Stable isotopes to study sulfur amino acid utilization in broilers

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Supplementary Table S1. *Ingredient and nutritional composition of experimental diets as-fed basis for broiler chickens from 42 to 56 d of age*

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Methionine source | No Met1 | DL-Met | | | | L-Met | | | | |
| Proportion (Met2:Cys3 ratio4) | 44:56 | 46:54 | 48:52 | 50:50 | 52:48 | 46:54 | 48:52 | 50:50 | 52:48 |
| Ingredients (g/kg) |  |  |  |  |  |  |  |  |  |
| Corn (7.86%) | 674.16 | 676.51 | 676.56 | 676.61 | 675.68 | 676.36 | 676.27 | 676.17 | 675.68 |
| Soybean meal (45%) | 253.52 | 253.46 | 253.45 | 253.45 | 253.56 | 253.48 | 253.49 | 253.50 | 253.56 |
| Soy oil | 44.02 | 43.11 | 43.07 | 43.02 | 43.32 | 43.24 | 43.32 | 43.41 | 43.63 |
| Dicalcium phosphate | 9.44 | 9.44 | 9.44 | 9.44 | 9.44 | 9.44 | 9.44 | 9.44 | 9.44 |
| Limestone | 7.12 | 7.12 | 7.12 | 7.12 | 7.12 | 7.12 | 7.12 | 7.12 | 7.12 |
| Sodium bicarbonate | 4.26 | - | - | - | 1.59 | - | - | - | 0.64 |
| Salt | 1.47 | 4.37 | 4.37 | 4.37 | 3.29 | 4.37 | 4.37 | 4.37 | 3.93 |
| Choline chloride (60%) | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Butyl hydroxy toluene | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 | 0.10 |
| Coccidiostat | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 |
| DL-methionine (98%) | - | 0.13 | 0.27 | 0.41 | 0.55 | - | - | - | - |
| L-methionine (99%) | - | - | - | - | - | 0.13 | 0.27 | 0.41 | 0.55 |
| L-cystine (100%) | 0.55 | 0.41 | 0.27 | 0.13 | - | 0.41 | 0.27 | 0.13 | - |
| L-lysine.HCl (78%) | 2.21 | 2.21 | 2.21 | 2.21 | 2.21 | 2.21 | 2.21 | 2.21 | 2.21 |
| L-threonine (98%) | 0.52 | 0.51 | 0.51 | 0.51 | 0.51 | 0.51 | 0.51 | 0.51 | 0.51 |
| L-valine (95.6%) | 0.13 | 0.13 | 0.13 | 0.13 | 0.13 | 0.13 | 0.13 | 0.13 | 0.13 |
| Premix5 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Nutritional content |  |  |  |  |  |  |  |  |  |
| ME6 (MJ/kg) | 13.59 | 13.59 | 13.59 | 13.59 | 13.59 | 13.59 | 13.59 | 13.59 | 13.59 |
| CP7 (g/kg) | 170(1848) | 170(182) | 170(180) | 170(172) | 170(185) | 170(181) | 170(183) | 170(186) | 170(179) |
| Digestible amino acids |  |  |  |  |  |  |  |  |  |
| Met+Cys (g/kg) | 6.3(6.3) | 6.3(6.2) | 6.3(6.1) | 6.3(6.2) | 6.3(6.5) | 6.3(6.3) | 6.3(6.4) | 6.3(6.3) | 6.3(6.1) |
| Met (g/kg) | 2.7(2.8) | 3.1(2.8) | 3.5(3.0) | 3.9(3.1) | 4.3(3.4) | 3.1(2.9) | 3.5(3.1) | 3.9(3.1) | 4.3(3.1) |
| Cys (g/kg) | 4.5(3.5) | 4.1(3.4) | 3.7(3.2) | 3.4(3.1) | 3.0(3.1) | 4.1(3.4) | 3.7(3.3) | 3.4(3.2) | 3.0(2.9) |
| Lysine (g/kg) | 10.0(11.1) | 10.0(10.8) | 10.0(10.6) | 10.0(10.4) | 10.0(11.0) | 10.0(10.9) | 10.0(11.0) | 10.0(11.4) | 10.0(9.8) |
| Threonine (g/kg) | 6.5(7.2) | 6.5(7.1) | 6.5(6.9) | 6.5(6.9) | 6.5(7.2) | 6.5(7.1) | 6.5(7.1) | 6.5(7.2) | 6.5(6.7) |

1 No methionine synthetic supplementation.

2 Met = Methionine.

3 Cys = Cysteine.

4 Met:Cys ratio= Proportion of methionine and cysteine in relation to dietary sulfur amino acids, in weight basis.

5 Content (per kg of diet) – vitamin A = 10 575 UI; vitamin D3 = 2 554 UI; vitamin K = 1.8 mg; vitamin E = 14.87 mg; vitamin B1 = 2.00 mg; vitamin B2 = 4.5 mg; vitamin B6 = 2.50 mg; vitamin B12 = 2.00 mg; niacin = 30.00 mg; folic acid = 0.75 mg; calcium pantothenate = 11.74 mg; biotin = 0.01; iron = 43.44 mg; zinc = 43.35 mg; copper = 8.56 mg; manganese= 56.00 mg; iodine = 0,56 mg; selenium = 0.34 mg; antioxidant 4.20 mg; Salinomycin sodium 12%; Butil hidroxy toluene.

6 ME = Metabolizable energy.

7 CP = Crude protein.

8 Values in parentheses are the analyzed values.