Questions – Starch Iodine Lab Name: Date: Blk:

IKI is used to test for starch (amylose) because Iodine along (*­*­­I­2) is not soluble in water. Combining I­2­ with KI allows them to form polyiodide ions (eg. I-3, I-5, I-7, etc). In the presence of amylose, which acts as a charge donor, the polyiodide accepts the charge and will result in a colour change (because it absorbs light of different wavelength(s) and thus appears a different colour to the human eye).

Use the internet or other resources to answer the following questions. List all websites from which you obtained information.

1. What was the purpose of the lab activity?
2. Explain how the polyiodide ion interacts with an amylose molecule.
3. Draw the two molecules (polyiodide and amylose) interacting:

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1. Which foods tested during the lab contained starch (amylose)? Are they plant-based or animal-based foods?
2. What organisms store carbohydrates in the form of starch?
3. How does amylose differ from amylopectin (in terms of structure)?
4. What are the subunits of the amylose polysaccharide?
5. What type of reaction is responsible for joining the subunits of amylose together?
6. What is the bond that joins the amylose subunits?