DATA & ANALYSIS
DYE/INDICATOR LAB

1. In the Results Table, record the name of the two extra dyes you are running in wells #7 and #8. Write any comments or observations you have while the gel is running. After you have completed gel electrophoresis, fill out the rest of the table.

<table>
<thead>
<tr>
<th>Sample / well #</th>
<th>Name of the Dye or pH Indicator</th>
<th>Distance traveled (mm)</th>
<th>To which pole +/-</th>
<th>Comments &amp; Observations</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td><strong>bromophenol blue</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td><strong>methylene blue</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td><strong>orange G</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td><strong>xylene cyanol</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td><strong>mixture ZZZ</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td><strong>mixture XXX</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

Results

2. Draw an accurate illustration of your gel after electrophoresis. You can also tape the acetate trace over the gel diagram.

3. Describe how well your results matched with your predictions. Was there anything surprising or unexpected?

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Gel Diagram

black (-) end | cathode

red (+) end | anode
4. Write a claim about which dyes/indicators you think are in Sample XXX. Justify your claim with specific evidence and reasoning.


5. Write a claim about which dyes/indicators you think are in Sample ZZZ. Justify your claim with specific evidence and reasoning.


6. If you were asked to improve the separation of these molecules, what are some of the variables you could modify in your own experiments?


7. Write two questions you have about this process and the results. Indicate how you might generate answers to these questions through experimentation.

   a)


   b)