

Modeling Nanotechnology—Encapsulation by Sodium Alginate Worksheet

Data Table

Part 1. Encapsulation and Acid Strength

| Step | Observations |
|------|--------------|
| 3 | |
| 6 | |
| 7 | |
| 8 | |
| 9a | |
| 9b | |
| 9c | |

Part 2. Diffusion

| Step | Observations |
|------|--------------|
| 16 | |
| 17 | |
| 18 | |
| 19a | |
| 19b | |
| 19c | |

Post-Lab Questions

1. Explain the observation made when the capsules containing acid–base indicators (Congo red or bromphenol blue) were added to the acid solutions.
2. Why are the rates of color change different between the acetic acid solution and the sodium bisulfate solution?
3. Do the indicators diffuse through the capsules? Propose a reason why they would or would not.
4. Based on your observations in Part 2, do the starch molecules diffuse through the capsule? Do the iodine molecules? Explain.