






NUTRIENT ANALYSIS LAB

SAFETY: Wear safety glasses and avoid contact with solutions. Use clean/dry test tubes for the experiment and clean all equipment and lab bench after use and then wash your hands.

OVERVIEW & BASIC PROCEDURE

The diagram below shows an overview of the experiment to test for the presence of nutrients using chemical indicators. Follow the procedure below as a rough guideline for the experiment. You will also test two unknowns and determine which nutrient(s) are present. Note that you will likely have to do a number of tests on the unknowns to accurately determine the contents and there might be more than one nutrient type present. Additional information about the experiment will be discussed in class.

	STARCH	GLUCOSE	PROTEIN	LIPID	UNKNOWN
					
<i>CONTROL</i>	5 ML WATER	5 ML WATER	5 ML WATER	5 ML WATER	0 ML WATER
<i>EXPT'L</i>	5 ML WATER + SMALL AMOUNT OF STARCH	5 ML WATER + SMALL AMOUNT OF GLUCOSE	5 ML WATER + SMALL AMOUNT OF PROTEIN	5 ML WATER + SMALL AMOUNT OF VEGETABLE OIL	5 ML OF SOLUTION WITH UNKNOWN NUTRIENT(S)
<i>CHEMICAL INDICATORS</i>	FEW DROPS OF IODINE SOLUTION	FEW DROPS OF BENEDICT'S SOLUTION + HEAT	FEW DROPS OF BIURET SOLUTION	FEW DROPS OF SUDAN IV SOLUTION	VARIOUS CHEMICAL INDICATOR TESTS
<i>OBSERV.</i>	DESCRIBE POSITIVE TEST	DESCRIBE POSITIVE TEST	DESCRIBE POSITIVE TEST	DESCRIBE POSITIVE TEST	IDENTIFY NUTRIENT(S)

OBSERVATIONS

Create a well-organized data table in which you describe the positive test for each substance. Also include descriptions of all tests you do on the two unknown solutions. Identify the two unknowns in your table after you have performed the tests.