

Fellowship Recipient: Lihe Yeo ( Penn State University)

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PMCA Industrial Internship Report



Happy faces: The four brilliant R&D scientists and I after three days of intensive training in SPI Polyols.

On October 30 2006, with a map in my hand, I embarked on a 21-day confectionery industry tour in a rental car. Here began one of the most fun yet educational adventures in my life, with the slope of my learning curve approaching infinity everyday.

During the internship, several private lectures had been arranged especially for me. I was introduced to the basic ingredients, their functionalities, and the chemical interactions in a wide range of confectionery products. In addition, I was exposed to several hands-on experiences such as tempering chocolate and formulating sugar-free chewing gums and candies. I was also scheduled to visit both pilot plants and manufacturing facilities in all the companies to help familiarize me with the overall manufacturing operation. I learned to recognize the technical challenges (e.g. installing the suitable type of depositing nozzle for chocolate enrobing, formulating a candy product to meet certain sensory requirements) and non-technical challenges (e.g. capturing the attention of young indecisive consumers to buy gummy candies) faced by both ingredient suppliers and manufacturers. I realized that the final products that I saw in the store everyday came from the joined efforts of a large group of people, from maintenance and operation crew to food scientists, engineers and marketing people.

Overall, this internship has assisted me in developing a sense of appreciation in what I am doing now as a graduate student. I hope my Master's thesis project, which is related to starch-flavor interaction, can contribute to PMCA's effort in helping the current confectionery industry.

I would like to thank PMCA for this incredible opportunity, Eric James for his guidance and perfect schedule arrangement, and also to the nine hosting companies who had unselfishly indulge me with their hospitality along with their knowledge and expertise in this internship.