



Sucrose (Plant) Microplate Assay Kit

Catalog # AS0036

Detection and Quantification of Sucrose Content in Tissue extracts,
Cell lysate Samples.

This instruction must be read in its entirety before using this product.

For research use only, Not for use in diagnostic procedures.

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I. INTRODUCTION

Sucrose ($C_{12}H_{22}O_{11}$) is a disaccharide of glucose and fructose with an α -1,2-glycosidic linkage. It is the most common food sweetener and the most important sugar in plants.

Sucrose is a disaccharide which can be converted into one glucose and one fructose. Fructose can react with resorcinol to generate colored substance, have characteristic absorption peak at 480nm.

II. KIT COMPONENTS

Component	Volume	Storage
96-Well Microplate	1 plate	
Assay Buffer	30 mlx 4	4 °C
Reaction Buffer I	1 mlx 1	4 °C
Reaction Buffer II	10 mlx 1	4 °C
Dye Reagent	Powderx 1	4 °C
Standard	Powder x 1	4 °C
Technical Manual	1 Manual	

Note:

Dye Reagent: add 5 ml distilled water to dissolve before use.

Standard: add 2 ml distilled water to dissolve before use, the concentration will be 1 mg/ml.

III. MATERIALS REQUIRED BUT NOT PROVIDED

1. Microplate reader to read absorbance at 480 nm
2. Distilled water
3. Pipettor
4. Pipette tips
5. Mortar
6. Centrifuge
7. Timer

IV. SAMPLE PREPARATION

1. For tissue samples

Weigh out 0.1g tissue, homogenize with 1 ml Assay buffer on ice, put it in water bath of 80°C for 10 minutes, centrifuged at 4,000g at room temperature for 10 minutes, take the supernatant into a new centrifuge tube.

V. ASSAY PROCEDURE

Add following reagents into the microcentrifuge tubes:

Reagent	Sample	Standard	Blank
Sample	40µl	--	--
Standard	--	40µl	--
Distilled water	--	--	40µl
Reaction Buffer I	10µl	10µl	10µl
Mix, put them into the boiling water for 10 minutes, then put them on ice.			
Reaction Buffer II	100µl	100µl	100µl
Dye Reagent	50 µl	50 µl	50 µl
Mix, then into the boiling water for 5 minutes. Centrifuge and transfer all reagents to the microplate, record absorbance measured at 480 nm.			

VI. CALCULATION

1. According to the protein concentration of sample

$$\begin{aligned}\text{Fructose (mg/mg)} &= C_{\text{Standard}} \times V_{\text{Standard}} \times (\text{OD}_{\text{Sample}} - \text{OD}_{\text{Blank}}) / (\text{OD}_{\text{Standard}} - \text{OD}_{\text{Blank}}) / \\ &\quad (V_{\text{Sample}} \times C_{\text{Protein}}) \\ &= (\text{OD}_{\text{Sample}} - \text{OD}_{\text{Blank}}) / (\text{OD}_{\text{Standard}} - \text{OD}_{\text{Blank}}) / C_{\text{Protein}}\end{aligned}$$

2. According to the weight of sample

$$\begin{aligned}\text{Fructose (mg/g)} &= C_{\text{Standard}} \times V_{\text{Standard}} \times (\text{OD}_{\text{Sample}} - \text{OD}_{\text{Blank}}) / (\text{OD}_{\text{Standard}} - \text{OD}_{\text{Blank}}) / (V_{\text{Sample}} \times W \\ &\quad / V_{\text{Assay}}) \\ &= (\text{OD}_{\text{Sample}} - \text{OD}_{\text{Blank}}) / (\text{OD}_{\text{Standard}} - \text{OD}_{\text{Blank}}) / W\end{aligned}$$

C_{Standard} : the standard concentration, 1mg/ml;

C_{Protein} : the protein concentration, mg/ml;

W : the weight of sample, g;

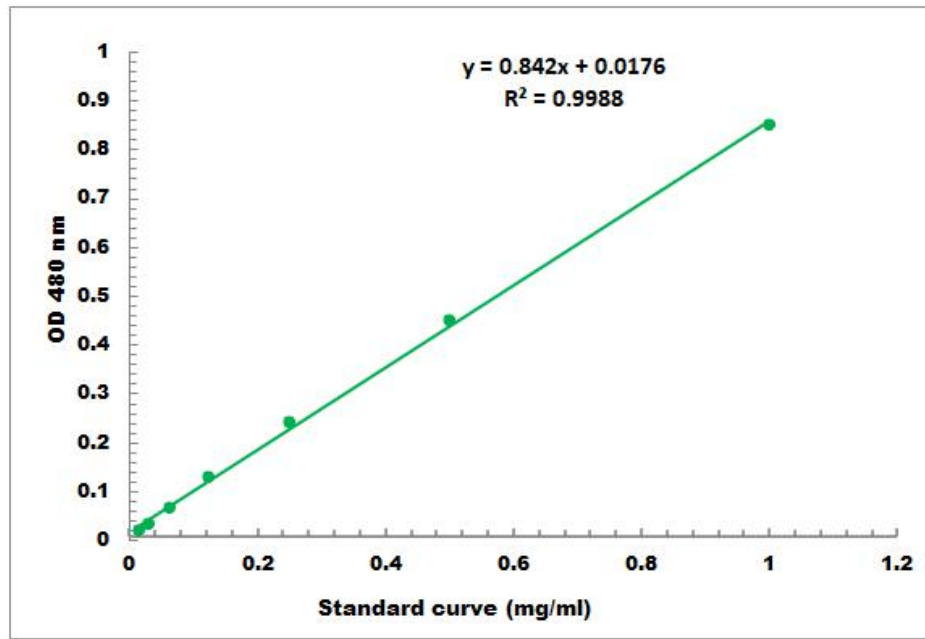
V_{Standard} : the volume of standard, 0.04 ml;

V_{Sample} : the volume of sample, 0.04 ml;

V_{Assay} : the volume of Assay buffer, 1 ml.

VII. TYPICAL DATA

The standard curve is for demonstration only. A standard curve must be run with each assay.



Detection Range: 10 μ g/ml -1000 μ g/ml

VIII. TECHNICAL SUPPORT

For troubleshooting, information or assistance, please go online to www.sabbiotech.cn or contact us at techcn@signalwayantibody.com

IX. NOTES