

Description of a Burning Candle

Circle QL for qualitative observation (characteristic) and QT for quantitative observation (measurement).

Name _____

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| QT or QL | 1. The candle is cylindrical in shape. | QT or QL | 22. When no currents disturb it, the flame is shaped like an elongated teardrop. |
| QT or QL | 2. It is about _____ centimeters in diameter. | QT or QL | 23. The flame begins about 1-cm above the top of the candle. |
| QT or QL | 3. The length is about _____ centimeters. | QT or QL | 24. The flame is a shade of blue at its base. |
| QT or QL | 4. The length decreased during the observation period. | QT or QL | 25. Immediately around the wick in a region about 1-cm wide and extending about 1-cm above the top of the wick, the flame is dark. |
| QT or QL | 5. The amount of decrease was about _____ centimeters per half hour. | QT or QL | 26. This dark region is roughly conical in shape. |
| QT or QL | 6. The candle is translucent. | QT or QL | 27. Around this zone and extending about 1-cm above the dark zone is a region which emits yellow light that is bright but not blinding. |
| QT or QL | 7. It is white (or yellow, etc.). | QT or QL | 28. The flame has sharply defined sides but a ragged top. |
| QT or QL | 8. It has a slight odor. | QT or QL | 29. The wick is white where it emerges from the candle but is dark as if burnt from the base of the flame to within 2-mm of the top. |
| QT or QL | 9. It has no distinct taste. | QT or QL | 30. The last 2-mm of the wick glows red. |
| QT or QL | 10. It is solid. | QT or QL | 31. The wick curls over about 1-cm from the end. |
| QT or QL | 11. It is soft enough to be scratched with a fingernail. | QT or QL | 32. As the candle shortens, so does the wick making its length showing always the same. |
| QT or QL | 12. A relatively thick string extends about 1-cm from the upper end of the candle. | QT or QL | 33. Heat is emitted by the flame. |
| QT or QL | 13. It is made of _____ (#) strands of string braided/twisted together. | QT or QL | 34. Enough heat is emitted so that it warms a finger uncomfortably when held for ten or twenty seconds about 0.5-cm to one side or 7 to 10-cm above the flame. |
| QT or QL | 14. The string or wick ignites when a lighted match is held next to it for a few seconds. | QT or QL | 35. The top of the burning candle becomes wet with colorless liquid. |
| QT or QL | 15. The wick then burns continuously. | QT or QL | 36. The top becomes bowl-shaped. |
| QT or QL | 16. The burning candle makes no sound. | QT or QL | 37. If the flame is blown, the rim of the candle top melts and the liquid runs down its side. |
| QT or QL | 17. The burning candle remains cool while the wick burns. | QT or QL | 38. As it runs down it cools and becomes translucent. |
| QT or QL | 18. It is warm near the top. | QT or QL | 39. The liquid gradually becomes solid attaching itself to the outside of the candle. |
| QT or QL | 19. The candle material is softer around the top as it burns. | QT or QL | 40. If the flame is not disturbed, the liquid does not spill over the rim of the bowl-shaped top. |
| QT or QL | 20. The flame flickers in response to air currents. | QT or QL | 41. It remains as a pool of liquid, wetting the wick at its base as high as the base of the flame. |
| QT or QL | 21. When the flame flickers, smoke comes from it occasionally. | QT or QL | 42. The liquid surface rises slightly around the base of the wick. |