The Power of Plants

Rebecca Barchus

University of Rhode Island, rlbarchus@gmail.com

Creative Commons License

This work is licensed under a Creative Commons Attribution-Noncommercial-Share Alike 3.0 License.

Follow this and additional works at: http://digitalcommons.uri.edu/srhonorsprog

Part of the Alternative and Complementary Medicine Commons

Recommended Citation

http://digitalcommons.uri.edu/srhonorsprog/519

This Article is brought to you for free and open access by the Honors Program at the University of Rhode Island at DigitalCommons@URI. It has been accepted for inclusion in Senior Honors Projects by an authorized administrator of DigitalCommons@URI. For more information, please contact digitalcommons@etal.uri.edu.
Honors Project Reflection

While studying Kinesiology and learning about the systems, functions, and movements of the human body I developed an interest in medicinal plants. While this is not a topic focused on in my courses, we do learn a bit about complementary and alternative medical practices. When I was brainstorming topics for my Honors Project, it seemed like the perfect opportunity to study the medicinal properties and uses of different plants. The opportunity to study a passion of mine through this project has been an incredible experience. I was able learn so much not only through literary research, but also by experimenting with rosemary, making my own products, and hosting a workshop.

The process of experimenting with isolating rosemary extract was very exciting and gave me a greater appreciation for the processes used to extract rosemary oil. I have grown and used rosemary as a culinary herb ever since I was a child. While I also have used rosemary essential oil and homeopathic products with rosemary, I have never experimented with extracting my own rosemary essential oil. I first considered trying to distil my own essential oil. I had previously learned how to distil products in my chemistry classes. After further consideration and guidance from my sponsors, we decided that was not a feasible option. Instead we decided to try a more basic method that others could easily replicate at in their own homes. I decided to try two different methods of isolation and extraction. I isolated rosemary using grapeseed oil and rosemary using a 50% ethyl alcohol and water solution. I decided to use oil and alcohol in order to observe the differences in the extraction. The oil should extract mostly oil soluble substances, as it is nonpolar, whereas the alcohol can extract a wider range of plant compounds as it has both polar and nonpolar regions.
One of thing I learned over the course of this project is the fact that it takes a vast quantity of plant material to make a small amount of a product. We harvested a large 32-gallon bag full of clipping from two of the older rosemary plants in the greenhouse. After combing the rosemary with the grapeseed oil and then with the alcohol solution respectively, the mixtures infused for a week. I was surprised at how quickly the alcohol solution changed into a dark forest green color. The grapeseed oil was a light olive green color from the start. Once the oil was combined with the ground rosemary there was no immediate or noticeable difference. Over the course of the week it also took on a slightly darker pigment, though not nearly as drastic as the change with the alcohol solution.

I also observed quite a bit of difference when it came time to strain the two different mixtures. The oil mixture was much more dense and viscous. The process of straining the oil took much longer than the alcohol mixture. There was also less total product from the oil extraction technique than there was from the alcohol extraction. The oil extraction technique smelled very earthy and camphorous. The alcohol extraction smelled much lighter and sweeter. However, the alcohol solution also smelled strongly of alcohol. I left this solution uncapped for a week to some of the water and alcohol to evaporate. After the evaporation the alcohol extraction smelled similar to the oil extraction. When I tried the same extraction techniques for a second time using the same ground herb mixture, the results were not nearly as dramatic. The scent and color were barely discernable in the grapeseed oil. The change in pigment was the only noticeable difference in the alcohol extraction.

One of the favorite parts of my Honors Project was experimenting with making different lotions, salves, and oils. After researching different herbs, I decided to use some of the rosemary oil I had extracted to make a rosemary and lavender hand cream. The first time I tried to make
the cream it was very oily and took a while to soak into the skin. This first batch resembled more of a salve than a cream or a lotion. It took some trial and error to find a formula that was not too greasy or oily and was more of a lotion. I also experimented with making some roll on perfume oils with different essential oils. In four of the roll on oils I used the rosemary oil I had extracted as a base. With the other half I just used plain grapeseed oil as a base. I found the process of making different products to be relaxing, fun, and a bit of an art form. This is definitely a passion and a practice I will pursue long after completing the project.

While most of these experiments were not very complex and did not require a scientific laboratory, they did require time, a lot of specialty ingredients, and some kitchen equipment. In order to find simpler, more accessible methods for people interested in creating their own products at home I also tried adding my own scents to lotions available in stores. I bought two different unscented lotions, one of which was for sensitive skin. I found that it was quite easy to add essential oils and customize the scent. However I also had no control over the consistency or texture of the premade lotions. I think this is a very good option for anyone who does not want to spend time or invest in the ingredients to make their own products at home.

The final portion of my project involved hosting a workshop. Hosting a workshop on campus was a very challenging and rewarding experience. I did not realize how many steps truly went into planning and organizing such an event. While reserving the space in the Memorial Union and creating my flyer were fairly straightforward and predictable steps, there were a variety of other steps I had not calculated. I did not realize that there were a few more steps to planning an event, such as registering my event with the Student Event Advising Office, having my flyer approved, and getting permission to post my flyer at each location. There were also many factors that were unpredictable and uncontrollable. I had decided not to host the workshop
outside because of possible inclement weather. I also needed tables to set up my materials and workspaces for any participants. However, I had not planned on it being a very nice and very hot spring day. While I was quite pleased with the turnout, around 25 people participated, I think more people would have participated if it had not been such nice weather and the room had not been so warm. Also I did not plan a formal lecture part of the workshop so that people could come in anytime during the workshop without missing anything important. Instead I talked to the participants in smaller groups as they arrived. Most participants seemed to like this, but in the future I would consider changing the format and having a lecture first as well as extending the time the workshop is open. Also I think it would be interesting to hold a series of workshop, either weekly or biweekly.

I believe the Honors Project in one of the most powerful learning experiences I have had while at the University of Rhode Island. Being able to design my own project, follow my passion, and learn from mentors has been an incredible opportunity. I was able to learn so much, not only about the medicinal properties of different plants, but also about research, planning and hosting events, and myself. I am grateful to have had the opportunity to delve into information, fields, and experiences I might otherwise not dipped a toe into. While my interest in medicinal herbs and essential oils started out as a hobby and idea for a project, it is a passion that will stay with me.