Supplementary Table 4. The changes in individual organic acid contents (mg/L) in ginkgo kernel juice during lactic acid fermentation with the addition of macroporous resin

	Fermentation time (h)	Treatments													
		D101	DA201	Y2	Y2+ D101	Y2+ DA201	Y3	Y3+ D101	Y3 + DA201	Y4	Y4+ D101	Y4+ DA201	T7	T7+ D101	T7+ DA201
Oxalic acid	0	123.44± 8.72^{g}	123.44± 8.72^{g}	123.44± 8.72^{g}	123.44± 8.72^{g}	123.44± 8.72^{g}	123.44± 8.72^{g}	123.44± 8.72^{g}	123.44± 8.72^{g}	123.44± 8.72^{g}	123.44± 8.72^{g}	123.44± 8.72^{g}	123.44± 8.72^{g}	123.44± 8.72^{g}	123.44± 8.72^{g}
	24	121.05± 7.36^{g}	120.96±10 .25^{g}	148.09± 10.04^{abc}	146.3± 11.29^{ab}	144.68± 10.72^{a}	152.31± 12.24^{a}	151.61± 14.32^{a}	151.18± 16.46^{a}	139.7± 10.21^{de}	138.36± 14.70^{de}	137.63± 14.52^{de}	141.23± 11.59^{cd}	140.6± 16.40^{cd}	139.55± 12.94^{cd}
	48	120.25± 9.32^{g}	118.80±11 .22^{g}	153.21± 10.97^{a}	151.92± 16.78^{a}	150.28± 12.68^{a}	148.63± 12.91^{ab}	143.93± 12.61^{bc}	143.73± 13.24^{bc}	141.57± 10.94^{cd}	141.25± 12.67^{cd}	139.91± 12.83^{cd}	137.83± 12.66^{d}	139.17± 12.04^{cd}	139.97± 12.29^{cd}
Quininic acid	0	43.59± 5.20^{b}	43.59± 5.20^{b}	43.59± 5.20^{b}	43.59± 5.20^{b}	43.59± 5.20^{b}	43.59± 5.20^{b}	43.59± 5.20^{b}	43.59± 5.20^{b}	43.59± 5.20^{b}	43.59± 5.20^{b}	43.59± 5.20^{b}	40.59± 5.20^{b}	41.59± 5.20^{b}	43.59± 5.20^{b}
	24	42.58±3 .21^{b}	43.40±3.4 6^{b}	42.16± 3.38^{b}	42.28± 0.98^{b}	41.86± 3.09^{b}	42.74± 2.76b	43.61± 4.71^{b}	43.95± 4.81^{ab}	45.98± 3.9^{a}	44.67± 3.49^{ab}	40.42± 3.12^{bc}	40.89± 4.35^{bc}	41.5± 1.44^{c}	43.31± 1.09^{b}
	48	42.48±2 .32^{b}	42.91±1.3 3^{b}	43.9± 0.61^{b}	41.27± 1.64^{b}	43.02± 2.32^{b}	43.67± 1.05b	44.74± 1.01^{a}	42.82± 1.03^{b}	44.29± 0.58^{a}	42.23± 0.24^{b}	42.31± 0.06^{b}	43.6± 1.05^{b}	43.52± 0.09^{b}	42.93± 1.68^{b}
Pyruvic acid	0	40.6± 7.07^{c}	40.6± 7.07^{c}	40.6± 7.07^{c}	40.6± 7.07^{c}	40.6± 7.07^{c}	40.6± 7.07^{c}	40.6± 7.07^{c}	40.6± 7.07^{c}	40.6± 7.07^{c}	40.6± 7.07^{c}	40.6± 7.07^{c}	40.6± 7.07^{c}	40.6± 7.07^{c}	40.6± 7.07^{c}
	24	29.40±2 .43^{d}	33.88±3.3 1^{d}	58.09± 6.58^{b}	62.31± 6.33^{b}	63.35± 6.57^{b}	79.83± 8.39^{a}	66.37± 6.24^{b}	69.47± 7.16^{b}	71.57± 7.09^{b}	54.93± 5.20^{b}	50.79± 5.18^{b}	0	0	0
	48	29.96±3	39.48±2.8	3.12±	5.21±	5.2±	12.46±	14.53±	14.53±	12.46±	12.46±	21.77±	0	0	0

		.01^{d}	3^{cd}	0.42^{e}	0.14^{e}	0.15^{e}	1.09^{e}	1.05^{e}	1.04^{e}	1.19^{e}	1.05^{e}	2.24^{e}			
	0	199.86±	199.86±	199.86±	199.86±	199.86±	199.86±	199.86±	199.86±	199.86±	199.86±	199.86±	199.86±	199.86±	199.86±
		21.11^{a}	21.11^{a}	21.11^{a}	21.11^{a}	21.11^{a}	21.11^{a}	21.11^{a}	21.11^{a}	21.11^{a}	21.11^{a}	21.11^{a}	21.11^{a}	21.11^{a}	21.11^{a}
Malic	2	192.3±1	195.8±13.	74.24±	74.61±	76.08±	41.16±	42.45±	44.3±	41.08±	41.9±	41.39±	123.95±	125.87±	128.58±
acid		3.42^{a}	01^{a}	2.87^{c}	8.63^{cd}	5.89^{cd}	4.11^{e}	2.07^{e}	3.44^{e}	2.22^{e}	3.01e	2.49^{e}	2.44^{b}	17.49^{b}	10.34^{b}
	48	193.62±	196.44±10	59.61±	60.1±	62.23±	40.63±	41.45±	41.74±	40.51±	39.95±	38.51±	119.38±	120.64±	120.55±
		11.22^{a}	.03^{a}	5.77^{cd}	3.38^{d}	4.15^{de}	0.89^{ef}	4.06^{def}	1.88^{def}	4.27^{ef}	2.32^{ef}	2.52^{f}	4.96^{b}	9.94^{b}	4.29^{b}
	0	32.38±	32.38±	32.38±	32.38±	32.38±1.79^{d}	32.38±	32.38±	32.38±	32.38±	32.38±	32.38±	32.38±	32.38±	32.38±
		1.79^{d}	1.79^{d}	1.79^{d}	1.79^{d}		1.79^{d}	1.79^{d}	1.79^{d}	1.79^{d}	1.79^{d}	1.79^{d}	1.79d	1.79^{d}	1.79^{d}
Shikimi	24	32.08±2	31.23±2.7	41.71±	41.54±	40.56±	52.67±	52.01±	52.09±	51.29±	51.23±	51.31±	35.6±	35.43±	35.65±
c acid		.46^{d}	3^{d}	4.61^{b}	3.13^{b}	4.12^{b}	5.05^{a}	4.51^{a}	4.4^{a}	4.58^{a}	4.24^{a}	4.06^{a}	3.13^{d}	3.09^{d}	4.15^{b}
	48	31.04±2	30.96±2.9	43.9±	43.27±	44.02±	52.67±	52.74±	52.82±	51.29±	51.23±	51.31±	35.6±	36.52±	34.93±
		.33^{d}	3^{d}	4.61^{b}	1.64^{b}	2.32^{b}	1.05^{a}	1.01^{a}	1.03^{a}	0.58^{a}	4.24^{a}	4.06^{a}	1.05^{c}	4.09^{c}	3.68^{c}
	0	268.78±	268.78±	268.78±	268.78±	268.78±	268.78±	268.78±	268.78±	268.78±	268.78±	268.78±	268.78±	268.78±	268.78±
		15.79^{d}	15.79^{d}	15.79^{d}	15.80^{d}	15.81^{d}	15.82^{d}	15.83^{d}	15.84^{d}	15.85^{d}	15.86^{d}	15.87^{d}	15.88^{d}	15.89^{d}	15.90^{d}
Lactic	24	10.58±0	8.64±0.78^{d}	312.79±	306.8±	300.65±	352.45±	347.66±	337.62±	252.91±	244.06±	237.57±	340.46±	337.75±	321.28±
acid		.34^{d}		7.36^{b}	25.26^{b}	3.85^{b}	14.97^{b}	5.62^{b}	4.88^{b}	33.72^{a}	34.94^{a}	20.19^{a}	47.71^{c}	42.23^{c}	35.32^{c}
	48	7.83±0.	6.48±0.67^{d}	779.69±	773.96±	783.77±	796.6±	794.13±	794.61±	1077.7±	1074.48±69.1	1069.9±	689.62±	681.84±	677.83±20
		29^{d}		15.4^{b}	14.73^{b}	4.11^{b}	0.26^{b}	2.93^{b}	2.76^{b}	34.92^{a}	1^{a}	25.16^{a}	44.94^{c}	26.14^{c}	.46^{c}
	0	302.71±	302.71±	302.71±	302.71±	302.71±	302.71±	302.71±	302.71±	302.71±	302.71±	302.71±	302.71±	302.71±	302.71±
Citric		13.15a	13.15a	13.15a	13.15a	13.15a	13.15a	13.15a	13.15a	13.15a	13.15a	13.15a	13.15a	13.15a	13.15a
acid	24	309.83±	310.09±13	152.96±	154.34±	156.04±	232.32±	233.14±	235.79±	230.34±	231.7±	231.53±	257.27±	260.44±	264.57±
		12.45^{a}	.93^{a}	7.21^{e}	4.42^{e}	1.48^{e}	9.62^{cd}	6.75^{c}	4.08^{cd}	12.16^{cd}	2.13^{c}	1.88^{c}	7.57^{b}	3.99^{b}	6.3^{b}

	48	310.48±21.02[a]	317.94±28.65[a]	150.96±5.7[c]	151.41±1.76[c]	152.24±1.18[c]	151.27±0.45[c]	151.29±0.07[c]	151.54±0.23[c]	150.61±3.38[c]	150.96±3.93[c]	152.42±1.49[c]	252.81±4.43[b]	252.33±4.15[b]	253.33±4.2[b]
Fumaric acid	0	0.09±0[d]	0.09±0[d]	0.09±0[d]	0.09±0[d]	0.09±0[d]	0.09±0[d]	0.09±0[d]	0.09±0[d]	0.09±0[d]	0.09±0[d]	0.09±0d	0.09±0[d]	0.09±0[d]	0.09±0[d]
	24	1.44±0.01[a]	1.44±0.01[a]	0	0	0	0	0	0	0	0	0	0.32±0[b]	0.32±0[b]	0.32±0[b]
	48	1.28±0.01a	1.44±0.01[a]	0	0	0	0	0	0	0	0	0	0.16±0.01[c]	0.16±0.01[c]	0.16±0.01[c]
Succinic acid	0	23.91±1.38[e]	23.91±1.38[e]	23.91±1.38[e]	23.91±1.38[e]	23.91±1.38[e]	23.91±.1.38[e]	23.91±1.38[e]	23.91±1.38[e]	23.91±1.38[e]	23.91±1.38[e]	23.91±1.38[e]	23.91±1.38[e]	23.91±1.38[e]	23.91±1.38[e]
	24	23.22±2.04[e]	24.09±2.25[e]	98.46±5.60[a]	96.26±4.48[a]	98.49±6.01[a]	75.44±0.8[d]	75.1±1.65[d]	74.31±0.4[d]	49.01±0.9[e]	50.03±1.06[e]	49.64±0.67[e]	37.47±0.44[e]	38.64±1.76[e]	38.49±1.25[e]
	48	22.23±2.10[e]	23.29±2.03[e]	197.93±6.41[ab]	218.43±9.44[a]	186.93±53.39[ab]	125.89±14.56[c]	133.97±14.84[c]	134.27±0.4[c]	91.09±2.08[d]	97.15±4.45[d]	95.46±5.14[d]	67.2±7.74[d]	66.98±2.79[d]	66.09±7.47[d]

Note: the letters in the table indicate significant differences in different treatments and fermentation times ($p<0.05$)

D101: unfermented samples with the addition of macroporous resin D101; **DA201**: samples with the addition of macroporous resin DA201;**Y2**: *L. plantarum* Y2 fermented samples without the addition of macroporous resin; **Y2+D101**: *L. plantarum* Y2 fermented samples with the addition of macroporous resin D101;**Y2+DA201**: *L. plantarum* Y2 fermented samples with the addition of macroporous resin DA201; **Y3**: *L. plantarum* Y3 fermented samples without the addition of macroporous resin; **Y3+D101**: *L. plantarum* Y3 fermented samples with the addition of macroporous resin D101; **Y3+DA201**: *L. plantarum* Y3 fermented samples with the addition of macroporous resin DA201;**Y4**: *L. plantarum* Y4 fermented samples without the addition of macroporous resin; **Y4+D101**: *L. plantarum* Y4 fermented samples with the addition of macroporous resin D101;**Y4+DA201**: *L. plantarum* Y4 fermented samples with the addition of macroporous resin DA201; **T7**: *L. plantarum* T7 fermented samples without the addition of macroporous resin;**T7+D101**: *L. plantarum* T7 fermented samples with the addition of macroporous resin D101; **T7+DA201**: *L. plantarum* T7 fermented samples with the addition of macroporous resin DA201.