

**Table S1.** Details of diets, ingredient composition, and proximate analysis published in Basto-Silva, *et al.* [28].

	Diets			
	FM-P50/CH10	FM-P40/CH20	PF-P50/CH10	PF-P40/CH20
<i>Ingredients (%DM)</i>				
Fishmeal <sup>1</sup>	64.8	51.9	13.0	10.4
Soybean meal <sup>2</sup>	-	-	25.0	19.1
Wheat gluten <sup>3</sup>	-	-	12.7	9.0
Corn gluten <sup>4</sup>	-	-	22.6	20.0
Fish oil <sup>5</sup>	10.4	11.9	15.2	15.7
Pregelatinized maize starch <sup>6</sup>	10.0	20.0	5.9	16.6
Cellulose <sup>7</sup>	11.3	12.7	-	2.9
Monocalcium phosphate <sup>8</sup>	-	-	1.5	2.1
Lysine <sup>9</sup>	-	-	0.6	0.5
Taurine <sup>10</sup>	-	-	0.2	0.2
Vitamin mix <sup>11</sup>	1.0	1.0	1.0	1.0
Mineral mix <sup>12</sup>	1.0	1.0	1.0	1.0
Binder <sup>13</sup>	1.0	1.0	1.0	1.0
Choline chloride (50%)	0.5	0.5	0.5	0.5
<i>Proximate analysis (%DM)</i>				
Dry matter	92.1	92.9	93.8	90.3
Crude protein	51.3	39.1	50.6	38.0
Crude fat	18.7	18.6	18.7	18.4
Ash	8.6	7.5	6.4	5.6
Starch	9.0	17.2	11.4	18.2
Gross energy (kJ g <sup>-1</sup> )	23.7	21.2	22.1	20.6

CH: Carbohydrate; CP: Crude protein; DM: Dry matter; FM: Fishmeal; GL: Gross lipid; P: Protein; PF: Plant-feedstuffs.

<sup>1</sup>Sorgal. S.A. Ovar. Portugal (CP: 77.1% DM; GL: 11.8% DM).

<sup>2</sup>Sorgal. S.A. Ovar. Portugal (CP: 52.0% DM; GL: 1.9% DM).

<sup>3</sup>Sorgal. S.A. Ovar. Portugal (CP: 83.1% DM; GL: 1.4% DM).

<sup>4</sup>Sorgal. S.A. Ovar. Portugal (CP: 70.1% DM; GL: 2.8% DM).

<sup>5</sup>Sorgal. S.A. Ovar. Portugal.

<sup>6</sup>C-Gel instant 12018. Cerestar. Mechelen. Belgium.

<sup>7</sup> $\alpha$ - Cellulose (C-8002). Sigma-Aldrich. Sintra. Portugal.

<sup>8</sup>Sorgal. S.A. Ovar. Portugal.

<sup>9</sup>Feed-grade lysine. Sorgal. S.A. Ovar. Portugal.

<sup>10</sup>Feed-grade taurine. Sorgal. S.A. Ovar. Portugal.

<sup>11</sup>Vitamins (mg kg<sup>-1</sup> diet): retinol acetate. 18000 (IU kg<sup>-1</sup> diet); cholecalciferol. 2000 (IU kg<sup>-1</sup> diet); alpha tocopherol acetate. 35; sodium menadione bisulphate. 10; thiamin-HCl. 15; riboflavin. 25; calcium pantothenate. 50; nicotinic acid. 200; pyridoxine HCl. 5; folic acid 10; cyanocobalamin. 0.02; biotin. 1.5; ascorbic acid. 50; inositol. 400. Premix. Lda. Viana do Castelo. Portugal.

<sup>12</sup>Minerals (mg kg<sup>-1</sup> diet): copper (II) sulphate. 5; ferrous carbonate. 40; fluorine. 1; potassium iodide. 0.6; magnesium oxide. 500; manganese oxide. 20; sodium selenite. 0.3; zinc oxide. 30; Minerals content (%): Calcium. 17; Phosphorus. 13; Potassium. 6; Chloride. 7; Sodium chloride. 4. Premix. Lda. Viana do Castelo. Portugal.

<sup>13</sup>Liptosa. Madrid. Spain.