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Chem Matters – The Forensics of Blood

Answer the Questions while reading the “Chem Matters” article from our class website

1. What are two different things criminals do to mislead police investigators?
2. What are two things Forensic scientists have developed blood testing techniques for?
3. What was special about Miller v. Pate in 1967?
4. What is the chemical formula for luminol?
5. What happens if blood is present?
6. What protein present in blood reacts to decompose Hydrogen Peroxide to form oxygen and water?
7. After all of the reactions take place, what signal is given by luminol that blood is present?
8. How effective is luminol with diluted blood?
9. What are some other substances that will provide a positive test using luminol?
10. What do you look for to get confirmation of blood in the Kastle-meyer test?
11. The clear solution applied to blood in this test consists of what two chemicals?
12. What blood protein must be present to see the desired result in the Kastle-Meyer test?
13. Both the luminol test and the Kastle-Meyer test are examples of what kind of test?
14. What is one reason investigators must ask the question “Is it human blood?”
15. What is one of the most widely used tests to answer that question?
16. On what is this test based?
17. What is done to human blood to produce the anti-human antibodies?
18. What is done to answer the question “Whose blood is it?”
19. Red blood cells contain many proteins on their surface. What are the most important?

Blood Composition p. 6

1. What is the liquid portion of blood?
2. How much of the total blood composition is plasma?
3. How long do red blood cells typically live?
4. What are the 3 pertinent facts about hemoglobin?
5. How much of the blood’s volume is white blood cells?
6. What is the main function of platelets?