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Table 1 Elemental analysis of *Chlorella vulgaris*

C[%]	H[%]	N[%]	S[%]	O[%]
27.4	7.0	5.5	0.4	59.7

Chlorella vulgaris  
 0.65 m, 10.5 m, 250 ml,  
 200 mL  
 MPa  
 10  
 3  
 (210 ) 30  
 10:0, 9:1, 7:3,  
 5:5, 3:7, 1:9, 0:10  
 2 m  
 (HHV)

Table 2 Pressure reactor

Ethanol : Water	10:0	9:1	7:3	5:5	3:7	1:9	0:10
Pressure [bar]	40	45	35	35	30	27	25

Table 2  
 Table 3  
 HHV  
 HHV, HHV  
 3:7, HHV

Table 3 HHV and yield of biochar

Ethanol:Water	10:0	9:1	7:3	5:5	3:7	1:9	0:10
HHV [MJ/kg]	36.4	29.1	36.8	45.8	51.3	44.2	24.5
Yield of biochar [-]	0.34	0.2	0.21	0.22	0.26	0.27	0.23

Chlorella vulgaris HHV 12 MJ/kg  
 , HHV 2.5 4  
 HHV 29 MJ/kg  
 0.2-0.34

$$\eta = w \frac{Q_c}{Q_f} \quad (1)$$

, ,  $w$ ,  $Q_c$ ,  $Q_f$  , [J/J], [kg/kg],  
 HHV[J/kg], HHV[J/kg] . Table 4

3:7  
 1.11

Table 4 Energy yield

Ethanol:Water	10:0	9:1	7:3	5:5	3:7	1:9	0:10
Energy yield [-]	1.03	0.49	0.64	0.84	1.11	0.98	0.47