Supplementary Data 1. The species, numbers and locations of the sampled fish

Fish Species	Species	Number of samples	Location	Diet Types
Large rainbow trout	*Oncorhynchus mykiss*	10	41°54′44,15″N 35°10′55,92″E	D1
Turbot	*Scophthalmus maximus*	3	40°58′17″N 39°50′30″E	D2
Sea bass	*Sparus aurata*	10	41°40′53.12″ N 35°28′22.48″ E	D3
Sea bream	*Dicentrarchus labrax*	10	41°40′53.12″N 35°28′22.48″E	D3

Supplementary Data 2. The biochemical, amino and fatty acid compositions of the diets

Parameters	**D1**	**D2**	**D3**
Biochemical composition (%)			
Crude Protein	45.64±0.44	45.65±0.45	44.81±0.12
Crude Fat	29.10±0.72	21.45±0.19	22.51±0.28
Crude Ash	10.19±0.37	11.80±0.87	15.15±1.72
Dry Matter	95.34±0.03	90.36±0.03	89.52±0.05
Amino acid composition (g/100g)			
Alanine	2.19±0.01	3.13±0.01	3.12±0.01
Aspartic acid	5.30±0.01	5.35±0.01	6.23±0.01
Methionine	0.70±0.01	1.13±0.01	0.98±0.01
Glutamic acid	6.63±0.01	9.00±0.01	7.07±0.01
Phenilalanine	1.99±0.01	2.34±0.01	2.17±0.01
Lysine	3.14±0.01	3.11±0.01	4.33±0.01
Histidine	1.19±0.01	1.29±0.01	1.14±0.01
Tyrosine	1.05±0.01	1.89±0.01	1.25±0.01
Glysine	2.21±0.01	2.11±0.01	4.07±0.01
Valine	1.91±0.01	2.26±0.01	2.45±0.01
Leucine	3.38±0.01	4.98±0.01	3.72±0.01
Isoleucine	1.32±0.02	1.63±0.01	1.56±0.01
Threonine	1.57±0.01	1.96±0.01	1.88±0.01
Serine	2.38±0.01	2.72±0.01	2.54±0.01
Proline	2.28±0.01	3.34±0.01	2.91±0.03
Ornitine	0.02±0.01	0.05±0.01	0.05±0.01
Cystine	0.23±0.01	0.38±0.01	0.14±0.01
Arginine	2.66±0.01	2.52±0.01	2.97±0.01
ΣEAA	17.83±0.03	21.22±0.01	21.18±0.01
ΣNEAA	22.28±0.01	28.05±0.02	27.66±0.01

Supplementary Data 2 (continued)

Parameters	D1	D2	D3
Fatty acid composition (%)			
C12:0	0.08±0.01	0.12±0.01	0.09±0.01
C14:0	3.67±0.19	6.77±0.07	4.90±0.03
C16:0	11.31±0.52	16.96±0.22	15.33±0.12
C18:0	4.13±0.18	6.06±0.11	5.43±0.10
C20:0	1.03±0.05	1.32±0.02	1.21±0.02
C22:0	0.50±0.02	0.72±0.01	0.76±0.01
C24:0	0.48±0.03	0.62±0.01	0.43±0.01
C16:1	0.31±0.03	1.11±0.01	0.55±0.02
C18:1n-9c	26.07±3.76	13.9±0.11	24.15±0.21
C18:1n-9t	3.29±0.20	3.58±0.07	1.59±0.28
C20:1n-9c	5.83±0.30	2.72±0.02	2.36±0.01
C22:1n-9	4.93±0.26	1.83±0.02	2.16±0.03
C24:1	1.09±0.06	1.84±0.02	1.16±0.07
C18:2n-6t	0.35±0.02	0.66±0.01	0.39±0.01
C18:2n-6c	13.41±0.68	9.40±0.12	14.73±1.06
C18:3n-3	7.82±0.40	3.00±0.03	5.18±0.04
C18:3n-6	0.32±0.05	0.38±0.01	0.32±0.02
C20:2	2.15±0.11	0.42±0.18	0.90±0.01
C20:3n-3	0.01±0.01	0.02±0.01	0.02±0.01
C20:3n-6	0.52±0.03	0.29±0.01	0.33±0.01
C20:4n:6	0.64±0.05	1.36±0.02	1.07±0.01
C20:5n-3	4.73±0.28	8.47±0.05	5.90±0.05
C22:2	0.24±0.01	0.24±0.01	0.19±0.01
C22:6n-3	5.74±0.28	13.49±0.01	7.45±0.06
ΣSFA	21.95±1.01	35.80±0.08	30.05±0.28
ΣMUFA	42.03±2.91	26.44±0.06	32.74±0.13
ΣPUFA	35.92±1.89	37.63±0.04	36.47±0.89

Each value represents the mean±standard error.

D1: large rainbow trout diet, **D2:** turbot diet, **D3:** sea bass and sea bream diets