

CURE Educational Programs: Website Survey of Gel Electrophoresis Equipment

DIRECTIONS: Go to www.ctbiobus.org, move the cursor to “Take a Tour” and click on “Tour the BioBus”. Click on the bottom picture to launch the interactive tour. Click to zoom in on the left side of the bus to continue.

Click on each piece of lab equipment used in gel electrophoresis to discover its title and what it does.

As you read, identify each piece of equipment using the space below(#1-13).

- | | |
|----------|-----------|
| 1. _____ | 8. _____ |
| 2. _____ | 9. _____ |
| 3. _____ | 10. _____ |
| 4. _____ | 11. _____ |
| 5. _____ | 12. _____ |
| 6. _____ | 13. _____ |
| 7. _____ | |

Next, on lined paper, compose a possible protocol for making a 1% agarose gel and doing gel electrophoresis using each piece of equipment. Underline the title of each piece of equipment when you use it in your protocol.

*** Complete the BioConnection Module or BioBus Experiment ***

After the electrophoresis experiment with CURE, answer the following questions in an essay on another piece of paper:

- What about your protocol was correct?
- How would you revise your protocol?
- What would you need to do differently in order to make a 3% agarose gel?

Extension activities:

1. Use blank paper to draw each piece of equipment. In your own words next to each illustration, describe how the equipment is used and for what purpose.
2. Draw a detailed picture of a micropipette. Label all the parts.
3. Go to <http://www.pbs.org/wgbh/nova/sheppard/analyze.html> and do DNA fingerprinting using gel electrophoresis to solve the It takes a lickin' case
4. Go to <http://gslc.genetics.utah.edu/units/biotech/gel/> and learn how gel electrophoresis works.