

CHAPTER 15	Launch Lab: Comparing the Reactivity of Alkanes and Alkenes Answer Key	BLM 15.0.1A
ANSWER KEY		

### Answers to Analysis Questions

1. Most substances that caused a change in colour of the potassium permanganate solution upon mixing were liquid at room temperature. You should note that coconut oil is an exception to this rule. Although it is liquid at room temperature, it does not cause a change in colour of the potassium permanganate solution.
2. Most substances that did not cause a change in colour of the potassium permanganate solution upon mixing were solids at room temperature. Again, you should note that coconut oil is an exception to this rule.
3. The physical property that appears to be related to the ability to cause a change in colour of the potassium permanganate solution, with one exception, is that the substance is a liquid at room temperature.
4. Unsaturated fats, which contain at least one carbon–carbon double bond, are liquid at room temperature. Therefore, compounds containing a double bond are able to react with potassium permanganate. Coconut oil, although a liquid at room temperature, is actually a saturated fat. Therefore, based on the absence of double bonds, it would not be expected to react with potassium permanganate.