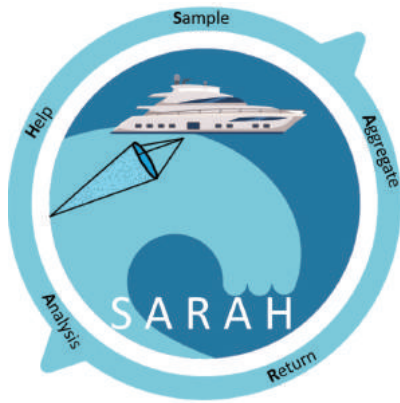


THE S.A.R.A.H. INITIATIVE



FIELD GUIDE

A citizen science movement
in partnership with Florida International University

The SARAH program will unite the International Yachting Community & the Academic World in an ambitious collaboration to combat plastic pollution & conserve our oceans.

CITIZEN-SCIENCE

- Become pioneers of this unique initiative and begin gathering data
- Be the platform for us to share the impact with the wider community
- Help us secure resources to continue this vital program into the future

WHY SARAH

- S – Sample: With the kits and instructions provided conduct as many net tows as possible on voyages
- A – Aggregate: After each net tow, rinse contents from net into sample filters, label and seal filters.
- R – Return: After each voyage, the samples are packaged and shipped back to the SARAH program research team at FIU.
- A – Analyze: Researchers will analyze the density, type, and size of plastic particles & archive in database.
- H – Help: By collecting this data you will help researchers quantify and map marine plastic debris and help stakeholders end this current epidemic.

Join us in our mission to protect our oceans. To learn more about how you can support or invest in this program, please contact: **Tony Gilbert at (786) 924-6209 | tony@seakeepers.org | www.seakeepers.org**

Sampling of microplastics on the sea surface: Instructions Part 1

1. First and most importantly, make sure to secure the neuston net tow rope to a cleat at the aft of the boat. Making sure this is as secure as possible is crucial, as there may be a considerable amount of drag, and the net and net frame assembly may be lost at sea should the knot give way.
2. Deploy the neuston net beyond your wake zone, adjusting your rope length to do so (approx. 15m distance from the boat), in order to prevent collecting water affected by turbulence inside the wake zone.
3. Write down the initial GPS coordinates and initial time in the data sheet.
4. Start to move in one straight direction with a speed of approx. 6- 8 knots for 15 min and begin the time measurement.
5. After 15 min stop the boat and write down final GPS coordinates, the length of the route (the most correct way is to calculate the length from the GPS coordinates) and the average boat speed into the data sheet provided and lift the neuston net out of the water.
6. Rinse the neuston net thoroughly from the outside of the net with seawater using a submersible pump or water from the boat water reservoir. Rinse in the direction from the net mouth to the cod end in order to concentrate all particles adhered to the net into the cod end.

Note: Never rinse the sample through the opening of the net in order to prevent contamination.

Sampling of microplastics on the sea surface: Instructions Part 2

1. Safely remove the cod end and sieve the sample in the cod end through a 1mm mesh size sieve. Take care to remove any large organic material. Repeat this step until there are no longer any particles inside the cod end.
2. Concentrate all material on the sieve in one part of the sieve.
3. With the use of a metal knife and fresh water, transfer the bulk of the material on the sieve with the knife, and rinse any remaining material off the sieve, into the black metal sample container.
4. Close the sample container, wipe it with paper towels and label the lid and outside of the jar with the date and final GPS coordinate with waterproof marker (you should also put a second label written with a pencil on velum paper in a jar to avoid the possible loss of the sample name due to the erased label on the jar).
5. Transfer labeled metal sample container into the freezer for storage prior to shipping.

Note on general sampling conditions:

- The wind speed should not be more than 2 Beaufort, since the waves are too high and the net is not stable on the sea surface.
- It is important to maintain a steady linear course at a constant speed during the trawls. Half of the neuston net opening should be submersed during sampling. Duration of sampling should be 15 min (in cases where there is a large amount of natural material, e.g. plankton bloom, the duration of sampling can be shorter).

Avoid the use of plastic tools

Avoid synthetic clothing (e.g. fleece), and contact of neuston net with vessel to prevent contamination of the sample. Be very careful not to damage the manta net or the boat hull while deploying and capturing the net.

Returning Your Samples

Please ship samples to:

Tony Gilbert, c/o The International Seakeepers Society
255 Aragon Avenue, Third Floor
Coral Gables, FL 33134, USA