

K-GLUHK FAQs (09/10)

Q1. Is it possible to detect glucose when it is bound via a glycosidic linkage.

A. No. The K-GLUHK test kit is specific for the measurement of “free” D-glucose. It will not detect glucose that is bound by a glycosidic linkage to another sugar molecule.

Q2. Can K-GLUHK be used to measure glucose as a component of polysaccharides in plant material?

A. Yes.

Determination of D-glucose in polysaccharides and fibrous plant material.

Mill plant material or polysaccharide to pass a 0.5 mm screen using a Retsch centrifugal mill, or similar. Accurately weigh approx. 100 mg of material into a Corning screw-cap culture tube (16 x 125 mm). Add 5 mL of 1.3 M HCl to each tube and cap the tubes. Incubate the tubes at 100°C for 1 h. Stir the tubes intermittently during the incubation. Cool the tubes to room temperature, carefully loosen the caps and add 5 mL of 1.3 M NaOH. Quantitatively transfer the contents of the tube to a 100 mL volumetric flask using distilled water and adjust the volume to 100 mL with distilled water. Mix thoroughly by inversion and filter an aliquot of the solution through Whatman No. 1 filter paper or centrifuge at 1,500 g for 10 min. Typically, no further dilution is required and a sample volume of 0.1 mL is satisfactory.

Q3. Can K-GLUHK be used to measure glucose in biological samples?

A. Yes. It is possible that biological samples may be used directly after appropriate sample dilution in distilled water however some biological samples may require deproteinisation with perchloric acid prior to addition to the assay. The deproteinisation method can be found at the following link on the Megazyme website: http://secure.megazyme.com/Corporate-Applications_Spotlight.aspx

Dilution during sample preparation must be taken into account to for the final calculation.