energies

Article

Kinetic parameters of nut shells pyrolysis

Supplementary materials

Table S1. The activation energy (Ea) and pre-exponential (A) of the walnut shells for different conversion rates (reaction order n = 1.5).

Conversion	5°C·min^{-1}			10°C·min^{-1}			20°C·min^{-1}		
(α)	Ea	A	R^2	Ea	A	R^2	Ea	A	R^2
0 - 0.05	53.9 ± 23.2	7.3 ± 0.1 × 10^{0}	0.98	83.4 ± 9.2	2.6 ± 3.5 × 10^{1}	0.94	59.1 ± 17.4	1.6 ± 2.2 × 10^{-1}	0.97
0.05 - 0.10	14.7 ± 8	7.8 ± 10.7 × 10^{-7}	0.78	31.1 ± 2.7	9.8 ± 4.5 × 10^{-6}	0.98	32.7 ± 1.5	6.7 ± 2.7 × 10^{-6}	0.98
0.10 - 0.15	5.9 ± 2.4	5.2 ± 2.9 × 10^{-9}	0.61	2.5 ± 0.4	1.6 ± 0.4 × 10^{-9}	0.51	11.9 ± 3.9	7.4 ± 4.4 × 10^{-8}	0.93
0.15 - 0.20	37.7 ± 16.1	1.6 ± 2.1 × 10^{-4}	0.98	36.7 ± 3.6	1.5 ± 1.1 × 10^{-5}	0.98	56.9 ± 2.8	3.9 ± 1.6 × 10^{-4}	0.98
0.20 - 0.25	66 ± 7.4	7.9 ± 5.9 × 10^{-3}	1.00	83.3 ± 2.8	1.0 ± 0.4 × 10^{-1}	0.99	109.5 ± 4.7	3.1 ± 2.1 × 10^{0}	1.00
0.25 - 0.30	70.4 ± 6.7	2.5 ± 2.9 × 10^{-2}	1.00	99.9 ± 1	1.9± 0.4 × 10^{0}	1.00	154.8 ± 28	4.9 ± 6.9 × 10^{5}	0.98
0.30 - 0.35	61.7 ± 14.6	3.8 ± 5.3 × 10^{-1}	1.00	94.2 ± 2.4	7.1 ± 3.0 × 10^{-1}	1.00	153.7 ± 9.4	7.5 ± 8.0 × 10^{3}	0.94
0.35 - 0.40	52.3 ± 11.9	3.1 ± 4.2 × 10^{-3}	1.00	73 ± 1.7	1.6 ± 0.4 × 10^{-2}	1.00	152.6 ± 8.6	5.4 ± 6.1 × 10^{3}	0.95
0.40 - 0.45	46.9 ± 2.1	1.3 ± 0.7 × 10^{-4}	1.00	57.6 ± 1.2	9.5 ± 1.7 × 10^{-4}	1.00	143 ± 6.6	9.1 ± 7.1 × 10^{2}	0.98
0.45 - 0.50	54.9 ± 9.7	1.1 ± 0.7 × 10^{-3}	1.00	57.4 ± 1	9.2 ± 1.6 × 10^{-4}	1.00	163 ± 29.9	2.7 ± 2.7 × 10^{5}	0.96
0.50 - 0.55	68.5 ± 13.2	1.9 ± 1.5 × 10^{-2}	1.00	73 ± 0.7	1.4 ± 0.2 × 10^{-2}	1.00	176.7 ± 46.7	1.2 ± 1.0 × 10^{7}	0.96
0.55 - 0.60	72.8 ± 8.1	3.0 ± 3.6 × 10^{-2}	1.00	92.1 ± 1.4	3.6 ± 0.9 × 10^{-1}	1.00	177.2 ± 46.7	2.5 ± 3.2 × 10^{7}	0.99
0.60 - 0.65	59 ± 19.6	1.2 ± 1.3 × 10^{-2}	0.99	98.9 ± 2	1.1 ± 0.4 × 10^{0}	1.00	185.6 ± 46.8	1.5 ± 2.1 × 10^{8}	0.98
0.65 - 0.70	36.2 ± 28.8	9.1 ± 12.8 × 10^{-3}	0.98	86.1 ± 4.9	1.8 ± 1.5 × 10^{-1}	1.00	172.5 ± 34.2	1.7 ± 1.2 × 10^{6}	0.98
0.70 - 0.75	26 ± 22.4	3.4 ± 4.8 × 10^{-4}	0.99	44.5 ± 7.4	2.7 ± 3.0 × 10^{-4}	0.98	176.9 ± 50.3	4.8 ± 6.8 × 10^{8}	0.97
0.75 - 0.80	12.8 ± 4.3	3.0 ± 3.3 × 10^{-7}	0.98	16 ± 0.5	6.4 ± 0.7 × 10^{-7}	0.99	113.5 ± 22.1	2.8 ± 3.9 × 10^{2}	0.96
0.80 - 0.85	12 ± 2.3	1.6 ± 1.1 × 10^{-7}	0.99	14.7 ± 0.4	4.8 ± 0.4 × 10^{-7}	0.99	79.2 ± 18.9	4.5 ± 5.7 × 10^{-1}	0.96
0.85 - 0.90	16.7 ± 3.3	3.5 ± 1.5 × 10^{-7}	0.99	15.1 ± 1	5.3 ± 1.0 × 10^{-7}	0.99	25.8 ± 7.5	1.5 ± 1.0 × 10^{-5}	0.95
0.90 - 0.95	32.8 ± 10.9	8.3 ± 7.9 × 10^{-6}	0.98	25.2 ± 1.9	3.1 ± 0.9 × 10^{-6}	0.98	26.3 ± 3.8	1.1 ± 0.7 × 10^{-5}	0.99
0.95 - 1.00	182.6 ± 65.2	4.4 ± 5.4 × 10^{4}	0.79	147.3 ± 5.3	1.5 ± 0.8 × 10^{1}	0.81	89.4 ± 9.8	7.4 ± 4.5 × 10^{-2}	0.83

Table S2. The activation energy (Ea) and pre-exponential (A) of the hazelnut shells for different conversion rates (reaction order n = 1.5).

Conversion	**5°C·min^{-1}**			**10°C·min^{-1}**			**20°C·min^{-1}**		
(α)	Ea	A	R^2	Ea	A	R^2	Ea	A	R^2
0 - 0.05	59,9 ± 20,8	$3.0 \pm 4.1 \times 10^{0}$	0,95	84,3 ± 9,1	$1.9 \pm 2.5 \times 10^{1}$	0,96	97 ± 6,1	$9.7 \pm 7.3 \times 10^{0}$	0,97
0.05 - 0.10	21 ± 7,5	$2.1 \pm 1.7 \times 10^{-6}$	0,92	26,3 ± 12,9	$2.5 \pm 3.0 \times 10^{-5}$	0,85	38,1 ± 2	$2.3 \pm 0.9 \times 10^{-5}$	0,97
0.10 - 0.15	4,6 ± 3,4	$6.1 \pm 6.7 \times 10^{-9}$	0,50	10,9 ± 6,8	$8.2 \pm 7.6 \times 10^{-8}$	0,76	6,1 ± 0,6	$1.1 \pm 0.2 \times 10^{-8}$	0,81
0.15 - 0.20	28,1 ± 19	$6.7 \pm 9.3 \times 10^{-5}$	0,88	45,9 ± 32,9	$5.7 \pm 8.1 \times 10^{-2}$	0,96	62,1 ± 9,1	$2.4 \pm 2.9 \times 10^{-3}$	0,98
0.20 - 0.25	57,8 ± 10	$2.2 \pm 2.1 \times 10^{-3}$	1,00	78,5 ± 31,8	$5.0 \pm 7.0 \times 10^{0}$	0,99	123,9 ± 6,8	$4.1 \pm 4.3 \times 10^{1}$	1,00
0.25 - 0.30	62,3 ± 4,1	$3.0 \pm 2.8 \times 10^{-3}$	1,00	93,5 ± 13,3	$2.3 \pm 2.7 \times 10^{0}$	1,00	149,8 ± 2,8	$1.6 \pm 0.7 \times 10^{3}$	1,00
0.30 - 0.35	56,2 ± 10,1	$3.7 \pm 5.1 \times 10^{-3}$	1,00	85,1 ± 0,4	$1.2 \pm 0.2 \times 10^{-1}$	1,00	154,1 ± 4,1	$3.4 \pm 2.0 \times 10^{3}$	1,00
0.35 - 0.40	49,8 ± 10	$1.0 \pm 1.4 \times 10^{-3}$	1,00	71,1 ± 5,1	$1.5 \pm 1.4 \times 10^{-2}$	1,00	147,3 ± 3,6	$1.1 \pm 0.4 \times 10^{3}$	1,00
0.40 - 0.45	51,5 ± 3	$2.7 \pm 1.3 \times 10^{-4}$	1,00	61,9 ± 3,8	$2.2 \pm 1.1 \times 10^{-3}$	1,00	135,2 ± 2,6	$1.6 \pm 0.7 \times 10^{2}$	1,00
0.45 - 0.50	62,1 ± 7,3	$2.5 \pm 1.8 \times 10^{-3}$	1,00	66,9 ± 7,7	$7.8 \pm 6.7 \times 10^{-3}$	1,00	125,6 ± 2,4	$3.6 \pm 1.1 \times 10^{1}$	1,00
0.50 - 0.55	74,1 ± 7,5	$2.1 \pm 1.4 \times 10^{-2}$	1,00	81,1 ± 13,1	$1.6 \pm 1.5 \times 10^{-1}$	1,00	124,1 ± 6	$4.0 \pm 3.3 \times 10^{1}$	1,00
0.55 - 0.60	71,4 ± 1,1	$9.3 \pm 3.4 \times 10^{-3}$	1,00	93,7 ± 8,9	$8.1 \pm 6.8 \times 10^{-1}$	1,00	121,5 ± 3,6	$2.1 \pm 1.0 \times 10^{1}$	1,00
0.60 - 0.65	51,9 ± 14	$3.9 \pm 5.4 \times 10^{-3}$	0,99	93,2 ± 4,7	$4.9 \pm 2.9 \times 10^{-1}$	1,00	120,8 ± 4,2	$1.9 \pm 0.8 \times 10^{1}$	1,00
0.65 - 0.70	28,8 ± 19,6	$2.7 \pm 3.8 \times 10^{-4}$	0,99	73,2 ± 18,9	$3.4 \pm 4.7 \times 10^{-1}$	0,99	115,7 ± 4,2	$9.2 \pm 5.6 \times 10^{0}$	1,00
0.70 - 0.75	19,6 ± 7,5	$2.3 \pm 3.0 \times 10^{-6}$	0,99	39,7 ± 25,8	$8.2 \pm 12.0 \times 10^{-3}$	0,98	101,4 ± 1,2	$9.0 \pm 1.4 \times 10^{-1}$	1,00
0.75 - 0.80	13,3 ± 0,6	$1.7 \pm 0.6 \times 10^{-7}$	0,99	22,5 ± 6,4	$5.0 \pm 5.8 \times 10^{-6}$	0,99	62,5 ± 8	$4.8 \pm 4.8 \times 10^{-3}$	0,99
0.80 - 0.85	14,8 ± 1	$2.4 \pm 0.7 \times 10^{-7}$	1,00	18 ± 2,8	$1.1 \pm 0.8 \times 10^{-6}$	0,99	34,7 ± 1,4	$3.1 \pm 0.8 \times 10^{-5}$	1,00
0.85 - 0.90	18,5 ± 3,3	$4.8 \pm 1.7 \times 10^{-7}$	0,99	17,4 ± 0,4	$8.2 \pm 1.3 \times 10^{-7}$	0,99	32,3 ± 3	$2.3 \pm 1.2 \times 10^{-5}$	0,99
0.90 - 0.95	32,7 ± 8,4	$6.2 \pm 3.8 \times 10^{-6}$	0,99	28,1 ± 5	$5.6 \pm 2.8 \times 10^{-6}$	0,99	32,2 ± 0,6	$2.0 \pm 0.1 \times 10^{-5}$	0,99
0.95 - 1.00	177,4 ± 54,7	$1.0 \pm 1.2 \times 10^{4}$	0,80	139,6 ± 35,3	$1.3 \pm 1.7 \times 10^{2}$	0,79	113 ± 8,5	$9.9 \pm 8.6 \times 10^{-1}$	0,85

Table S3. The activation energy (Ea) and pre-exponential (A) of the peanut shells for different conversion rates (reaction order n = 1.5).

Conversion	**5°C·min⁻¹**			**10°C·min⁻¹**			**20°C·min⁻¹**		
(α)	Ea	A	R^2	Ea	A	R^2	Ea	A	R^2
0 - 0.05	46.5 ± 6.4	$1.6 \pm 1.2 \times 10^{-3}$	0.93	57.3 ± 13.2	$1.0 \pm 1.5 \times 10^{-1}$	0.96	66.1 ± 12.7	$1.1 \pm 1.5 \times 10^{-1}$	0.96
0.05 - 0.10	10.4 ± 4.2	$7.3 \pm 9.6 \times 10^{-8}$	0.84	10.9 ± 4.2	$7.2 \pm 8.7 \times 10^{-8}$	0.89	18.4 ± 2.3	$2.5 \pm 1.1 \times 10^{-7}$	0.97
0.10 - 0.15	20.2 ± 17.4	$1.1 \pm 1.5 \times 10^{-5}$	0.90	26 ± 13.1	$9.6 \pm 13.0 \times 10^{-6}$	0.95	39.5 ± 7.6	$3.5 \pm 3.5 \times 10^{-5}$	0.98
0.15 - 0.20	36.3 ± 15.7	$1.7 \pm 2.3 \times 10^{-4}$	0.99	53 ± 10.4	$9.1 \pm 10.0 \times 10^{-4}$	0.99	72.9 ± 4.7	$8.5 \pm 4.1 \times 10^{-3}$	1.00
0.20 - 0.25	45.4 ± 9.2	$1.9 \pm 2.2 \times 10^{-4}$	1.00	66.3 ± 6.8	$5.7 \pm 4.4 \times 10^{-3}$	1.00	91.6 ± 3.7	$1.9 \pm 0.8 \times 10^{-1}$	1.00
0.25 - 0.30	50.6 ± 6.7	$3.7 \pm 4.0 \times 10^{-4}$	1.00	72.9 ± 2.3	$1.3 \pm 0.4 \times 10^{-2}$	1.00	105.6 ± 4.7	$2.1 \pm 1.4 \times 10^{0}$	1.00
0.30 - 0.35	59.5 ± 7.6	$2.3 \pm 2.5 \times 10^{-3}$	1.00	80 ± 2.4	$4.7 \pm 1.6 \times 10^{-2}$	1.00	115.7 ± 3.8	$1.0 \pm 0.5 \times 10^{1}$	1.00
0.35 - 0.40	67.4 ± 9.7	$1.4 \pm 1.7 \times 10^{-2}$	1.00	89 ± 4.5	$2.7 \pm 1.9 \times 10^{-1}$	1.00	125.1 ± 2.3	$4.2 \pm 0.6 \times 10^{1}$	1.00
0.40 - 0.45	73.7 ± 8.1	$3.0 \pm 2.7 \times 10^{-2}$	1.00	95.2 ± 5.1	$8.3 \pm 6.6 \times 10^{-1}$	1.00	133.9 ± 4.7	$1.9 \pm 1.0 \times 10^{2}$	1.00
0.45 - 0.50	72.5 ± 3.3	$1.4 \pm 0.5 \times 10^{-2}$	1.00	99.1 ± 4.8	$1.4 \pm 0.7 \times 10^{0}$	1.00	143.8 ± 6.7	$1.1 \pm 0.9 \times 10^{3}$	1.00
0.50 - 0.55	64.5 ± 4.3	$4.4 \pm 3.7 \times 10^{-3}$	1.00	99.4 ± 4.6	$1.5 \pm 0.8 \times 10^{0}$	1.00	143.8 ± 7.2	$1.1 \pm 0.7 \times 10^{3}$	1.00
0.55 - 0.60	49.1 ± 9.5	$7.4 \pm 9.4 \times 10^{-4}$	0.99	91.8 ± 5	$4.6 \pm 3.2 \times 10^{-1}$	1.00	140.7 ± 5.3	$5.6 \pm 2.5 \times 10^{2}$	1.00
0.60 - 0.65	28.3 ± 13.7	$5.0 \pm 7.0 \times 10^{-5}$	0.99	76 ± 2.9	$2.7 \pm 1.2 \times 10^{-2}$	1.00	134.7 ± 4.3	$2.1 \pm 0.9 \times 10^{2}$	1.00
0.65 - 0.70	17.8 ± 5.8	$1.0 \pm 1.2 \times 10^{-6}$	0.99	52.3 ± 5.6	$6.6 \pm 4.2 \times 10^{-4}$	0.99	117.3 ± 3.9	$1.6 \pm 1.0 \times 10^{1}$	1.00
0.70 - 0.75	11.6 ± 0.9	$1.1 \pm 0.4 \times 10^{-8}$	0.99	27.4 ± 5.5	$9.6 \pm 9.6 \times 10^{-6}$	0.99	91.3 ± 2.3	$2.8 \pm 1.0 \times 10^{-1}$	1.00
0.75 - 0.80	11.1 ± 0.7	$9.7 \pm 2.2 \times 10^{-8}$	0.99	18.4 ± 0.5	$9.7 \pm 0.9 \times 10^{-7}$	1.00	54.6 ± 5.5	$1.3 \pm 1.0 \times 10^{-3}$	0.99
0.80 - 0.85	12.2 ± 1.7	$1.2 \pm 0.3 \times 10^{-8}$	0.99	17.8 ± 0.9	$8.8 \pm 1.8 \times 10^{-7}$	0.99	29 ± 1.3	$1.3 \pm 0.3 \times 10^{-5}$	0.99
0.85 - 0.90	18.2 ± 3.3	$4.1 \pm 1.6 \times 10^{-7}$	0.99	17.3 ± 0.6	$7.9 \pm 0.2 \times 10^{-7}$	0.99	32.1 ± 2.7	$2.3 \pm 1.0 \times 10^{-5}$	1.00
0.90 - 0.95	38.3 ± 9.7	$1.5 \pm 1.5 \times 10^{-5}$	0.98	26.4 ± 3.2	$3.9 \pm 1.7 \times 10^{-6}$	0.98	35.6 ± 3.7	$4.2 \pm 2.3 \times 10^{-5}$	1.00
0.95 - 1.00	218.3 ± 38	$4.9 \pm 6.8 \times 10^{5}$	0.79	150.5 ± 19.8	$8.6 \pm 11.0 \times 10^{1}$	0.79	96.6 ± 10.9	$2.2 \pm 2.5 \times 10^{-1}$	0.85

Table S4. The activation energy (Ea) and pre-exponential (A) of the pistachio shells for different conversion rates (reaction order n = 1.5).

Conversion	5°C·min^{-1}			10°C·min^{-1}			20°C·min^{-1}		
(α)	Ea	A	R^2	Ea	A	R^2	Ea	A	R^2
0 - 0.05	41.6 ± 10.8	$4.1 \pm 5.8 \times 10^{-3}$	0.95	55.2 ± 16.7	$5.2 \pm 7.1 \times 10^{-2}$	0.95	79.5 ± 11.6	$7.3 \pm 9.5 \times 10^{-1}$	0.97
0.05 - 0.10	9.2 ± 10.1	$8.3 \pm 12.0 \times 10^{-8}$	0.50	19.6 ± 22.7	$3.1 \pm 4.3 \times 10^{-5}$	0.61	14.6 ± 7.3	$3.7 \pm 4.9 \times 10^{-7}$	0.81
0.10 - 0.15	91.4 ± 51.1	$1.4 \pm 2.0 \times 10^{5}$	0.96	164.8 ± 41.2	$6.6 \pm 9.0 \times 10^{7}$	0.99	78.3 ± 55	$2.8 \pm 3.9 \times 10^{2}$	0.81
0.15 - 0.20	155.3 ± 36.2	$2.2 \pm 3.1 \times 10^{8}$	1.00	219.6 ± 27.6	$9.2 \pm 8.9 \times 10^{10}$	1.00	228.6 ± 26.4	$3.4 \pm 4.6 \times 10^{10}$	1.00
0.20 - 0.25	150.4 ± 32.4	$7.8 \pm 11.0 \times 10^{7}$	1.00	254.9 ± 63.9	$1.6 \pm 2.3 \times 10^{18}$	0.98	259.2 ± 11.6	$5.1 \pm 6.7 \times 10^{11}$	1.00
0.25 - 0.30	115.9 ± 38.6	$6.7 \pm 9.4 \times 10^{5}$	1.00	183.6 ± 10.7	$2.0 \pm 2.6 \times 10^{7}$	0.92	404.7 ± 207.4	$5.0 \pm 7.0 \times 10^{40}$	0.95
0.30 - 0.35	72.7 ± 32.1	$3.4 \pm 4.9 \times 10^{1}$	0.99	141.3 ± 28.8	$8.5 \pm 12.0 \times 10^{-5}$	0.98	201.6 ± 36.8	$6.8 \pm 7.0 \times 10^{8}$	0.98
0.35 - 0.40	39.9 ± 15.7	$8.0 \pm 11.0 \times 10^{-4}$	0.99	95.1 ± 47.1	$2.6 \pm 3.7 \times 10^{4}$	0.96	187.4 ± 11.6	$5.6 \pm 7.3 \times 10^{6}$	1.00
0.40 - 0.45	31.4 ± 2.2	$5.8 \pm 2.3 \times 10^{-6}$	0.99	61.5 ± 36.4	$6.4 \pm 9.1 \times 10^{0}$	1.00	120.5 ± 13.8	$2.0 \pm 2.7 \times 10^{2}$	1.00
0.45 - 0.50	50 ± 11.2	$6.3 \pm 5.8 \times 10^{-4}$	1.00	51.7 ± 11.2	$2.4 \pm 3.2 \times 10^{-3}$	0.99	67.2 ± 6.3	$8.9 \pm 9.1 \times 10^{-3}$	0.99
0.50 - 0.55	77.6 ± 12	$1.3 \pm 1.5 \times 10^{-1}$	1.00	71.1 ± 11.5	$4.7 \pm 5.9 \times 10^{-2}$	1.00	59.1 ± 1.2	$1.3 \pm 0.2 \times 10^{-3}$	1.00
0.55 - 0.60	89.4 ± 1.5	$2.7 \pm 0.9 \times 10^{-1}$	1.00	96.7 ± 21.4	$1.2 \pm 1.6 \times 10^{1}$	1.00	84.2 ± 9.4	$2.0 \pm 2.3 \times 10^{-1}$	1.00
0.60 - 0.65	80.3 ± 18.1	$1.5 \pm 2.1 \times 10^{0}$	1.00	113.3 ± 24.5	$2.0 \pm 2.0 \times 10^{2}$	1.00	116.2 ± 12.2	$4.9 \pm 6.4 \times 10^{1}$	1.00
0.65 - 0.70	49.7 ± 36.9	$8.1 \pm 12.0 \times 10^{-1}$	0.98	108.6 ± 15	$3.3 \pm 3.9 \times 10^{1}$	1.00	143.9 ± 10.6	$2.4 \pm 3.1 \times 10^{3}$	1.00
0.70 - 0.75	30.2 ± 28.9	$4.0 \pm 5.7 \times 10^{-3}$	0.99	81.4 ± 21	$5.5 \pm 3.9 \times 10^{-1}$	0.99	153.9 ± 6.4	$5.4 \pm 5.1 \times 10^{3}$	1.00
0.75 - 0.80	12.4 ± 4.9	$3.4 \pm 3.9 \times 10^{-7}$	0.97	42.8 ± 29.9	$4.4 \pm 6.2 \times 10^{-2}$	0.98	130.1 ± 3.2	$1.1 \pm 0.5 \times 10^{2}$	1.00
0.80 - 0.85	11.1 ± 1.2	$1.3 \pm 0.5 \times 10^{-7}$	0.99	17.8 ± 5.1	$2.0 \pm 2.1 \times 10^{-6}$	0.98	52.3 ± 1.1	$7.0 \pm 1.1 \times 10^{-4}$	0.97
0.85 - 0.90	14.2 ± 1.7	$2.2 \pm 0.4 \times 10^{-7}$	0.99	15.3 ± 1.7	$7.3 \pm 3.6 \times 10^{-7}$	0.99	27.7 ± 1	$1.3 \pm 0.2 \times 10^{-5}$	1.00
0.90 - 0.95	26.6 ± 8.3	$2.7 \pm 1.8 \times 10^{-6}$	0.98	20.9 ± 1.1	$1.8 \pm 0.1 \times 10^{-6}$	0.99	30.3 ± 1.6	$1.9 \pm 0.4 \times 10^{-5}$	0.99
0.95 - 1.00	162.9 ± 49.1	$1.4 \pm 1.6 \times 10^{3}$	0.76	104.8 ± 25.7	$7.6 \pm 8.6 \times 10^{-1}$	0.79	83.5 ± 4.3	$2.9 \pm 1.4 \times 10^{-2}$	0.84