

Morrison R., J.-F. Hamel, J. Sun & A. Mercier 2024. Comparative analysis of phenotypes in the sea cucumber *Cucumaria frondosa* from the Arctic and the NW Atlantic. *Arctic Science*, 10: 69-86 [open access]. <https://doi.org/10.1139/as-2023-0025>

This study compared the characteristics (weight of different organs, colour) and nutritional profile (moisture, protein, fat, amino-acids, vitamins, antioxidant) of the sea cucumber *Cucumaria frondosa* from Nunavut (Qikiqtaaluk) and Newfoundland. Sea cucumbers from Nunavut and Newfoundland had similar body weights, but those from Newfoundland had heavier gonads and body walls. Sea cucumbers from Nunavut had a distinctive colour, with more red ventral side and yellow and a darker brown colour in general. Sea cucumbers from both locations had similar moisture content. Sea cucumbers from Nunavut had less protein and lipid contents than those from Newfoundland. Inversely, sea cucumbers from Newfoundland contained more omega-3 fatty acids (which are considered healthy for the human consumption), a higher concentration of proline (which is an amino acid crucial for collagen formation, wound healing, and cardiovascular health), more vitamin A and more antioxidant than individuals from Nunavut. In consequence, Newfoundland sea cucumbers have an interesting nutritional profile which may support the sustainable development of sea cucumber fisheries in Qikiqtaaluk.

[illegible]