

EX No 5 Chemical test: forstarch

Background

Amylose forms a colloidal dispersion in hot water whereas amylopectin is completely insoluble. The structure of amylose consists of long polymer chains of glucose units connected by an alpha acetal linkage. Starch - Amylose shows a very small portion of an amylose chain. All of the monomer units are alpha -D-glucose, and all the alphaacetal links connect C #1 of one glucose and to C #4 of the next glucose. As a result of the bond angles in the acetal linkage, amylose actually forms a spiral much like acoiled spring. See the graphic below, which show four views in turning from a the side to an end view

Chemical Test for Starch or Iodine

Amylose in starch is responsible for the formation of a deep blue color in the presence of iodine. The iodine molecule slips inside of the amylose coil. Iodine - KI Reagent: Iodine is not very soluble in water; therefore the iodine reagent is made by dissolving iodine in water in the presence of potassium iodide. This makes a linear triiodide ion complex with is soluble that slips into the coil of the starch causing an intense blue-black color.

CONCLUSION From the above morphological characters and chemical tests the given crude drug is identified as starch.

REFERENCES 1.Kokate CK. Practical Pharmacognosy, 4 edition, VallabhPrakashan. Delhi; 1994: 98