

Pre-Lab 3 Quiz: Lab 4- Preparation of Benzil from Benzoin

Name: _____ Date: _____

1. Write the balance equation including nitric acid for the oxidation of benzoin to benzil and how many moles of nitric acid is required for each benzoin mole? (10 pts).
2. Why this reaction has to be carried out in a fume hood? (10 pts)
3. The UV spectra of benzoin shows a peak at λ_{max} EtOH (247) nm and move to higher λ_{max} EtOH (purple color) when NaOH solution added to a ethanol solution of benzoin. Explain this absorption in terms of benzoin structure(10 pts)
4. How many moles are in 4 g of benzoin? (10pts)

Ans: _____

5. What is the theoretical yield of benzil starting with 4 g of benzoin? (10 pts)

Ans: _____