

# Plant-based Company Offers Important Hands-on Experience for Budding STEM Student

Botaneco, a Calgary-based manufacturing company, is working to revolutionize sustainable sourcing for products across the personal care, food, and feed ingredient industries. Through an innovative extraction and purification process, they extract plant-based oils and proteins that offer a greener, natural solution to conventional ingredients.

The company currently has a few skin care products on the market, and are currently focused on developing new food and feed ingredient products. An integral part of initiating this phase was summer student Devon Bishop, who Botaneco research assistant Analucia Mata said was a valuable addition to the team.

“I was really impressed with him because, some of the things we do, they don’t really teach in school, so you have to just learn it here and he did a really good job learning very quickly,” she said.

For his four-month summer term, Bishop was specifically looking at the potential to develop a vegan coffee creamer using sunflower seed oleosomes. His job was to begin the testing for the oxidative stability of the extracted oleosomes to begin to lay the groundwork for future development.

“The project he was working on, that was the first set of data we got and it was the first time running the test, so now we have established a clear standard operating procedure for how it should be done,” Mata said. “The process is more clear to us and he helped achieve that.”



*As a chemical laboratory technology student at the Southern Alberta Institute of Technology (SAIT), Bishop said the experience of getting to be in the lab and learn new skills was the clarity he needed to know he had chosen the right field: “It helped me prove to myself that I was on the right track, like I know now I could succeed in this area.”*

As a chemical laboratory technology student at the Southern Alberta Institute of Technology (SAIT), Bishop said the experience of getting to be in the lab and learn new skills was the clarity he needed to know he had chosen the right field. “It helped me prove to myself that I was on the right track, like I know now I could succeed in this area” he explained. “It also meant I could gain some experience so I don’t feel totally lost at school learning about this stuff.”

Having this fresh perspective is something Mata said students have the unique ability to offer companies and their experienced teams. The opportunity to have summer students then, she said, becomes a mutually beneficial experience.

“Me and my lab mates have been working here for quite a while now, and sometimes we just get caught in the centre of the problem, or the center of the project, so students bring in a fresh look,” she said. “Having someone to teach improves your performance as well in the industry, so students always help us a lot and they’re really proactive.”

Bringing on students can be a difficult task for small companies like Botaneco, who often have limited resources as their disposal. This is where programs like BioAlberta’s Work-integrated Learning Voucher (WIL Voucher) come in to aid growing companies by giving them the means to hire extra hands. This funding meant Botaneco could reach their goals sooner while giving valuable experience to Bishop as he goes into his final year of studies.

“Thank you for giving me the opportunity to show myself that I can actually handle being in the field with professionals that have been here for years,” Bishop said.

As Mata explained, having student help like Bishop offers opportunities to focus on present and future growth simultaneously for both Botaneco and the greater biotech industry throughout Alberta. “I think it’s really important to encourage people to get into this type of industry. In Alberta the planting industry is pretty big and growing so it’s always exciting to have new additions,” she said. “We’re really grateful and we’re really lucky to have the support of BioAlberta to help finance the students.”

