



Arm & Hammer Animal and Food Production

469 North Harrison Street | Princeton, NJ 08540

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Temperature Stability Report for AMAX™ SCP

Purpose: Effect of temperature on stability of AMAX™ SCP.

Procedure: AMAX SCP was incubated as shown below.

1. Ambient
2. 100°C or 212 °F for 3 min

Ambient and heat-treated samples were analyzed to measure any changes in chemical parameters indicating decomposition.

Results:

AMAX SCP lot # VO0100 DOM 040920			
Parameter	Ambient	Heat treated, 100° C for 3 min	% change from ambient
Moisture, %	9.24	9.35	1.19
Dry matter, %	90.76	90.65	-0.12
Protein (crude), %	43.8	43.9	0.23
Fat (crude), %	5.5	5.01	-8.91
Fiber (crude), %	0.85	1.08	27.06
Ash, %	8.73	8.66	-0.80
Total digestible nutrients, %	71.4	71.6	0.28
Net energy (lactation), Mcal/lbs	0.74	0.74	0.00
Net energy (maint), Mcal/lbs	0.77	0.77	0.00
Net energy (gain), Mcal/lbs	0.52	0.52	0.00
Digestible energy, Mcal/lbs	1.42	1.43	0.70
Metabolizable energy, Mcal/lbs	1.23	1.23	0.00
Aspartic acid, %	4.42	4.24	-4.07
Threonine, %	1.36	1.29	-5.15
Serine, %	2.02	1.86	-7.92
Glutamic acid, %	5.56	5.16	-7.19
Proline, %	2.08	1.95	-6.25
Glycine, %	1.95	1.84	-5.64
Alanine, %	3.07	2.9	-5.54
Cystine, %	0.57	0.68	19.30
Valine, %	2.56	2.38	-7.03



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Parameter	Ambient	Heat treated, 100° C for 3 min	% change from ambient
Methionine, %	0.52	0.52	0.00
Isoleucine, %	2.07	1.97	-4.83
Leucine, %	3.91	3.57	-8.70
Tyrosine, %	1.75	1.63	-6.86
Phenylalanine, %	1.95	1.77	-9.23
Lysine (total), %	2.92	2.58	-11.64
Histidine, %	1.03	0.97	-5.83
Arginine, %	1.96	1.84	-6.12
Tryptophan, %	0.45	0.45	0.00
Carbohydrates (calculated), %	32.7	33	0.92

No significant changes were noted as a result of heat treatment. % change noted in ambient and heat-treated AMAX SCP sample was within the margin of lab error for testing.

Conclusion: AMAX SCP is stable at high temperatures and the product efficacy can be maintained during pelleting.

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Arm and Hammer Animal Nutrition