Supplementary Materials

1 GC-MS analysis

First, 100 mL water was extracted thrice with 15 mL of CH_2Cl_2 (5 mL each time) (AR grade, Tianjin Damao Chemical Reagent Co., Ltd., China). The remaining water sample was adjusted to pH ≥ 11 by adding NaOH (AR grade, Tianjin Damao Chemical Reagent Co., Ltd., China) and then extracted thrice with 15 mL of CH_2Cl_2. Then, the organic phase was concentrated to 5 mL using a rotary evaporator (RE-52AA, Shanghai Yarong Biochemical Instrument Co., Ltd., China) and purged to 1 mL with high-purity nitrogen gas (99.999%, Taiyuan Taineng Gas Co., Ltd., China). Finally, 0.4 μL of concentrated liquor was injected into the GC/MS analyzer (Agilent 7890A/5975C, USA) equipped with a HP-5MS chromatographic column (30 mm × 0.25 mm × 0.25 mm) at a column flow rate of 1 mL/min. The programmed heating sequence was followed by retention at 50℃ for 5 min and then an increase in temperature to 280℃ at 5℃/min. The analysis was conducted by referring to the NIST 05 mass spectral library database.

Table S1 Microbial biodiversity

Sample	OTUs num	Diversity		Richness	
		Simpson	Shannon	ACE	Chao1
S_0	2258	0.099	4.611	3003.30	2951.42
S_1	2221	0.104	4.524	3049.01	2910.00
S_2	2165	0.082	4.689	3089.85	2958.74
S_3	2177	0.042	4.900	2818.75	2692.03
S_4	2001	0.105	4.518	2972.47	2836.02
S_5	1662	0.029	4.968	2226.63	2157.64

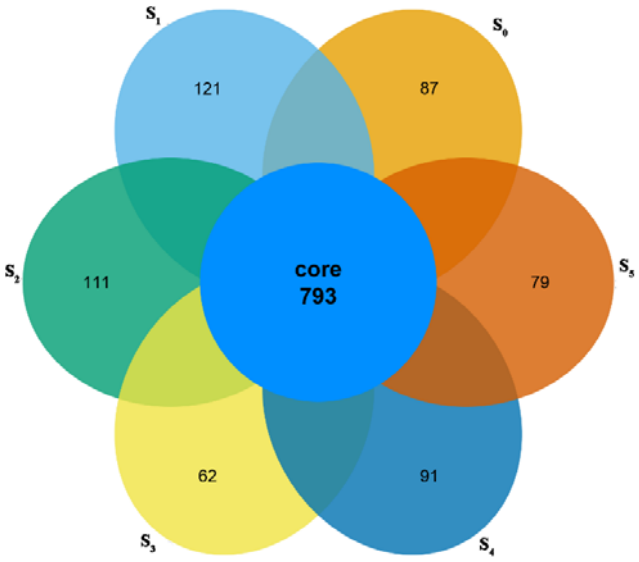

Fig. S1 Venn diagram of the bacterial communities of the six samples