**CHE 2060: Pre-lab quiz for isolation of usnic acid**

*Due upon your arrival in lab.*

*Read the lab materials and the text and search engines to find answers to these questions.*

1. Where do you find Usnea?

2. What is a lichen?

3. Why are lichens disappearing from some cities?

4. What’s an antibiotic?

5. What is the source of most antibiotics? What types of materials are they discovered from?

6. What types of bacteria are killed by usnic acid?

7. What are some of the drawbacks of using usnic acid as an antibiotic?

8. What are major hazards of acetone?

9. What are the major hazards of ferric chloride (FeCl3) and 2,4-dintrophenylhydrazine?

10. Draw the structure of usnic acid and label aldehydes, ketones and phenolic groups