The San Luis Valley is a very unique place because of the useful environment we have. Growing peppers isn’t very common around here. However, they too could possibly benefit from the special environment we have. Quantifying capsaicin is on its way to becoming a very useful tool throughout the medical field. Capsaicin is the compound found in peppers that gives each pepper their spiciness. Using High-Performance Liquid Chromatography, I extracted both capsaicin and dihydrocapsaicin, and later quantified capsaicin and dihydrocapsaicin that was used to calculate the spiciness of seven different peppers. Determining the spiciness of a pepper is described as a Scoville Heat Unit (SHU). These units range from 0-16,000,000. Each pepper was given a SHU, and then compared to the average SHU. Jalapenos show a much higher Scoville Heat Unit when grown in the San Luis Valley than the average. An extremely good use of our unique San Luis Valley region would be to invest in jalapenos. Since capsaicin can be quantified, the process of starting medical research is at the tip of our fingers. Capsaicin has many health benefits that could contribute to future medical research. Although health benefits are essential, they can’t be done without the first step in growing the peppers. With our unique San Luis Valley region, it would be valuable not only to the researchers, but also to the farmers who invest in growing peppers with high levels of capsaicin.