

Table S1. Thermal stability of xylanase, cellulase and  $\beta$ -1,3-glucanase in combi-CLEAs and free enzymes at 30°C, 40°C, 50°C, 60°C and 70°C after 2, 4 and 8 h of incubation.

Enzyme	Time (h)	Residual activity (%)				
		30°C	40°C	50°C	60°C	70°C
Free xylanase	2	61±1.8	74±2.2	78 ± 2.3	65 ± 2.0	35 ± 1.1
	4	54±1.6	47±1.4	56±1.7	23±0.7	16±0.5
	8	45±1.4	29±0.9	24±0.7	7±0.2	1±0.03
Free cellulase	2	59±1.7	70±2.1	72 ± 2.2	61 ± 1.8	47 ± 1.4
	4	51±1.5	41±1.2	60±1.8	27±0.8	9.0±0.3
	8	42±1.3	32±0.9	23±0.7	5±0.2	1±0.03
Free $\beta$ -1,3-glucanase	2	53±1.6	63±1.9	65 ± 2.0	60 ± 2.8	37 ± 1.1
	4	52±1.6	44±1.3	63±1.9	20±0.6	15±0.5
	8	40±1.2	30±0.9	20±0.6	9±0.3	1±0.03
Xylanase in combi-CLEAs	2	63±1.9	92±2.8	96 ± 2.9	89 ± 2.7	80± 2.4
	4	59±1.8	68±2.0	74±2.2	36±1.1	27±0.8
	8	49±1.5	43±1.3	38±1.1	12±0.4	3±0.09
Cellulase in combi-CLEAs	2	72±2.2	91±2.7	97 ± 2.9	90 ± 2.7	79 ± 2.4
	4	65±2.0	61±2.1	71±2.1	31±0.9	22±0.7
	8	55±1.7	40±1.2	41±1.2	10±0.3	4±0.12
$\beta$ -1,3-glucanase in combi-CLEAs	2	74±2.2	93±2.8	95 ± 2.9	88 ± 2.6	72 ± 2.4
	4	67±2.0	60±2.1	69±2.1	34±1.0	24±0.7
	8	57±1.7	39±1.2	34±1.0	14±0.4	2±0.06

Table.S2. Sugar concentrations of HPLC analysis of combi-CLEAs hydrolyzed SCB pulp

Time (h)	Amount of sugar release in the hydrolysate (mg/L)				
	Arabinose	Galactose	Glucose	Xylose	Mannose
2	62	8	420	102	15
9	85	11	721	180	26
24	145	18	987	333	41
33	151	23	1254	923	157
48	182	31	2021	1012	147
57	185	32	2023	1015	150