



**CALIFORNIA SCIENCE & ENGINEERING FAIR
2018 PROJECT SUMMARY**

Name(s) Eva Y. Chen	Project Number J0607
Project Title The Optimal Extraction Method of Medicinal Components from Lingzhi	
Abstract Objectives/Goals The objective of my project is to find what is the most effective way to extract the medicinal components from lingzhi. Methods/Materials I first cut five grams of lingzhi into smaller pieces. Added 20 ml. of methanol, ethyl acetate, hexane, acetone, and water in five separate flasks. That was then filtered then evaporated in a hood. Which I then added chloroform-d and put them in the NMR spectrometer. Finally, I compared the critical components that were extracted. Results The components that were extracted and filtered was compared with their respective NMR spectra. My data showed that methanol was the most effective out of all five extracts. Conclusions/Discussion The methanol worked the best out of all five chemical extracts. Since it extracted the most polysaccharides and triterpenes out of the five extracts. While the water extract was the worst out of the five extract. This concludes that methanol extracts the most critical components from lingzhi.	
Summary Statement I made five different extracts and tested them to find which method was the most effective.	
Help Received My chemistry professor taught me how to do extractions and how to use the NMR. I also recieved safety training and technic training.	