Supplementary material

Cyanate Degradation in Different Matrices Using Heat-Purified Enzymes

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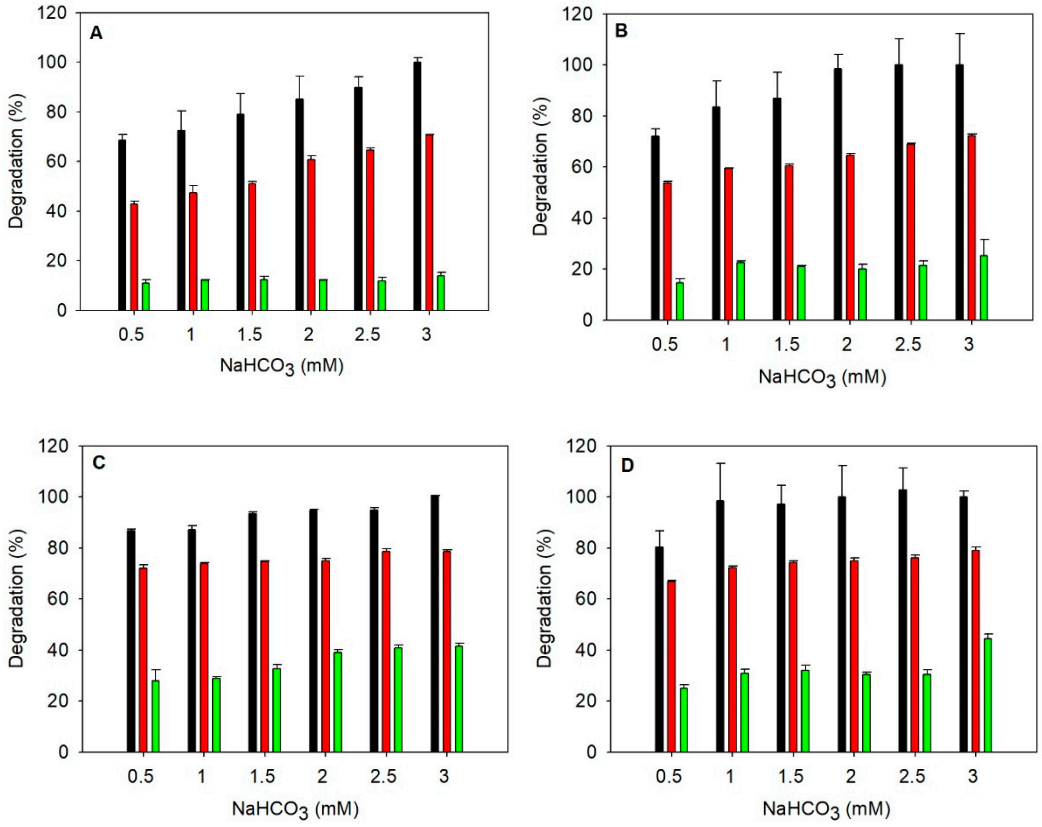


Figure S1. Degradation of cyanate in different matrices using Ni-NTA column-purified enzymes. The activity of SazCA added was 0 (**A**, control), 0.5 (**B**), 0.75 (**C**), and 1 WAU (**D**); the activity of TlCyn added was 0.03 U. Degradation was performed in 50 mM Tris-HCl, pH 8 (black), industrial wastewater (red), and artificial wastewater (green). The 100% was defined as the cyanate degradation observed with 3 mM $NaHCO_3$ in the buffer.

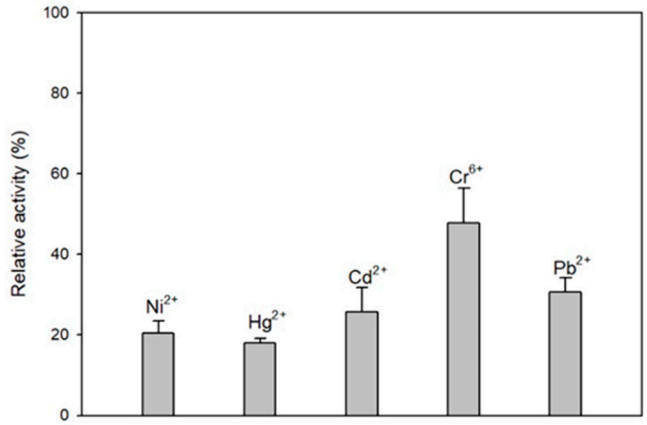


Figure S2. Inhibition of SazCA by metal ions. The activity before incubation with metal ions was set as 100%. The enzyme solution was incubated with the metal ion at a final concentration of 5 mM for 30 min followed by measuring its hydratase activity.

Table S1. Properties of TlCyn purified by heating.

Temperature (°C)	60				70				80			
Time (min)	5	10	15	20	5	10	15	20	5	10	15	20
Purity (%) [1]	53	51	50	48	52	46	46	37	43	41	39	35
Total activity (U) [1]	147	139	142	130	78	69	64	37	26	23	17	8
Total Protein (mg) [1]	1.5	1.4	1.3	1.2	0.8	0.8	0.8	0.6	1	0.8	0.8	0.8
Specific activity (U/mg protein) [1]	99	101	107	109	96	85	83	58	23	28	20	9

[1] The data were obtained from a culture volume of 50 mL.

Table S2. Properties of SazCA purified by heating.

Temperature (°C)	70				80				90			
Time (min)	5	10	15	20	5	10	15	20	5	10	15	20
Purity (%) [1]	53	58	56	53	60	50	51	48	37.4	18.9	15.0	6.3
Total activity (WAU) [1]	37871	41790	39882	39091	47174	34582	32957	30448	10928	4573	3058	524
Total Protein (mg) [1]	12	11	11	11	13	13	13	14	5	5	6	5
Specific activity (WAU/mg protein) [1]	3339	3746	3527	3657	3669	2576	2570	2231	2278	844	551	103

[1] The data were obtained from a culture volume of 50 mL.