Plastic ingestion and associated additives in chicks of the northern fulmar *Fulmarus glacialis* from the Faroe Islands

Supplementary Material

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Size distribution

The largest particle found was 45 mm in length and was found in one of the young chicks (Fig. S1). The smallest one was 1 mm in length, the threshold for the minimum size of interest in this study. No significant difference in size distribution was evident between the two age classes (Mann-Whitney; W: 891, p: 0.1233), but the majority was smaller or equal to 5 mm in old chicks (57%), and smaller or equal to 7 mm in young chicks (64%).

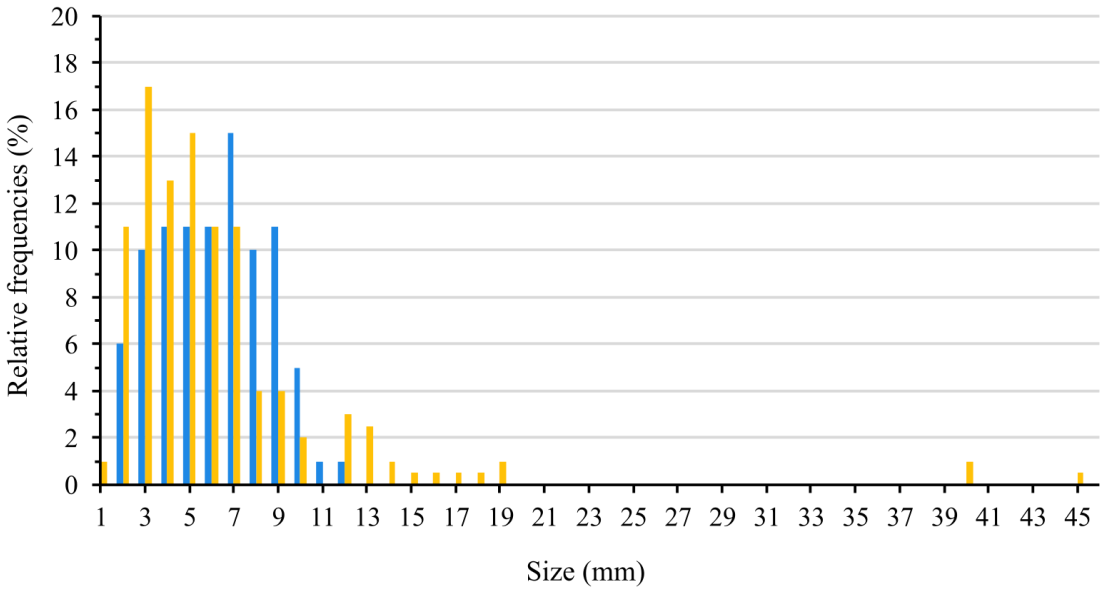

Fig. S1. Frequency distribution of the size of ingested plastics in both young (blue) and old chicks (yellow).

Table S1.

Biometric measurements of the collected fulmar chicks. Old chicks: O1-O10, young chicks: Y1-Y10.

Fulmar ID	Body mass (g)	Wing length (cm)	Culmen length (cm)	Head + bill length (cm)	Gonys length (cm)
Y1	301	5.0	2.5	6.4	1.2
Y2	371	5.5	2.7	6.7	1.2
Y3	320	5.1	2.6	6.7	1.2
Y4	343	5.0	2.5	6.5	1.2
Y5	318	5.5	2.6	6.9	1.2
Y6	153	3.3	2.0	5.2	0.9
Y7	256	4.5	2.3	5.9	1.1
Y8	395	6.0	2.8	7.0	1.3
Y9	333	5.2	2.6	6.9	1.2
Y10	127	3.0	2.1	5.4	1.0
O1	928	19.5	3.6	9.3	1.5
O2	951	16.5	3.4	8.2	1.3
O3	761	16.0	3.5	8.6	1.3
O4	881	24.0	3.3	8.7	1.4
O5	959	14.5	3.1	8.4	1.3
O6	403	14.5	3.0	7.6	1.3
O7	785	16.5	3.3	8.5	1.3
O8	1244	22.5	4.0	9.6	1.6
O9	606	11.0	3.0	7.9	1.3
O10	1180	22.5	3.8	9.8	1.6

Table S2. Number and mass of plastic per individual. Old chicks: O1-O10, young chicks: Y1-Y10, SD: standard deviation.

Fulmar ID	Number of plastics	Mass of plastics (mg)
Y1	2	27
Y2	30	872
Y3	2	4.5
Y4	1	1.5
Y5	9	131
Y6	1	13.9
Y7	15	88.4
Y8	8	373
Y9	12	94.3
Y10	0	0
Average (±SD)	8.0±9.3	0.16±0.26
Median	5	0.06
O1	6	63
O2	78	492
O3	4	5.8
O4	12	130
O5	7	298
O6	9	38.1
O7	5	133
O8	20	72.1
O9	2	7.3
O10	25	169
Average (±SD)	16.8±22.7	0.14±0.15
Median	8	0.1
Total average (±SD)	12.4±17.5	0.15±0.21
Total median	7.5	0.08

Table S3. Concentrations of all BDE congeners analysed in pg/g wet weight. O: old chicks, Y: young chicks. LOD: limit of detection, LOQ: limit of quantification.

Samples	BDE 17	BDE 28	BDE 47	BDE 49	BDE 66	BDE 85	BDE 99	BDE 100	BDE 119	BDE 138	BDE 153	BDE 154
O1	<LOD	<LOD	52.1	7.8	<LOD	<LOD	<LOD	20.5	10.2	<LOD	16.2	36.1
O2	<LOD	3.1	144.4	19.6	<LOD	<LOD	31.5	43.5	19.7	<LOD	20.3	83.3
O3	<LOD	<LOD	59.7	4.1	<LOD	<LOD	29.1	17.1	10.0	<LOD	38.3	36.2
O4	<LOD	<LOD	31.7	3.7	<LOD	<LOD	<LOD	9.5	7.8	<LOD	18.0	29.2
O5	<LOD	<LOD	67.6	7.3	<LOD	<LOD	<LOD	18.3	8.7	<LOD	24.7	56.5
O6	<LOD	7.3	249.7	28.0	5.0	<LOD	48.3	60.5	40.2	<LOD	63.9	143.8
O7	<LOD	<LOD	89.8	14.5	<LOD	<LOD	31.5	35.0	22.4	<LOD	41.8	89.8
O8	<LOD	<LOD	58.6	7.2	<LOD	<LOD	<LOD	16.3	12.4	<LOD	21.0	60.6
O9	<LOD	<LOD	<LOD	2.2	<LOD	<LOD	<LOD	<LOD	4.7	<LOD	10.6	10.6
O10	<LOD	<LOD	96.5	13.2	<LOD	<LOD	<LOD	29.3	14.8	<LOD	17.6	37.7
Y1	0.91	7.8	362.4	40.8	4.3	<LOD	42.4	99.1	37.3	<LOD	78.6	289.7
Y2	<LOD	<LOD	93.9	12.8	<LOD	<LOD	<LOD	22.1	15.0	<LOD	33.6	72.8
Y3	<LOD	<LOD	452.0	14.4	<LOD	<LOD	339.6	56.1	20.9	<LOD	81.4	55.1
Y4	<LOD	5.8	200.7	26.8	2.3	<LOD	<LOD	55.7	29.9	<LOD	49.2	149
Y5	<LOD	<LOD	74.5	10.8	<LOD	<LOD	22.1	20.9	15.4	<LOD	38.1	77.0
Y6	<LOD	<LOD	98.9	17.3	<LOD	<LOD	31.2	35.3	25.9	<LOD	146.5	86.6
Y7	<LOD	<LOD	51.3	6.7	<LOD	<LOD	<LOD	13.4	8.9	<LOD	28.3	37.9
Y8	<LOD	<LOD	109.4	11.1	<LOD	<LOD	34.3	26.3	15.3	<LOD	40.9	80.9
Y9	<LOD	<LOD	30.9	4.4	<LOD	<LOD	<LOD	<LOD	7.3	<LOD	22.5	29.5
Y10	<LOD	<LOD	132.2	16.6	2.9	<LOD	100.9	29.2	52.5	<LOD	349.1	182.3
LOD	0.4	2.0	19.8	0.6	1.6	1.2	17.6	6.0	1.2	2.4	2.4	1.8
LOQ	0.9	6.0	45.2	1.5	4.0	3.6	43.7	18.0	3.6	5.2	5.2	3.7

Samples	BDE 156	BDE 184	BDE 183	BDE 191	BDE 202	BDE 197	BDE 196	BDE 207	BDE 206	BDE 209	sumPBDE
O1	<LOD	<LOD	<LOD	<LOD	3.7	<LOD	<LOD	<LOD	<LOD	<LOD	146.6
O2	<LOD	<LOD	6.6	<LOD	10.7	<LOD	<LOD	15.8	36.2	2065	2499.7
O3	<LOD	<LOD	4.0	<LOD	4.5	<LOD	<LOD	<LOD	<LOD	<LOD	203
O4	<LOD	<LOD	5.3	<LOD	8.9	<LOD	<LOD	<LOD	<LOD	<LOD	114.1
O5	<LOD	<LOD	7.2	<LOD	11.0	2.8	<LOD	<LOD	<LOD	<LOD	204.1
O6	<LOD	<LOD	7.9	<LOD	17.3	<LOD	<LOD	<LOD	<LOD	<LOD	671.9
O7	<LOD	<LOD	5.4	<LOD	7.4	<LOD	<LOD	<LOD	<LOD	<LOD	337.6
O8	<LOD	<LOD	4.5	<LOD	10.1	<LOD	<LOD	<LOD	<LOD	<LOD	190.7
O9	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	<LOD	28.1
O10	<LOD	<LOD	<LOD	<LOD	6.9	<LOD	<LOD	<LOD	<LOD	<LOD	216
Y1	<LOD	<LOD	8.5	<LOD	19.4	3.8	<LOD	12.1	24.5	1613	2644.61
Y2	<LOD	<LOD	6.4	<LOD	10.6	<LOD	<LOD	<LOD	<LOD	<LOD	267.2
Y3	<LOD	<LOD	5.9	<LOD	6.0	<LOD	<LOD	<LOD	<LOD	<LOD	1031.4
Y4	<LOD	<LOD	5.7	<LOD	15.6	<LOD	<LOD	<LOD	<LOD	<LOD	540.7
Y5	<LOD	<LOD	6.3	<LOD	11.4	<LOD	<LOD	15.3	<LOD	1496	1787.8
Y6	<LOD	<LOD	23.3	<LOD	34.2	3.3	4.7	<LOD	<LOD	<LOD	507.2
Y7	<LOD	<LOD	4.3	<LOD	11.9	<LOD	<LOD	<LOD	<LOD	<LOD	162.7
Y8	<LOD	<LOD	7.3	<LOD	9.3	3.4	<LOD	<LOD	<LOD	<LOD	338.2
Y9	<LOD	<LOD	5.3	<LOD	9.0	<LOD	4.2	18.0	28.7	1440	1599.8
Y10	<LOD	<LOD	43.4	<LOD	56.0	7.5	8.4	14.4	<LOD	1096	2091.4
LOD	2.4	2.4	2.4	2.4	2.4	2.4	2.4	6.4	20.0	598	
LOQ	5.2	5.2	5.2	5.2	5.2	5.2	5.2	14.2	50.8	1992	