

Co-Culture of Filamentous Feed-Grade Fungi and Microalgae as an Alternative to Increase Feeding Value of Ethanol Coproducts

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Supplementary Materials

Analysis of Variance (ANOVA) for Xylanase Production

Analysis of Variance for Means							
Source	DF	Seq SS	Adj SS	Adj MS	F	P	
pH0	2	213.93	213.93	106.965	21.29	0.045	
Temperature	2	36.94	36.94	18.471	3.68	0.214	
Algae:Fungi	2	80.34	80.34	40.170	8.00	0.111	
Residual Error	2	10.05	10.05	5.024			
Total	8	341.26					

ANOVA for Endoglucanase Production

Analysis of Variance for Means							
Source	DF	Seq SS	Adj SS	Adj MS	F	P	
pH0	2	50.504	50.504	25.252	21.55	0.044	
Temperature	2	21.046	21.046	10.523	8.98	0.100	
Algae:Fungi	2	27.564	27.564	13.782	11.76	0.078	
Residual Error	2	2.344	2.344	1.172			
Total	8	101.458					

ANOVA for Cellulase Production

Analysis of Variance for Means							
Source	DF	Seq SS	Adj SS	Adj MS	F	P	
pH0	2	97.369	97.369	48.684	24.15	0.040	
Temperature	2	30.296	30.296	15.148	7.51	0.117	
Algae:Fungi	2	45.656	45.656	22.828	11.32	0.081	
Residual Error	2	4.032	4.032	2.016			
Total	8	177.352					

ANOVA for Lipid Accumulation

Analysis of Variance for Means							
Source	DF	Seq SS	Adj SS	Adj MS	F	P	
pH0	2	63.654	63.654	31.8272	37.92	0.026	
Temperature	2	11.162	11.162	5.5812	6.65	0.131	
Algae:Fungi	2	17.089	17.089	8.5444	10.18	0.089	
Residual Error	2	1.679	1.679	0.8393			
Total	8	93.584					

ANOVA for C18:2% production in regards to total lipids

Analysis of Variance for Means							
Source	DF	Seq SS	Adj SS	Adj MS	F	P	
pH0	2	0.150770	0.150770	0.075385	3.35	0.230	
Temperature	2	0.038919	0.038919	0.019460	0.87	0.536	

Algae:Fungi	2	0.001053	0.001053	0.000527	0.02	0.977
Residual Error	2	0.044956	0.044956	0.022478		
Total	8	0.235698				

Supplementary Figures

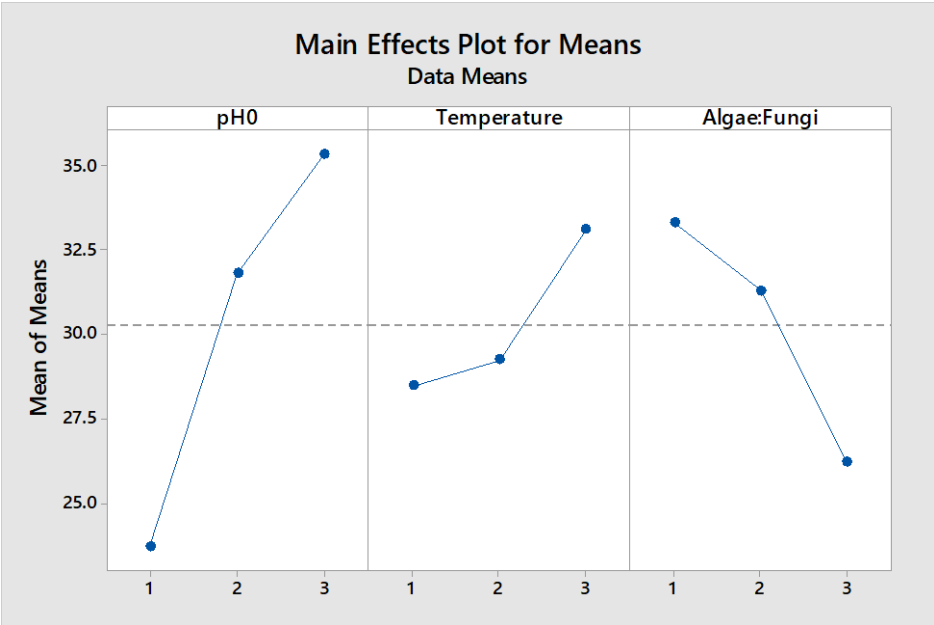


Figure S1. Main Effects Plot for Means in regards to Xylanase Production.

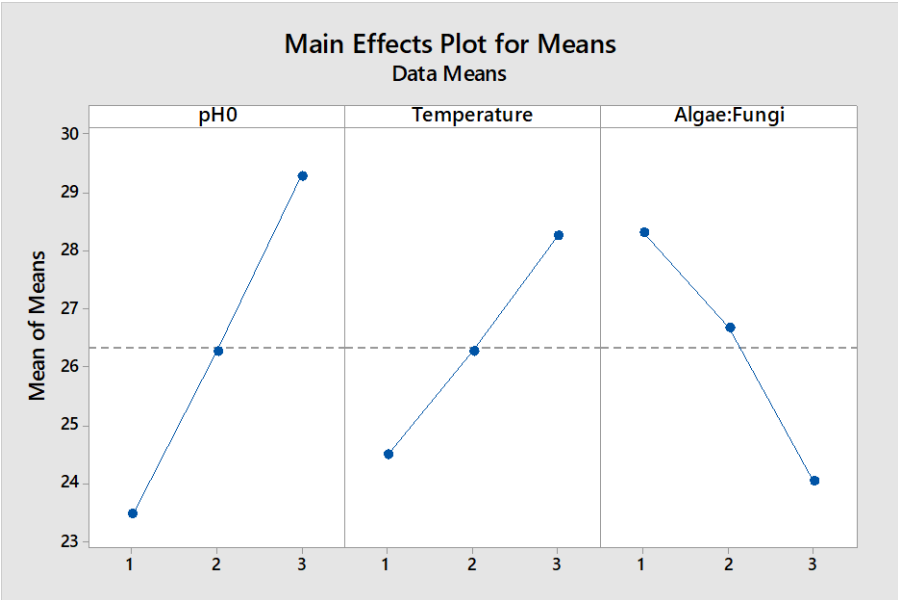


Figure S2. Main Effects Plot for Means in regards to Endoglucanase Production.

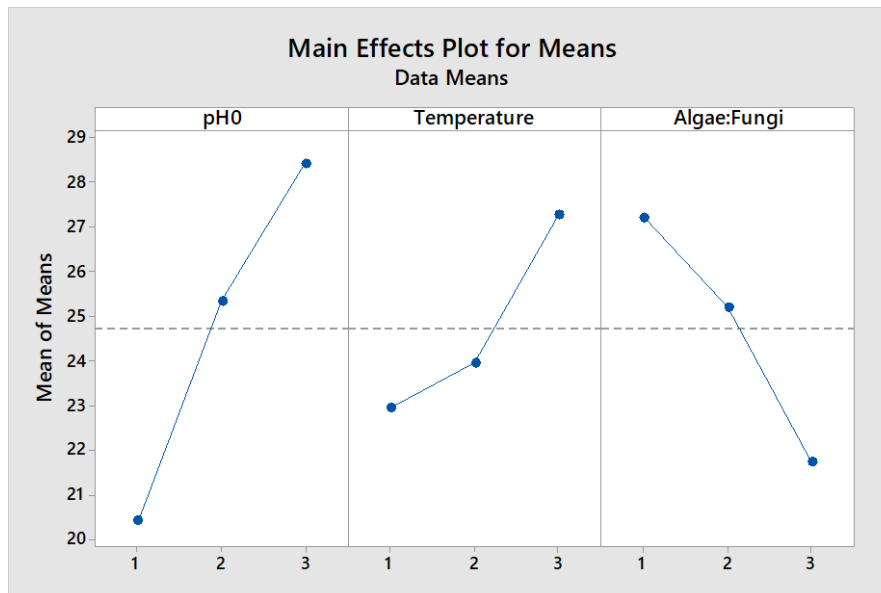


Figure S3. Main Effects Plot for Means in regards to Xylanase Production.

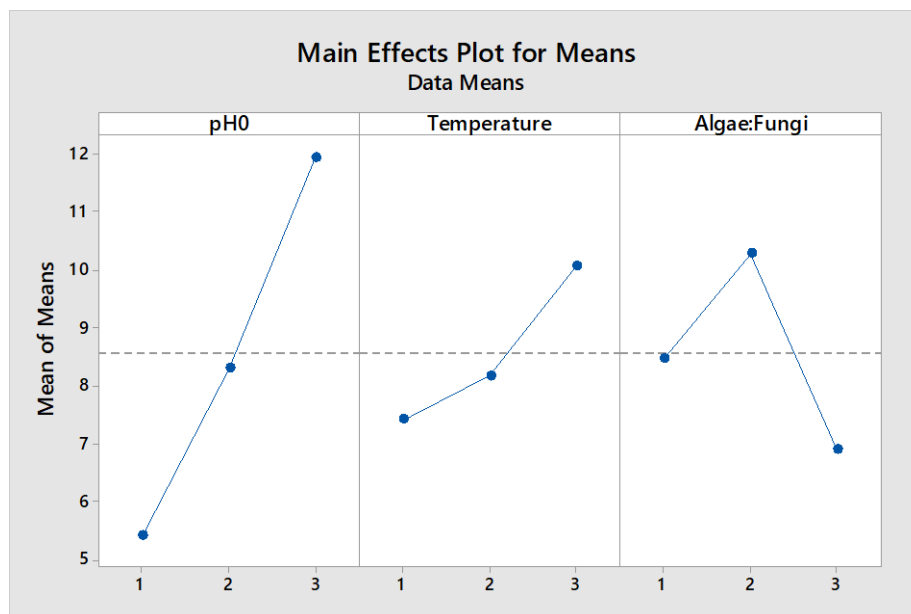


Figure S4. Main Effects Plot for Means in regards to Lipid Accumulation.

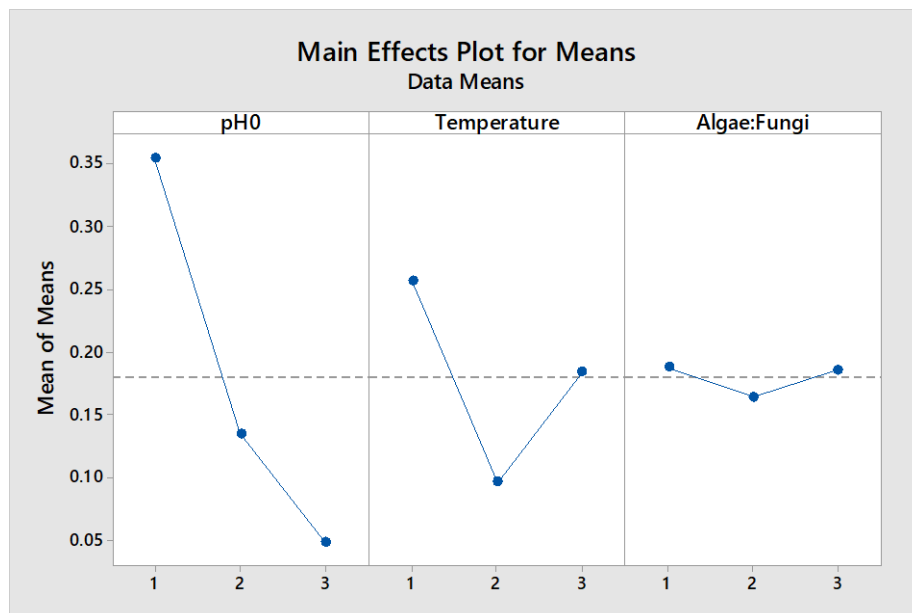


Figure S5. Main Effects Plot for Means in regards to C18:2 Percentage of Total Lipids.

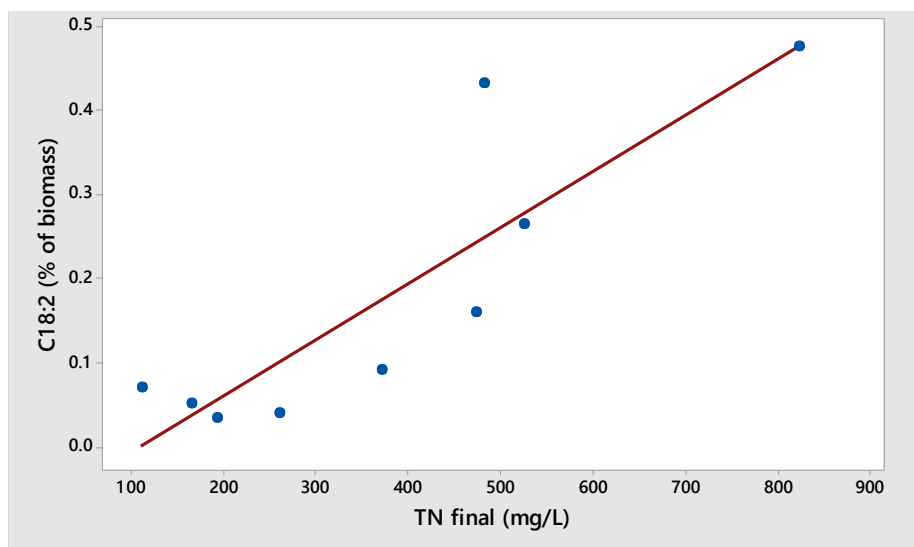


Figure S6. Scatterplot of C18:2% and TN_f. Pearson correlation of C18:2 (% of biomass) and TN final (mg/L) = 0.871. P-Value = 0.002.

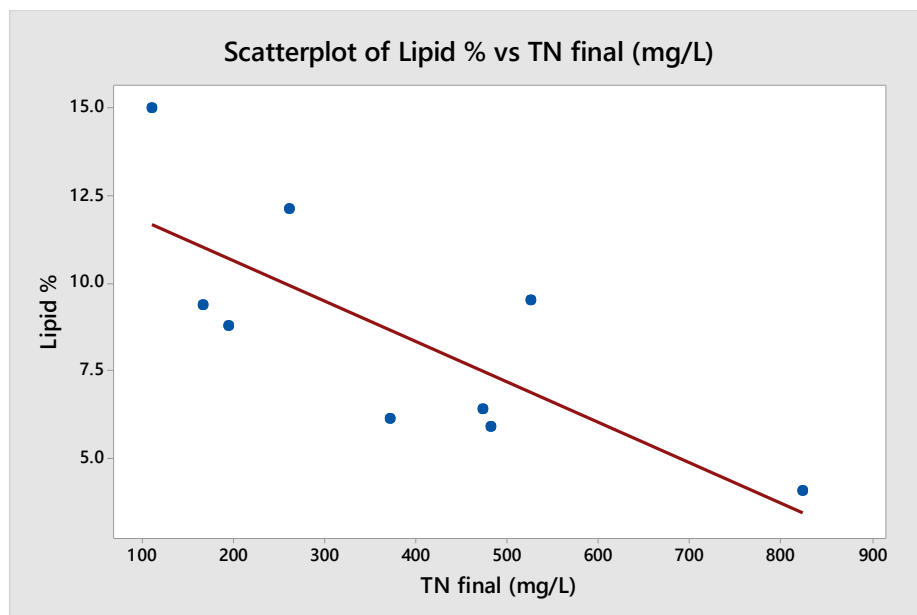


Figure S7. Scatterplot of Lipid % and TN_f. Pearson correlation of Lipid % and TN final (mg/L) = -0.760. P-Value = 0.017.