

## M11 Activity 1 - Post Lab Results (Video Demonstration)

**Check-in Activity 1: Complete the table and submit your answer as text entry.**

After watching the videos presented for the Chromic acid test, Lucas test, Esterification, Iodoform, Acrolein test, and Fermentation, record your observations in the given table.

Name of Test	Test Solution	Reagents	Observations	Rationale / Principle of the test
<b>CHROMIC ACID</b>	n - butyl alcohol	H <sub>2</sub> CrO <sub>4</sub>	1. Color change from orange to green/blue green within 5s.	It is able to identify aldehydes, primary alcohol, and secondary alcohol.
	sec. butyl alcohol	H <sub>2</sub> CrO <sub>4</sub>	2. Color change from orange to green/blue green within 5s.	It is able to identify aldehydes, primary alcohol, and secondary alcohol.
	tert. butyl alcohol	H <sub>2</sub> CrO <sub>4</sub>	3. Color remained orange (no reaction).	Tert-butyl alcohol doesn't show any reaction because it is a tertiary alcohol. it can't identify tertiary alcohols.
<b>LUCAS TEST</b>	n - butyl alcohol	Zn in HCl	4. Solution remains clear. (no reaction)	Not usually reactive enough to form a primary halogenoalkane.
	sec. butyl alcohol	Zn in HCl	5. Forms a cloudy solution	May be reactive enough to slowly

			within 5 to 10 minutes.	form.
	tert. butyl alcohol	Zn in HCl	6. Forms a cloudy solution within 1 to 2 minutes..	Reactive enough to immediately form an insoluble tertiary halogenoalkane.
<b>ESTERIFICATION</b>	Ethanol	Acetic acid (CH <sub>3</sub> -COOH)	7. Sweet fruity smell was detected.	The process of combining an organic acid (RCOOH) with an alcohol (ROH) to form an ester (RCOOR) and water; or a chemical reaction resulting in the formation of at least one ester product.
<b>IODIFORM</b>	Ethyl alcohol	I <sub>2</sub> & NaOH	8. Formation of a yellow precipitate or suspension of iodoform.	If the alcohol contains a methyl group attached to a carbon that also has a hydrogen and an OH group then it will give a positive iodoform test.
	Propan-1-ol	I <sub>2</sub> & NaOH	9. There is Ethyl group at the terminal, so it does not give Iodoform test. The solution color turned into a clear so it is a negative result.	To give Iodoform test, it is necessary to either have CH <sub>3</sub> -C(OH) or CH <sub>3</sub> -C=O, that is methyl group at the terminal.

	Propan-2-ol	I <sub>2</sub> & NaOH	10. It forms a pale yellow solid with an antiseptic smell.	To give Iodoform test, it is necessary to either have CH <sub>3</sub> -C(OH) or CH <sub>3</sub> -C=O, that is methyl group at the terminal.
ACROLEIN	Glycerol	KHSO <sub>4</sub>	11. Produced a burnt fat odor.	When a fat is heated strongly in the presence of a dehydrating agent such as Potassium bisulfate, the glycerol portion of the molecule is dehydrated to form the unsaturated aldehyde, acrolein (CH <sub>2</sub> =CH-CHO), which has the peculiar odor of burnt grease.
FERMENTATION	Glucose	Zymase from yeast	12. substance pyruvate molecules is formed, which is also known as glycolysis.	Fermentation happens in anaerobic conditions (i.e., without oxygen). Fermentation begins with glycolysis which breaks down glucose into two pyruvate molecules and produces two ATP (net) and two NADH. Fermentation allows glucose to

				be continuously broken down to make ATP due to the recycling of NADH to NAD <sup>+</sup> .
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Design/Format your own worksheet (follow the table format) - copied worksheet are not tolerated.

And at the end make a general conclusion on your worksheet. Submit this a file uploads as pdf using the file name format M11\_PLR\_Surname i.e. M11\_PLR\_Lapig

**CONCLUSION:**

I therefore conclude that in organic chemistry there are a lot of different test that are interesting to know because I learn a lot of the solubility in a different compounds. To be able to dissolve a compound we need to analyze its own structure for us to know if it will dissolve or make a positive result to the test that we are doing.

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Note: This is the only one and original copy of worksheet that Mr. Aranas submitted. Thankyou.