MICROPLASTICS ANALYSIS WITH THE MICRO-TRAWL

WHAT DO YOU NEED?

- Sieves with different mesh sizes (the finer the mesh, th better. The finest sieve should be have a max mesh size of 1 mm). You will look for plastics between 1 and 5 mm. verzamelen. For instance this one, or this one.
- A tap or waterhose and a squeeze bottle to rinse the panty hose.
- Drip tray
- Pincer or small pliers or a small spoon
- Magnifying glass
- Laminated gridsheet

IMPORTANT TIP!

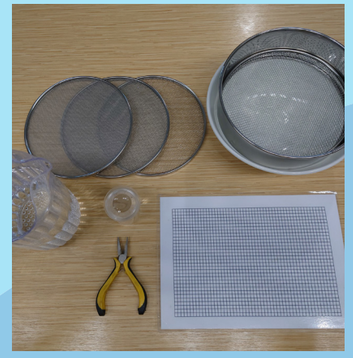
It is best to do the analysis as soon as possible after collecting the sample, otherwise it will start to smell, because the organic material will rot. You can also store the samples in the fridge or freezer.

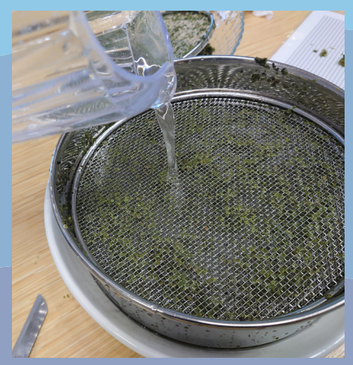
PART 1 - RINSING

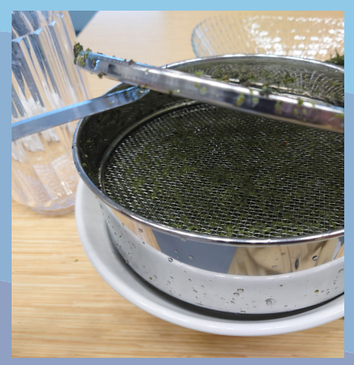
1. Put the 4 sieve on top of each other, from bigger to smaller mesh sizes (big on top, fine below).
2. Hold the micro-trawl above the sieve and turn the panty hose inside out.
3. Rinse the panty hose above the sieve, using the tap, water hose or squeeze bottle. **Watch out!:** make sure nothing lands outside the sieve, to make sure you catch al (micro)plastics!
4. Do you find a lot of large pieces of organic material (leaves, twigs, algae, etc.)? Than it is better to rinse them above the sieve (to catch any stuck microplastics) and put the organic material aside.
5. You now have collected the entire sample in the sieve.

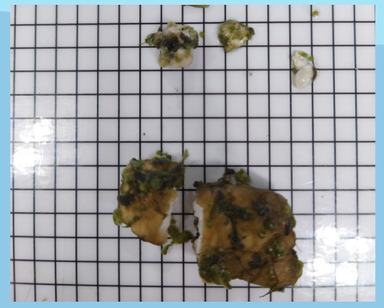
PART 2 - SORTING

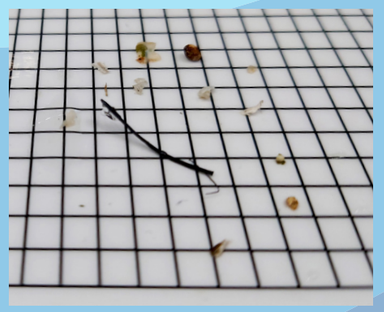
1. Use the pincers or pliers to remove all recognizable pieces of plastic from the sieve and put them on the grid paper (see images below). With the four different sieves you can first look at the big pieces and go smaller with each sieve.
2. Use the magnifying glass to find the a smallest parts in each sieve.
3. Using the magnifying glass, look closely at the parts to make sure it is plastic. You can also check with the pincers or pliers whether the pieces are hard or soft. Take everything that is soft (often not plastic) or green/brown in color (presumably organic material) out of the sieves.
4. If needed/possible: leave the plastic pieces to dry on the grid paper.
5. Use the grids to divide all the pieces based on:
   a. Size. Split everything ito: 1) smaller than 1 square (smaller than 5 mm) and 2) bigger than 1 square (bigger than 5 mm).
   b. Type. The different types are Fragment, Film, Foam, Pellet or Line.
6. Count all the plastics from each type and whether they are bigger or smaller than 5 mm. Write it down on the datasheet.
7. Take a picture of the grid with all the plastics on it.
8. -Clean the sieves and throw the organic material in the trash (do NOT throw it back in the water).
   -The panty hose can be put in the laundry and used again. Just check for any wholes or ‘ladders’ in it before you start sampling again.











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THE OCEAN MOVEMENT
SAIL WITH SCIENCE
DISCOVER YOUR FOOTPRINT

1. Write Trawl number here _____.
2. Place all plastic particles on this paper and photograph it.
3. Count the particles bigger than a box, and those smaller.
4. Dry sample on the paper and fold the whole thing into an envelope.

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TABLES - WRITING DOWN DATA

You can print the tables on this page to take with you when you go sampling. You can write down all the information about your sampling in them. It is best to also keep this information digitally, for instance by typing it into an Excel file once you are home. In that way you can make sure you won't lose your printed tables and lose data!

SAMPLE 1 - DATE: _ _ /_ _ /_ _ _ _ TIME: _ _ : _ _

SUP-duration (minutes):_____

Start location (GPS): _____

End location (GPS): _____

Took a picture of the full trawl?: YES / NO

Took a picture of the grid with plastics on it?: YES / NO

	Fragment	Film	Foam	Pellet	Line
Smaller than 5 mm					
Smaller than 5 mm					

SAMPLE 2 - DATE: _ _ /_ _ /_ _ _ _ TIME: _ _ : _ _

SUP-duration (minutes):_____

Start location (GPS): _____

End location (GPS): _____

Took a picture of the full trawl?: YES / NO

Took a picture of the grid with plastics on it?: YES / NO

	Fragment	Film	Foam	Pellet	Line
Smaller than 5 mm					
Smaller than 5 mm					

SAMPLE 3 - DATE: _ _ /_ _ /_ _ _ _ TIME: _ _ : _ _

SUP-duration (minutes):_____

Start location (GPS): _____

End location (GPS): _____

Took a picture of the full trawl?: YES / NO

Took a picture of the grid with plastics on it?: YES / NO

	Fragment	Film	Foam	Pellet	Line
Smaller than 5 mm					
Smaller than 5 mm					

SAMPLE 4 - DATE: _ _ /_ _ /_ _ _ _ TIME: _ _ : _ _

SUP-duration (minutes):_____

Start location (GPS): _____

End location (GPS): _____

Took a picture of the full trawl?: YES / NO

Took a picture of the grid with plastics on it?: YES / NO

	Fragment	Film	Foam	Pellet	Line
Smaller than 5 mm					
Smaller than 5 mm					