

Optimization of Grinding Process of Sunflower Meal for Obtaining Protein-Enriched Fractions

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Table S1. ANOVA table for protein content (R1).

R1	Sum of Squares	df	Mean Square	F-value	p-value
Model	40.81	9	4.53	3.39	0.0133
A-SOD	20.35	1	20.35	15.19	0.0011
B-Roll gap	5.82	1	5.82	4.35	0.0516
C-Feed rate	5.94	1	5.94	4.44	0.0495
D-Roll speed	0.5253	1	0.5253	0.3922	0.539
AB	1.14	1	1.14	0.8491	0.369
AC	2.4	1	2.4	1.79	0.1976
AD	0.9929	1	0.9929	0.7413	0.4006
BC	2.03	1	2.03	1.51	0.2346
D ²	1.62	1	1.62	1.21	0.2865
Residual	24.11	18	1.34		
Lack of Fit	20.56	15	1.37	1.16	0.5178
Pure Error	3.54	3	1.18		
Cor Total	64.92	27			

Table S2. ANOVA table for fraction yield (R2).

R2	Sum of Squares	df	Mean Square	F-value	p-value
Model	486.97	10	48.7	30.49	< 0.0001
A-SOD	347.06	1	347.06	217.32	< 0.0001
B-Roll gap	54.06	1	54.06	33.85	< 0.0001
C-Feed rate	34.07	1	34.07	21.33	0.0002
D-Roll speed	0.3158	1	0.3158	0.1977	0.6622
AB	7.92	1	7.92	4.96	0.0398
AC	11.15	1	11.15	6.98	0.0171
BD	4.76	1	4.76	2.98	0.1023
CD	17.91	1	17.91	11.22	0.0038
A ²	9.33	1	9.33	5.84	0.0271
D ²	2.73	1	2.73	1.71	0.2086
Residual	27.15	17	1.6		
Lack of Fit	20.41	14	1.46	0.649	0.7522
Pure Error	6.74	3	2.25		
Cor Total	514.12	27			

Table S3. ANOVA table for grinding energy consumption (R3).

R3	Sum of Squares	df	Mean Square	F-value	p-value
Model	94.89	11	8.63	27.66	< 0.0001
A-SOD	0.6328	1	0.6328	2.03	0.1735
B-Roll gap	81.6	1	81.6	261.66	< 0.0001
C-Feed rate	1.18	1	1.18	3.77	0.0701
D-Roll speed	0.3896	1	0.3896	1.25	0.2802
AB	0.2508	1	0.2508	0.8042	0.3831
AC	0.281	1	0.281	0.9011	0.3566
BC	2.92	1	2.92	9.37	0.0075
CD	0.5898	1	0.5898	1.89	0.188
A ²	3.33	1	3.33	10.67	0.0049
B ²	0.6368	1	0.6368	2.04	0.1723
D ²	1.42	1	1.42	4.55	0.0487
Residual	4.99	16	0.3119		
Lack of Fit	3.77	13	0.2899	0.7126	0.7137
Pure Error	1.22	3	0.4069		
Cor Total	99.88	27			