Carolina Quick Tips®

What's Your Type?

Using Carolina® Synthetic Blood in your classroom offers your students the opportunity to conduct realistic blood typing activities without any of the associated risks. Since our proprietary synthetic blood features realistic clotting mechanisms and easy cleanup, it is ideal for almost any classroom.

- **TEKS HS**
  B.c.8.B: Predict possible outcomes of various genetic combinations using monohybrid and dihybrid crosses, including non-Mendelian traits of incomplete dominance, codominance, sex-linked traits, and multiple alleles.
- **TEKS MS**
  8.b.1.E: Collect quantitative data using the International System of Units (SI) and qualitative data as evidence.

Materials Required

Carolina® Transfusion Matching with Synthetic Blood Kit (700104)

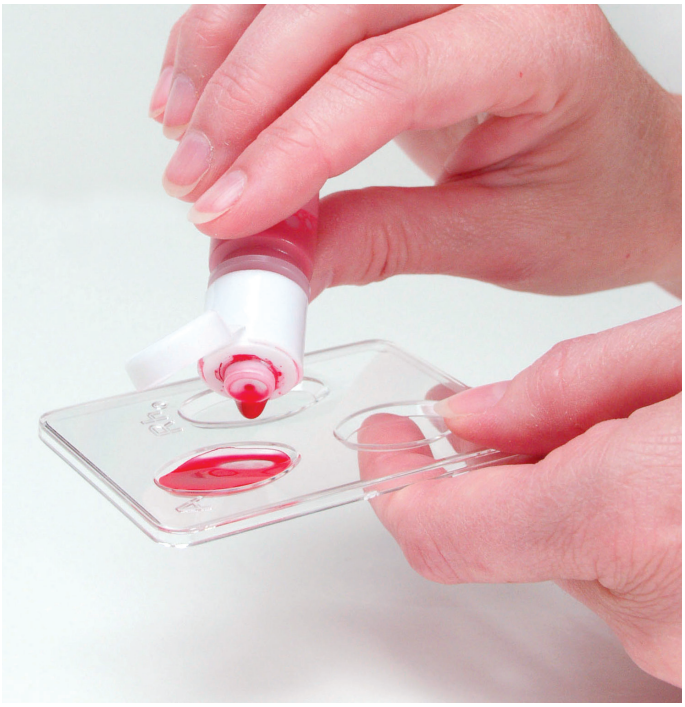
Carolina® ABO-Rh Blood Typing with Synthetic Blood Kit (700101)

Activity Procedure

Choose 2 samples of blood from the provided options.

1. Mix/shake all vials well before starting the activity.
2. Using one of the blood samples, place a drop into each well of the blood-typing slide.
3. Add a drop of synthetic anti-A serum (blue) to the well labeled A. Replace the cap.
4. Add a drop of synthetic anti-B serum (yellow) to the well labeled B. Replace the cap.
5. Add a drop of synthetic anti-Rh serum (clear) to the well labeled Rh. Replace the cap.
6. Using a different color mixing stick for each well (blue for anti-A, yellow for anti-B, white for anti-Rh), gently stir the synthetic blood and antisera drops for 30 seconds. Discard each mixing stick after a single use to avoid contaminating your samples.
7. Examine the thin films of liquid mixture. If the film remains uniform there is no agglutination. If the sample appears granular or clumpy, agglutination has occurred.
8. Clean the blood typing slide and repeat the procedure for the remaining blood samples.

	Sample _____	Sample _____
Anti-A		
Anti-B		
Rh		
Blood Type		



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Results/Summary

Observe each of your samples for positive agglutination reactions, and make a note in the provided table. Remember, not all agglutination reactions will look the same. A sample that agglutinates in the presence of a given antiserum indicates that the sample is testing positive for that blood type. Using this information, determine the blood type of your chosen sample.

Additional Information

Looking to extend the lesson beyond just blood typing? Use this activity as the perfect introduction for discussing blood diseases such as sickle cell anemia and leukemia. Take a moment to observe some blood smear slides, and make comparisons between healthy blood cells and samples with various blood ailments. View more information, content links, and products related to this activity at www.carolina.com/takeaways.

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