

**Project Update: July 2022**

**Project Background**

All analyses of water, sediment, and crab samples are being finalised.

Step by step: wet weight – oven drying – dry weight – dry sediment aliquot for digestion – sample digestion (this process can be seen in the video posted on YouTube: <https://youtube.com/shorts/jN1kZpwkUmg>) – flotation and sample filtration.

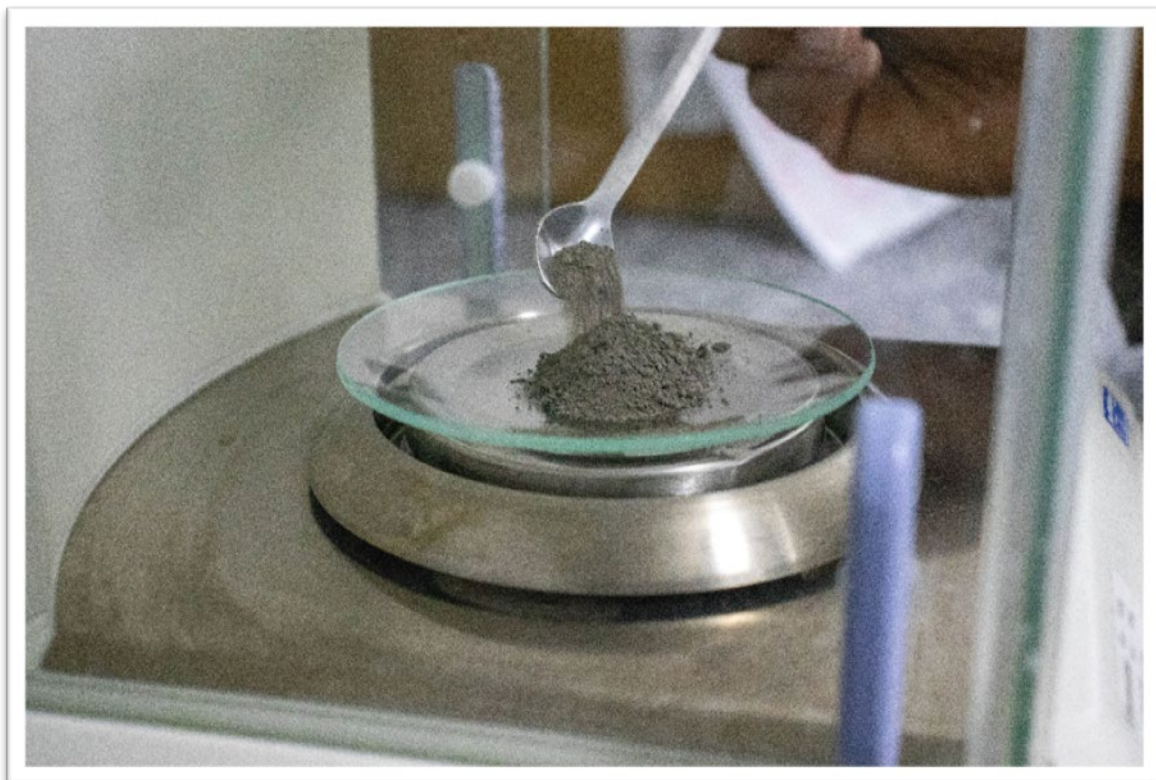


**Figure 1.** Wet sediment samples. © Dayene S Mendes.

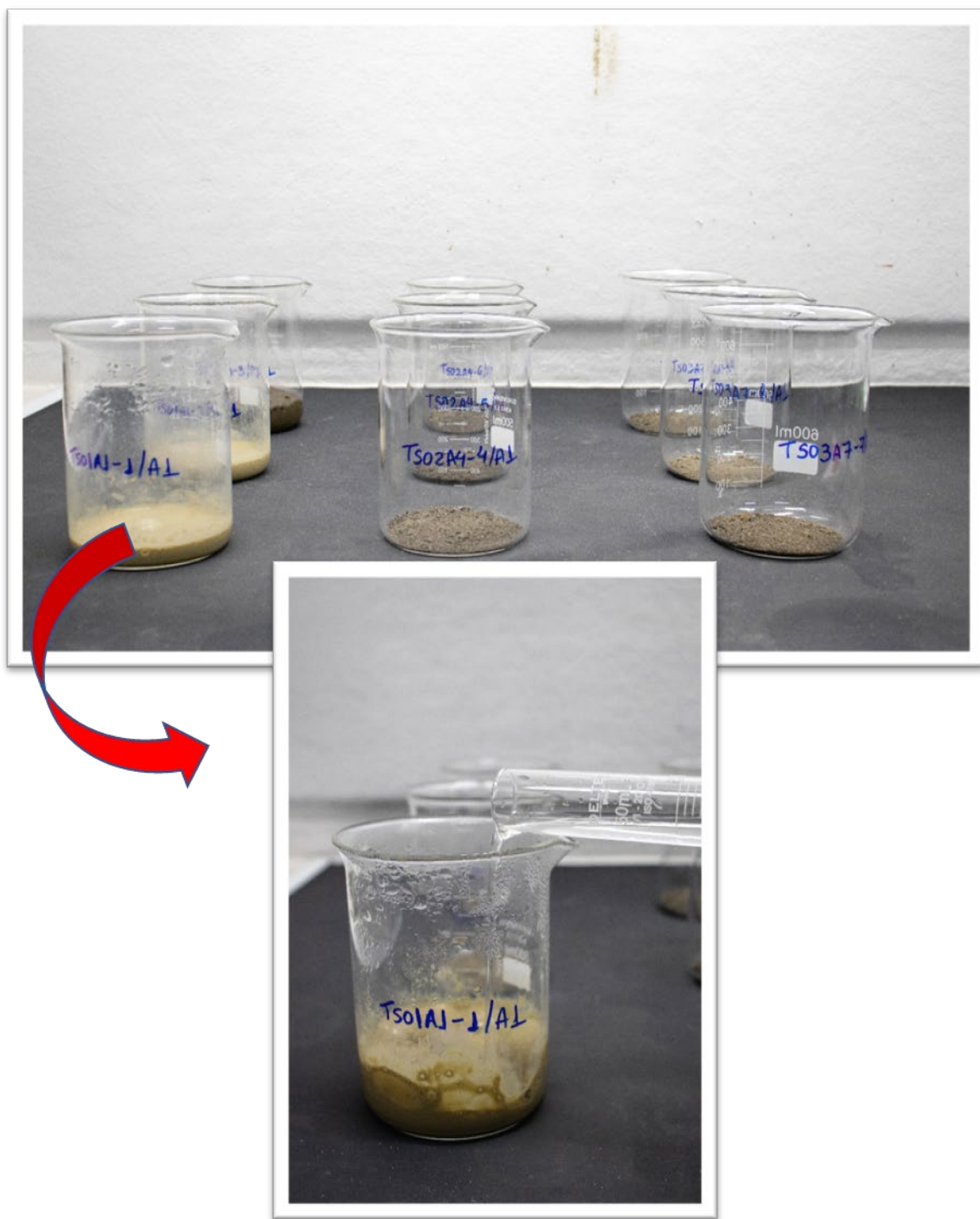




**Figure 2.** Sediment samples in the oven. © Dayene S Mendes. **Figure 3.** Weigh the dry sediment after 3 days in the oven. © Dayene S Mendes.



**Figure 4.** Weigh a 10 g aliquot of the dry sediment. © Dayene S Mendes.



**Figure 5.** Becker's with 10g aliquots of dry sediment and addition of 50 ml of Hydrogen Peroxide ( $\text{H}_2\text{O}_2$ ) for digestion of organic matter. © Dayene S Mendes.

After digestion of organic matter, the sample was subjected to the flotation process, which consists of adding 300 ml of saline solution ( $\text{NaCl}$  with a density of  $1.2 \text{ g/cm}^3$ ) in the Becker.

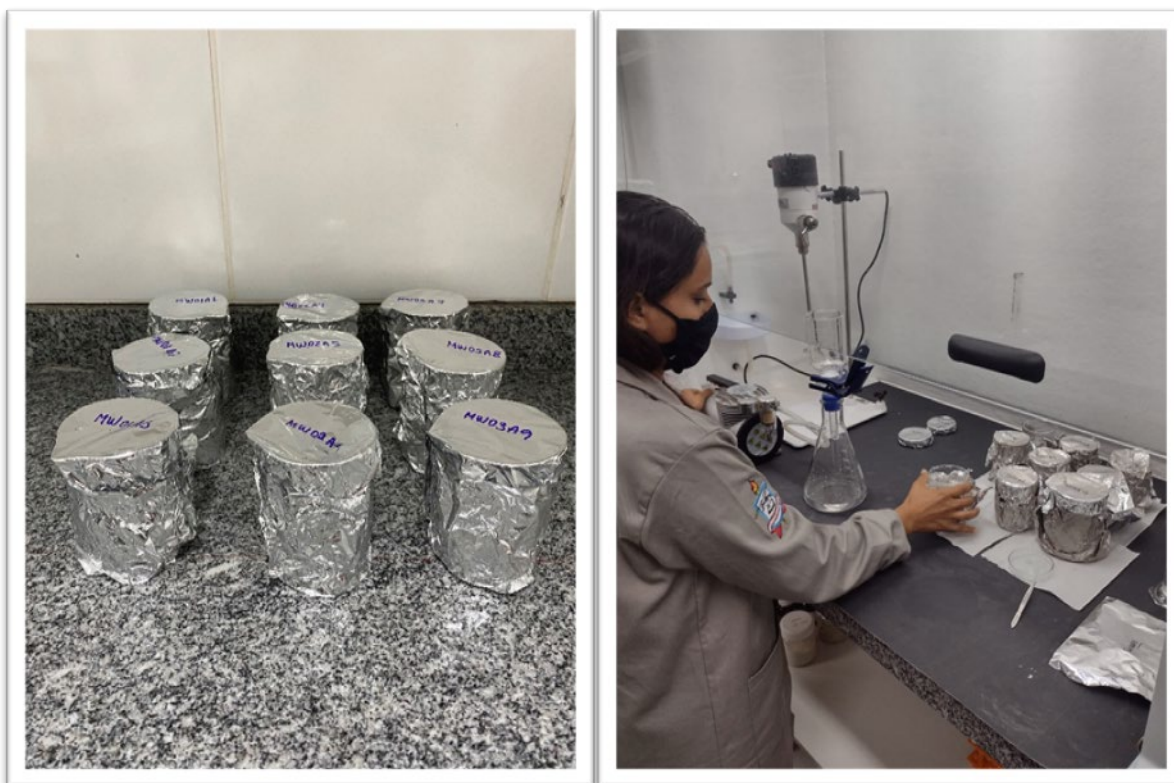
Saline solution preparation:





**Figure 6.** Preparation of the saline solution using a mechanical stirrer to dissolve all the salt in the ultra-pure water. © Dayene S Mendes.

The saline solution was added to sediment samples, mixed for 2 minutes, and allowed to stand for 2 h to allow the microplastic particles to float, then the samples were filtered.



**Figure 7.** Filtration of samples after the flotation process of plastic particles. © Dayene S Mendes

### **Socio-environmental education**

Actions on the importance of preserving the mangrove ecosystem were taken to the children of the João Paulo II educational centre in Bragança - Pará.



**Figure 8.** Educational actions for children. © Dayene S Mendes.

### **Cine Resex**

Cine Resex is an action of the Mangues da Amazônia Project whose objective is to share culture and art through cultural and entertainment films for everyone. The chosen films always involve the main environmental themes. Plastic and microplastic



pollution could not be left out and I was able to talk a little about this subject, considering my line of research in the project, for several children.



**Figure 9.** Students of various age groups participated in Cine Resex. © Dayene S Mendes.

### **Mangrove Clean-up Day**

Cleaning effort in mangrove areas along the Ajuruteua Peninsula – Pa, Northern Brazil. A total of 543.5 kg of waste was removed from these areas in July 2022.



**Figure 10.** Records of solid waste collection steps in mangrove areas. © Mangues da Amazônia.