

Forensics C - Forensics - Pearl City Invitational - 12-12-2020

The files that pertain to the murders at hand are located here - <https://docs.google.com/document/d/1QqlxwmXo2TYxLngu0zFhj3AdPnfHX-o6OunZkFLMuZo/edit#>
(<https://docs.google.com/document/d/1QqlxwmXo2TYxLngu0zFhj3AdPnfHX-o6OunZkFLMuZo/edit#>)

As always, feel free to ask questions in the chat and we'll be happy to help! Good luck in finding the Impostors, Crewmate.

Qualitative Analysis!

Use the table provided to you to identify the lettered compounds, the color which they are in flame and uses for them which connect to the suspects.

Make sure to capitalize and hyphenate where needed. Do NOT use chemical formulas!

Follow the directions given in the questions for the numbered polymers!

1. (3.00 pts) A

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2. (3.00 pts) B

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3. (3.00 pts) C

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4. (3.00 pts) D

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5. (3.00 pts) E

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6. (3.00 pts) F

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7. (3.00 pts) G

8. (3.00 pts) H

9. (3.00 pts) What is the identity of Polymer #1? What are two uses (related to the suspects) for Polymer #1?

10. (3.00 pts) What is the identity of Polymer #2? What are two uses (related to the suspects) for Polymer #2?

Fibers/Hair

Use the images from the files to indicate the identity of the fiber or hair and who it might have come from.

11. (2.00 pts) A

12. (2.00 pts) B

13. (2.00 pts) C

14. (2.00 pts) D

15. (2.00 pts) E

16. (5.00 pts) What is Hair #1? Who could it have come from? What type of medulla does it have and what type of cuticles?

17. (2.00 pts) **Glass!**

What type of fracture is this and how do you know. Describe in detail.

18. (6.00 pts) **Bloodstains!**

Identify bloodstains #1 - 3.

19. (6.00 pts) **Blood Typing!**

Identify the blood types found at the scene.

20. (5.00 pts) **Fingerprints!**

Explain the Henry system and its three levels of detail.

21. (5.00 pts) Mass Spectrometry!

Explain the 4 stages of how a mass spectrometer works.

Tie-Breakers!

These are trivia questions, which will be used to break ties.

22. (2.00 pts) What is Locard's Exchange Principle? (2 points)**23. (5.00 pts) Explain in why compounds have flame colors and the quantum chemistry behind it. (5 points)****24. (3.00 pts)**

Explain the chemistry behind chromatography, highlighting the significance of the polarity of the mobile phase and substance. (3 points)

25. (30.00 pts)**Analysis!**

Use all the evidence you've collected to identify the Impostor(s). Explain why you've chosen to eject (who you've found guilty) these suspects and explain why the other suspects are innocent. Detailed and concise explanations will be given extra points.

Good job Crewmates!

Hopefully, you were able to avenge Pink (and Yellow)'s death and figure out if Green (and all of the other suspects) were innocent or guilty!

If you have any questions or comments or just wanna say "Hi, I took the test you wrote at PCHS", dm me (Saum) on Discord at saum#2608! I'd love to hear from you!

GFHL (good fun have luck) for the rest of your tests and for awards!

Lots of hugs and have a nice day,

Saum and Matthew <3