Carla Mejías-Rivera

Towards the end of my doctoral studies, I applied to the GO-SHIP A20 cruise eager to acquire additional knowledge in the field of chemical oceanography and to experience what is like to participate in a research expedition in open ocean. As a Chemist, I was especially interested to work with the CFC/SF6 tracers group. I was sure that having this opportunity was going to help me expand my knowledge in the field by learning a new research topic and providing me with numerous experiences that will surely clarify and open new options for my future in the field of oceanography.

My duties during the expedition consisted of collecting and analyzing water samples for CFC-12, CFC-11, SF6 and N2O. Sample collection for tracers was a completely new experience for me. Instead of collecting seawater into bottles, these samples are collected into a 250ml glass syringe, employing special care to avoid even the smallest bubble, since bubbles can alter the tracers’ analysis. This was a challenging skill to acquire at the beginning but once learned, sampling was very fun. Samples in the syringes were then taken to the lab for analysis. They were injected, one at a time, into an instrument that extracts the tracers from the sample, separates, concentrates, and sends them into three different gas chromatographers. After processing, I had the opportunity to view the profiles and learn how to interpret the fundamental features. While looking at the data profiles and visually comparing them to the previous GO-SHIP expedition in the same transect (2012), we could not avoid seeing ourselves as “translators” of the ocean’s message through chemical analysis… isn’t it wonderful!?! So many stories can be told by looking at this data, some could serve as lessons learned, others could bring hope, but all equally fascinating.

While at sea, having the opportunity to meet other scientists and crew and get to know their work was overall very enriching and exciting. This opportunity was not only great for my professional development but also personally fulfilling. I am very grateful for all the people that made this possible, for those who shared their knowledge, for the amazing human beings I met, for all the lessons learned, and for the time I spent onboard the R/V Thomas G. Thompson.