

Additional File 8

Increasing the economic value of lignocellulosic stillage through medium through medium-chain fatty acid production

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Table S17: Comparison of hexanoic (C6) and octanoic (C8) acid productivities and titers for this study and other studies utilizing cellulosic or ethanol-production derived substrates

Substrate	Inoculum/ Organism	SRT (d)	pH	Maximum Productivity (g COD L ⁻¹ hr ⁻¹)		Maximum Titer (g COD L ⁻¹)		Reference
				C6	C8	C6	C8	
Switchgrass Stillage	Wastewater Acid Digester Sludge	6.0	5.5	0.13	0.017	18.7	2.39	This Study
Diluted Acid Treated Corn Stover Hydrolysate	<i>M. elsdenii</i>	7.1 ¹	6.5 ²	0.17	NR	28.6	NR	[1]
Mechanically Refined Corn Stover Hydrolysate	<i>M. elsdenii</i>	7.1 ¹	6.5 ²	0.18	NR	30.0	NR	[1]
Wheat Bioethanol Beer and Stillage	Enriched MCFA Producing Community	7.5	5.5	0.10	0.043	17.8	7.81	[2]
Corn Beer	Reactor Microbiome	12 to 15	5.5	0.19	Trace	NR	Trace	[3]
Corn Beer	Reactor Microbiome	15.5 to 26.3 ³	5.5	0.31	Trace	14.0	Trace	[4]
Acid Pre-treated Willow	Silage, Rumen, and Compost Mixture	21 ¹	NR	NR	NR	66.0	NR	[5]
Ethanol, Alfalfa and Switchgrass	<i>C. Kluyveri</i> and Rumen Microbiome	2 ¹	6.8 ²	0.13	NR	13.4	NR	[6]
Ethanol and Brewer's Spent Grain	Wastewater Activated Sludge	20 ¹	7	NR	NR	0.80	NR	[7]

1. Time represents the duration of a batch experiment
2. pH represents the starting pH of a batch experiment without pH control
3. This study utilized 2-bromoethanesulfonate to inhibit methanogenesis

References:

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