

Supplementary Material

Impact of different cooking methods on the proximate chemical and fatty acid composition of blackspot seabream (*Pagellus bogaraveo*) and blackbelly rosefish (*Helicolenus dactylopterus*) from the North Atlantic Azores Archipelago

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Table S1 ANOVA results on the effect of cooking methods on water loss, moisture, ash and total fat content of *P. bogaraveo* and *H. dactylopterus*. Significant p-values are indicated in bold.

<i>P. bogaraveo</i>						
	SS	DF	MS	F	p-value	F critical
Water loss						
<i>Between</i>	3372.388	3	1124.129	30.1250	0.0000	2.6693
<i>Within</i>	5224.166	140	37.3155			
<i>Total</i>	8596.554	143				
Moisture						
<i>Between</i>	5984.861	4	1496.215	129.8285	0.0000	2.4233
<i>Within</i>	2016.797	175	11.5246			
<i>Total</i>	8001.658	179				
Ash						
<i>Between</i>	28.5410	4	7.1353	55.4808	0.0000	2.4341
<i>Within</i>	18.6481	145	0.1286			
<i>Total</i>	47.1891	149				
Total Fat						
<i>Between</i>	62.1280	4	15.5320	12.5460	0.0001	3.0556
<i>Within</i>	18.5700	15	1.2380			
<i>Total</i>	80.6980	19				
<i>H. dactylopterus</i>						
	SS	DF	MS	F	p-value	F critical
Water loss						
<i>Between</i>	2812.549	3	937.5164	44.1619	0.0000	2.6920
<i>Within</i>	2207.825	104	21.2291			
<i>Total</i>	5020.374	107				
Moisture						
<i>Between</i>	9218.987	4	2304.747	266.3939	0.0000	2.4414
<i>Within</i>	1124.714	130	8.6516			
<i>Total</i>	10343.7	134				
Ash						
<i>Between</i>	11.3756	4	2.8439	150.4936	0.0000	2.4472
<i>Within</i>	2.2677	120	0.0019			
<i>Total</i>	13.6432	124				
Total Fat						
<i>Between</i>	6.9600	4	1.7400	1.1757	0.3609	3.0556
<i>Within</i>	22.2000	15	1.4800			
<i>Total</i>	29.1600	19				

Table S2 ANOVA results on the effect of cooking methods on the main fatty acids content of fat in *P. bogaraveo*. Significant p-values are indicated in bold.

		SS	DF	MS	F	p-value	F critical
Total Fat							
	<i>Between</i>	62.1280	4	15.5320	12.5460	0.0001	3.0556
	<i>Within</i>	18.5700	15	1.2380			
	<i>Total</i>	80.6980	19				
Myristic Acid							
	<i>Between</i>	0.5120	4	0.1280	5.3333	0.0071	3.0556
	<i>Within</i>	0.3600	15	0.0240			
	<i>Total</i>	0.8720	19				
Palmitic Acid							
	<i>Between</i>	6.6880	4	1.6720	5.5364	0.0061	3.0556
	<i>Within</i>	4.5300	15	0.3020			
	<i>Total</i>	11.2180	19				
Stearic Acid							
	<i>Between</i>	0.5120	4	0.1280	4.9231	0.0098	3.0556
	<i>Within</i>	0.3900	15	0.0260			
	<i>Total</i>	0.9020	19				
Total SFA							
	<i>Between</i>	18.8320	4	4.7080	4.7943	0.0108	3.0556
	<i>Within</i>	14.7300	15	0.9820			
	<i>Total</i>	33.5620	19				
Palmitoleic Acid							
	<i>Between</i>	0.0480	4	0.0120	2.0000	0.1462	3.0556
	<i>Within</i>	0.0900	15	0.0060			
	<i>Total</i>	0.1380	19				
Elaidic Acid + Oleic Acid							
	<i>Between</i>	0.9120	4	0.2280	0.9048	0.4859	3.0556
	<i>Within</i>	3.7800	15	0.2520			
	<i>Total</i>	4.6920	19				
Total MUFA							
	<i>Between</i>	0.7680	4	0.1920	0.4638	0.7613	3.0556
	<i>Within</i>	6.2100	15	0.4140			
	<i>Total</i>	6.9780	19				
Linoleic acid + Linolelaidic acid							
	<i>Between</i>	1.3200	3	0.4400	7.0400	0.0055	3.4903
	<i>Within</i>	0.7500	12	0.0625			
	<i>Total</i>	2.0700	15				
Docosahexanoic Acid [DHA]							
	<i>Between</i>	0.0480	4	0.0120	3.0000	0.0528	3.0556
	<i>Within</i>	0.0600	15	0.0040			
	<i>Total</i>	0.1080	19				
Total PUFA							
	<i>Between</i>	5.3920	4	1.3480	9.4930	0.0005	3.0556
	<i>Within</i>	2.1300	15	0.1420			
	<i>Total</i>	7.5220	19				

Table S3 ANOVA results on the effect of cooking methods on the nutritional correlations and nutritional value of fat in *P. bogaraveo*. Significant p-values are indicated in bold.

	SS	DF	MS	F	p-value	F critical
Total n-3 PUFA						
<i>Between</i>	0.1280	4	0.0320	5.3333	0.0071	3.0556
<i>Within</i>	0.0900	15	0.0060			
<i>Total</i>	0.2180	19				
EPA + DHA						
<i>Between</i>	0.1280	4	0.0320	8.0000	0.0012	3.0556
<i>Within</i>	0.0600	15	0.0040			
<i>Total</i>	0.1880	19				
Total n-6 PUFA						
<i>Between</i>	2.2800	3	0.7600	12.1600	0.0006	3.4903
<i>Within</i>	0.7500	12	0.0625			
<i>Total</i>	3.0300	15				
PUFA / SFA						
<i>Between</i>	0.3520	4	0.0880	1.4194	0.2755	3.0556
<i>Within</i>	0.9300	15	0.0620			
<i>Total</i>	1.2820	19				
MUFA / SFA						
<i>Between</i>	1.2320	4	0.3080	2.2319	0.1144	3.0556
<i>Within</i>	2.0700	15	0.1380			
<i>Total</i>	3.3020	19				
UFA / SFA						
<i>Between</i>	2.6880	4	0.6720	2.3662	0.0995	3.0556
<i>Within</i>	4.2600	15	0.2840			
<i>Total</i>	6.9480	19				
n-6 / n-3						
<i>Between</i>	44.2400	3	14.7467	47.1893	0.0000	3.4903
<i>Within</i>	3.7500	12	0.3125			
<i>Total</i>	47.9900	15				
n-3 / n-6						
<i>Between</i>	36.6700	3	12.2233	10.9873	0.0009	3.4903
<i>Within</i>	13.3500	12	1.1125			
<i>Total</i>	50.0200	15				
AI						
<i>Between</i>	6.9200	3	2.3067	11.3909	0.0008	3.4903
<i>Within</i>	2.4300	12	0.2025			
<i>Total</i>	9.3500	15				
TI						
<i>Between</i>	4.8300	3	1.6100	12.6275	0.0005	3.4903
<i>Within</i>	1.5300	12	0.1275			
<i>Total</i>	6.3600	15				
h / H						
<i>Between</i>	3.9680	4	0.9920	26.1053	0.0000	3.0556
<i>Within</i>	0.5700	15	0.0380			
<i>Total</i>	4.5380	19				
FLQ						
<i>Between</i>	296.0800	4	74.0200	150.4472	0.0000	3.0556
<i>Within</i>	7.3800	15	0.4920			
<i>Total</i>	303.4600	19				
HPI						
<i>Between</i>	2.6400	4	0.6600	8.2500	0.0010	3.0556
<i>Within</i>	1.2000	15	0.0800			
<i>Total</i>	3.8400	19				
PI						
<i>Between</i>	0.4320	4	0.1080	10.8000	0.0003	3.0556
<i>Within</i>	0.1500	15	0.0100			
<i>Total</i>	0.5820	19				

Table S4 ANOVA results on the effect of cooking methods on the main fatty acids content of fat in *H. dactylopterus*. Significant p-values are indicated in bold.

		SS	DF	MS	F	p-value	F critical
Total Fat							
	<i>Between</i>	6.9600	4	1.7400	1.1757	0.3609	3.0556
	<i>Within</i>	22.2000	15	1.4800			
	<i>Total</i>	29.1600	19				
Myristic Acid							
	<i>Between</i>	0.1120	4	0.0280	4.6667	0.0120	3.0556
	<i>Within</i>	0.0900	15	0.0060			
	<i>Total</i>	0.2020	19				
Palmitic Acid							
	<i>Between</i>	0.5280	4	0.1320	2.5385	0.0834	3.0556
	<i>Within</i>	0.7800	15	0.0520			
	<i>Total</i>	1.3080	19				
Stearic Acid							
	<i>Between</i>	0.0480	4	0.0120	3.0000	0.0528	3.0556
	<i>Within</i>	0.0600	15	0.0040			
	<i>Total</i>	0.1080	19				
Total SFA							
	<i>Between</i>	1.0720	4	0.2680	1.5581	0.2363	3.0556
	<i>Within</i>	2.5800	15	0.1720			
	<i>Total</i>	3.6520	19				
Palmitoleic Acid							
	<i>Between</i>	0.2080	4	0.0520	6.5000	0.0031	3.0556
	<i>Within</i>	0.1200	15	0.0080			
	<i>Total</i>	0.3280	19				
Elaidic Acid + Oleic Acid							
	<i>Between</i>	1.3280	4	0.3320	2.6349	0.0757	3.0556
	<i>Within</i>	1.8900	15	0.1260			
	<i>Total</i>	3.2180	19				
Total MUFA							
	<i>Between</i>	0.9920	4	0.2480	0.9323	0.4716	3.0556
	<i>Within</i>	3.9900	15	0.2660			
	<i>Total</i>	4.9820	19				
Linoleic acid + Linolelaidic acid							
	<i>Between</i>	3.6300	3	1.2100	9.8776	0.0015	3.4903
	<i>Within</i>	1.4700	12	0.1225			
	<i>Total</i>	5.1000	15				
Eicosapentaenoic Acid [EPA]							
	<i>Between</i>	0.0300	3	0.0100	2.0000	0.1678	3.4903
	<i>Within</i>	0.0600	12	0.0050			
	<i>Total</i>	0.0900	15				
Docosahexanoic Acid [DHA]							
	<i>Between</i>	1.0720	4	0.2680	10.3077	0.0003	3.0556
	<i>Within</i>	0.3900	15	0.0260			
	<i>Total</i>	1.4620	19				
Total PUFA							
	<i>Between</i>	2.6880	4	0.6720	2.2550	0.1117	3.0556
	<i>Within</i>	4.4700	15	0.2980			
	<i>Total</i>	7.1580	19				

Table S5 ANOVA results on the effect of cooking methods on the nutritional correlations and nutritional value of fat in *H. dactylopterus*. Significant p-values are indicated in bold.

		SS	DF	MS	F	p-value	F critical
Total n-3 PUFA							
	<i>Between</i>	1.9520	4	0.4880	18.7692	0.0000	3.0556
	<i>Within</i>	0.3900	15	0.0260			
	<i>Total</i>	2.3420	19				
EPA + DHA							
	<i>Between</i>	1.6480	4	0.4120	15.8462	0.0000	3.0556
	<i>Within</i>	0.3900	15	0.0260			
	<i>Total</i>	2.0380	19				
Total n-6 PUFA							
	<i>Between</i>	3.6300	3	1.2100	9.8776	0.0015	3.4903
	<i>Within</i>	1.4700	12	0.1225			
	<i>Total</i>	5.1000	15				
PUFA / SFA							
	<i>Between</i>	1.4080	4	0.3520	5.6774	0.0055	3.0556
	<i>Within</i>	0.9300	15	0.0620			
	<i>Total</i>	2.3380	19				
MUFA / SFA							
	<i>Between</i>	0.6880	4	0.1720	1.1467	0.3727	3.0556
	<i>Within</i>	2.2500	15	0.1500			
	<i>Total</i>	2.9380	19				
UFA / SFA							
	<i>Between</i>	7.0720	4	1.7680	14.2581	0.0001	3.0556
	<i>Within</i>	1.8600	15	0.1240			
	<i>Total</i>	8.9320	19				
n-6 / n-3							
	<i>Between</i>	195.2400	3	65.0800	13016.0000	0.0000	3.4903
	<i>Within</i>	0.0600	12	0.0050			
	<i>Total</i>	195.3000	15				
n-3 / n-6							
	<i>Between</i>	827.6000	3	275.8667	98.2606	0.0000	3.4903
	<i>Within</i>	33.6900	12	2.8075			
	<i>Total</i>	861.2900	15				
AI							
	<i>Between</i>	1.1600	3	0.3867	25.7778	0.0000	3.4903
	<i>Within</i>	0.1800	12	0.0150			
	<i>Total</i>	1.3400	15				
TI							
	<i>Between</i>	0.5900	3	0.1967	78.6667	0.0000	3.4903
	<i>Within</i>	0.0300	12	0.0025			
	<i>Total</i>	0.6200	15				
h / H							
	<i>Between</i>	11.9520	4	2.9880	29.2941	0.0000	3.0556
	<i>Within</i>	1.5300	15	0.1020			
	<i>Total</i>	13.4820	19				
FLQ							
	<i>Between</i>	700.8800	4	175.2200	43805.0000	0.0000	3.0556
	<i>Within</i>	0.0600	15	0.0040			
	<i>Total</i>	700.9400	19				
HPI							
	<i>Between</i>	16.6880	4	4.1720	231.7778	0.0000	3.0556
	<i>Within</i>	0.2700	15	0.0180			
	<i>Total</i>	16.9580	19				
PI							
	<i>Between</i>	3.4720	4	0.8680	54.2500	0.0000	3.0556
	<i>Within</i>	0.2400	15	0.0160			
	<i>Total</i>	3.7120	19				