	<i>P</i> -value		$r_p$	<i>P</i> -value
1	<b>-0.513*</b>	0.05	1	<b>-0.523*</b>	0.046
2	-0.477	0.072	2	<b>-0.539*</b>	0.039
3	<b>0.651**</b>	0.009	3	<b>-0.655**</b>	0.008
4	<b>-0.598*</b>	0.019	4	-0.448	0.094
5	-0.507	0.053	5	-0.234	0.401
6	-0.335	0.222	6	<b>-0.822**</b>	0.000
7	<b>-0.580*</b>	0.023	7	<b>-0.855**</b>	0.000
8	-0.477	0.071	8	<b>-0.618*</b>	0.014
9	<b>-0.552*</b>	0.033	9	<b>-0.817**</b>	0.000
10	<b>-0.749**</b>	0.001	10	-0.269	0.335
11	-0.160	0.565	11	<b>-0.729**</b>	0.002
12	-0.056	0.838	12	<b>-0.778**</b>	0.001
13	-0.275	0.318			
14	-0.320	0.243			

\* , \*\* represents significant correlation at the 0.05 and 0.01 level (two-tailed), respectively.