**Table 1**

GLMs were used to analyse the frequency of plastic ingestion and the number of plastic pieces ingested by individuals.

|  |  |
| --- | --- |
| Models of the frequency of ingestion |  |
| Model 1 | glm (formula = proportion of Thames and Clyde fish found to ingest plastic ~ SEASON + SITE + log(LENGTH) + GROUP, family = "binomial") |
| Model 2 | glm (formula = proportion of Thames organisms found to ingest plastic ~ log(LENGTH) + GROUP, family = "binomial") |
| Model 3 | glm (formula = proportion of Thames flounder found to ingest plastic ~ GENDER, family = "binomial") |
| Model 4 | glm (formula = proportion of Clyde dab found to ingest plastic ~ SEASON + GENDER, family = "binomial") |
| Models of the number of plastic pieces ingested |  |
| Model 5 | glm (formula = number of plastic pieces ingested by Thames and Clyde fish ~ SEASON + log(LENGTH)\*GROUP, family = Gamma (link = log)) |
| Model 6 | glm (formula = number of plastic pieces ingested by Thames organisms ~ SUBSITE + GROUP, family = Gamma (link = log)) |
| Model 7 | glm (formula = number of plastic pieces ingested by Thames flounder ~ GENDER, family = Gamma (link = log)) |
| Model 8 | glm (formula = number of pieces of plastic ingested by Clyde dab ~ SEASON + log(LENGTH) + GENDER, family = Gamma (link = log)) |

**Table 2**

Details of the plastics recovered from contamination controls (blank Petri dishes) placed in the laboratories at Millport and Royal Holloway. Results show the number of plastics remaining after FTIR analysis. The limit of detection (average + one standard deviation) was rounded up to the nearest whole number.

|  |  |  |  |
| --- | --- | --- | --- |
| Plastic description |  | RHUL | Millport  |
| Clear fibres |  |  |  |
|  | Average number of plastics recovered | 0.333 | 0 |
|  | Standard deviation | 0.577 | 0 |
|  | LOD | 1 | 0 |
| Blue fibres |  |  |  |
|  | Average number of plastics recovered | 0 | 0.333 |
|  | Standard deviation | 0 | 0.577 |
|  | LOD | 0 | 1 |
| Red fibres |  |  |  |
|  | Average number of plastics recovered | 0.333 | 0 |
|  | Standard deviation | 0.577 | 0 |
|  | LOD | 1 | 0 |
| Black fibres |  |  |  |
|  | Average number of plastics recovered | 0 | 0.333 |
|  | Standard deviation | 0 | 0.577 |
|  | LOD | 0 | 1 |
| Black film |  |  |  |
|  | Average number of plastics recovered | 0 | 0.667 |
|  | Standard deviation | 0 | 1.155 |
|  | LOD | 0 | 2 |

**Table 3**

Four functional feeding groups of marine species were studied: bottom feeding flatfish, other benthic fish, pelagic fish and shrimp, sampled from the Firth of Clyde and Thames Estuary. The two most commonly sampled species from each group and the group total for plastic ingestion (of plastics confirmed by FTIR, excluding plastic below the limit of detection), average ingestion and sample size are recorded below. For the complete list of species studied as well as maximum and minimum length recorded in this study see Appendix B.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Species | Location | Sample number | Number of individuals with plastics (% of total) | Average number of plastics per individual ± standard deviation | Maximum number of plastics per individual |
| European flounder, *Platichthys flesus* (Linnaeus, 1758)  | Thames | 118 | 35 |  |  |
| Clyde Sea | 8 | 0 |  |  |
| Dab, *Limanda limanda* (Linnaeus, 1758) | Thames | 1 | 100 |  |  |
| Clyde Sea | 307 | 50 |  |  |
| Flatfish total | Thames | 137 | 33 | 2.93 ± 2.83 | 12 |
| Clyde Sea | 541 | 39 | 3.92 ± 3.77 | 17 |
| Whiting, *Merlangius merlangus* (Linnaeus, 1758) | Thames | 29 | 10 |  |  |
| Clyde Sea | 0 | n/a |  |  |
| Pouting, *Trisopterus luscus* (Linnaeus, 1758) | Thames | 7 | 29 |  |  |
| Clyde Sea | 0 | 0 |  |  |
| Pelagic fish total | Thames | 37 | 14 | 3.20 ± 4.92 | 12 |
| Clyde Sea | 10 | 60 | 5.83 ± 8.47 | 23 |
| Roker, *Raja clavata* (Linnaeus, 1758) | Thames | 7 | 14 |  |  |
| Clyde Sea | 0 | n/a |  |  |
| Lesser spotted dogfish, *Scyliorhinus canicula* (Linnaeus, 1758) | Thames | 7 | 28 |  |  |
| Clyde Sea | 1 | 0 |  |  |
| Other benthic fish total | Thames | 21 | 19 | 1.50 ± 0.58 | 2 |
| Clyde Sea | 14 | 14 | 2.00 ± 1.41 | 3 |
| Brown shrimp, *Crangon Crangon* (Linnaeus, 1758) | Thames | 116 | 6 | 1.00 ± 0.00 | 1 |
| Clyde Sea | 0 | n/a |  |  |
| Total | Thames | 311 | 20 | 2.64 ± 2.83 | 12 |
|  | Clyde Sea | 565 | 39 | 4.00 ± 3.94 | 23 |
|  | Overall | 876 | 32 | 3.70 ± 3.76 | 23 |