

Effects of high manganese dose on sheep rumen enzyme activities

Data 2: Specific katalytic activities, ukat/g of protein, outliers excluded

Ctrl, control group, 34.3 mg Mn/kg DM feed, no manganese supplement

IMn, inorganic manganese supplement, 182.7 mg Mn/kg DM feed

OMn, organic manganese supplement, 184 mg Mn/kg DM feed

Ctrl-AMYL	IMn-AMYL	OMn-AMYL	Ctrl-CMCaza	IMn-CMCaza	OMn-CMCaza	Ctrl-Xyl	IMn-Xyl	OMn-Xyl
3.85			0.66			181.29		
	2.63	2.31		1.82	1.85	168.24	168.84	242.69
2.56	2.68	2.20	0.32	1.02	1.37	201.18	167.28	250.63
2.85	1.39	2.58	0.35	1.16	1.45	187.85	223.00	143.84
3.59							154.95	
3.74	1.68		0.86	1.43			269.02	

	Ctrl-AMYL	IMn-AMYL	OMn-AMYL	Ctrl-CMCaza	IMn-CMCaza	OMn-CMCaza	Ctrl-Xyl	IMn-Xyl	OMn-Xyl
Number of values	5	4	3	4	4	3	4	5	3
Minimum	2.560	1.390	2.200	0.3200	1.020	1.370	168.2	155.0	143.8
25% Percentile	2.705	1.463	2.200	0.3275	1.055	1.370	171.5	161.1	143.8
Median	3.590	2.155	2.310	0.5050	1.295	1.450	184.6	168.8	242.7
75% Percentile	3.795	2.668	2.580	0.8100	1.723	1.850	197.8	246.0	250.6
Maximum	3.850	2.680	2.580	0.8600	1.820	1.850	201.2	269.0	250.6
Mean	3.318	2.095	2.363	0.5475	1.358	1.557	184.6	196.6	212.4
Std. Deviation	0.5763	0.6577	0.1955	0.2589	0.3522	0.2572	13.71	48.24	59.50
Std. Error	0.2577	0.3288	0.1129	0.1294	0.1761	0.1485	6.856	21.57	34.35
Lower 95% CI of mean	2.602	1.048	1.878	0.1355	0.7971	0.9178	162.8	136.7	64.59
Upper 95% CI of mean	4.034	3.142	2.849	0.9595	1.918	2.195	206.5	256.5	360.2
Sum	16.59	8.380	7.090	2.190	5.430	4.670	738.6	983.1	637.2

Table Analyzed	Data 2 - amyláza,CMC-áza,xylanáza-upravená,spec				
One-way analysis of variance					
P value	0.0206				
P value summary	*				
Are means signif. different? (P < 0.05)	Yes				
Number of groups	3				
F	6.167				
R square	0.5781				
ANOVA Table	SS	df	MS		
Treatment (between columns)	3.704	2	1.852		
Residual (within columns)	2.703	9	0.3003		
Total	6.407	11			
Bonferroni's Multiple Comparison Test	Mean Diff.	t	Significant? P < 0.05?	Summary	95% CI of diff
Ctrl-AMYL vs IMn-AMYL	1.223	3.327	Yes	*	0.1447 to 2.301
Ctrl-AMYL vs OMn-AMYL	0.9547	2.385	No	ns	-0.2193 to 2.129
IMn-AMYL vs OMn-AMYL	-0.2683	0.6411	No	ns	-1.496 to 0.9594

Table Analyzed	Data 2 - amyláza,CMC-áza,xylanáza-upravená,spec				
One-way analysis of variance					
P value	0.0039				
P value summary	**				
Are means signif. different? (P < 0.05)	Yes				
Number of groups	3				
F	11.96				
R square	0.7493				
ANOVA Table	SS	df	MS		
Treatment (between columns)	2.109	2	1.054		
Residual (within columns)	0.7054	8	0.08818		
Total	2.814	10			
Bonferroni's Multiple Comparison Test	Mean Diff.	t	Significant? P < 0.05?	Summary	95% CI of diff
Ctrl-CMCaza vs IMn-CMCaza	-0.8100	3.858	Yes	*	-1.443 to -0.1768
Ctrl-CMCaza vs OMn-CMCaza	-1.009	4.450	Yes	**	-1.693 to -0.3252
IMn-CMCaza vs OMn-CMCaza	-0.1992	0.8782	No	ns	-0.8831 to 0.4848

Table Analyzed	Data 2 - amyláza,CMC-áza,xylanáza-upravená,spec				
One-way analysis of variance					
P value	0.7136				
P value summary	ns				
Are means signif. different? (P < 0.05)	No				
Number of groups	3				
F	0.3504				
R square	0.07224				
ANOVA Table	SS	df	MS		
Treatment (between columns)	1320	2	659.9		
Residual (within columns)	16950	9	1883		
Total	18270	11			
Bonferroni's Multiple Comparison Test	Mean Diff.	t	Significant? P < 0.05?	Summary	95% CI of diff
Ctrl-Xyl vs IMn-Xyl	-11.98	0.4114	No	ns	-97.37 to 73.42
Ctrl-Xyl vs OMn-Xyl	-27.75	0.8371	No	ns	-125.0 to 69.48
IMn-Xyl vs OMn-Xyl	-15.77	0.4975	No	ns	-108.7 to 77.20