Supplementary Material

Title: Exploring a high-efficiency and low-cost technique for maximizing glucoamylase production from food waste

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Table S1 Compositions of substrates used in this study (based on dry weight)

	Starch (mg/g)	Protein (mg/g)	Lipid (mg/g)	Ash (mg/g)
Mixed food waste	453.8 ± 47.2	240.1 ± 15.6	143.2 ± 8.7	34.9 ± 3.1
Rice waste	823.2 ± 59.3	67.8 ± 6.1	8.7 ± 0.5	7.1 ± 0.3
Cake waste	566.8 ± 38.9	127.8 ± 8.7	157.2 ± 5.6	23.6 ± 1.5

Table S2 Central composite design with experimental and predicted responses of GA activities.

Run	Fermentation time (X_1, day)	Amount of inoculum (X_2, mL)	Fermentation temperature (X_3, °C)	GA activity (U/g)	
				Experimental	Predicted
1	8	2	30	155.62	159.56
2	6	1.5	35	169.50	163.81
3	6	1.5	45	81.24	74.37
4	4	2	30	79.06	83.25
5	6	1.5	25	140.01	136.22
6	6	1.5	35	161.20	163.81
7	6	1.5	35	165.35	163.81
8	6	0.5	35	78.87	72.56
9	10	1.5	35	149.99	144.87
10	4	1	40	79.42	86.14
11	6	1.5	35	163.98	163.81
12	4	1	30	95.16	100.30
13	6	2.5	35	65.33	60.99
14	2	1.5	35	53.87	48.32
15	6	1.5	35	164.93	163.81
16	8	2	40	106.34	111.86
17	4	2	40	60.54	66.24
18	8	1	30	146.26	151.22
19	6	1.5	35	168.58	163.81
20	8	1	40	99.92	106.39

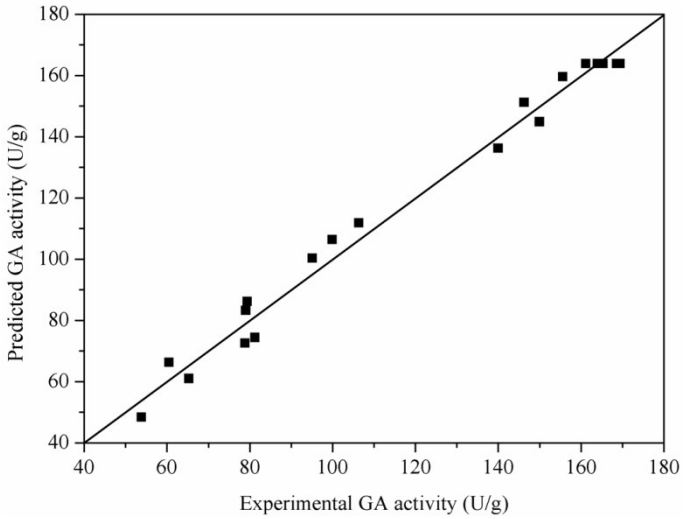

Fig. S1 The distribution of experimental vs. predicted values of GA yield.