**Supplemental material**

**Supplementary Table S1.***Ingredient composition and nutrient levels of the basal diet*

|  |  |  |
| --- | --- | --- |
| Ingredient  | Content (%) | Nutrient level (calculated value) |
| Corn | 55.92 | Metabolizable energy (kcal/kg) | 3073 |
| Soybean oil  | 4.55 | Crude protein (%) | 16.50 |
| Soybean meal  | 29.77 | Crude fibre (%) | 3.15 |
| Salt | 0.30 | Phosphorus (%) | 0.52 |
| D,L-Methionine | 0.20 | Calcium (%) | 0.96 |
| Limestone | 6.0 | Lysine (%) | 1.05 |
| Dicalcium phosphate | 1.86 | Methionine (%) | 0.52 |
| Calcium carbonate | 1.10 | Methionine + cysteine (%) | 0.76 |
| Premix1 | 0.30 |  |  |
| Total | 100.00 |  |  |

1Premix provided per kg of diet: Cu, 10 mg; Fe, 50 mg; Mn, 60 mg; Zn, 65 mg; Se, 0.40 mg; vitamin A, 9000 IU; vitamin D3, 3100 IU; vitamin E, 25 IU; vitamin B1, 2.5 mg; vitamin B2, 5 mg; vitamin B12, 0.02 mg; biotin, 0.1 mg; folacin, 1 mg; pantothenic acid, 12 mg; nicotinic acid, 38 mg; and pyridoxine, 3.5 mg

Yolk

Thick albumen

Thin albumen

**Supplementary Figure S1.***Internal egg material spread on a flat surface. Note the difference in density between the thick and thin albumen*