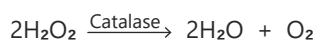
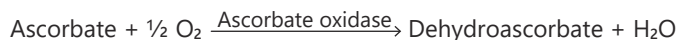
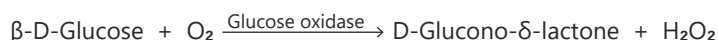


Fructose Assay Kit

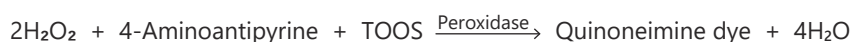
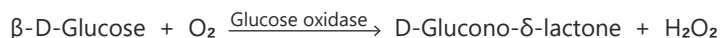
	[Contents]	Reagent A: 30 mL
		Reagent B: 30 mL
		D-Fructose standard solution (100 mg/L) : 1.5 mL
	[Number of Assays]	60
	[Analyte]	D-Fructose
	[Storage Temperature]	2 - 8°C
	[Expiration Date]	Indicated individually

[Principle]

Step1: The enzymes in Reagent A eliminate the effects of ascorbate and D-glucose coexisting in the sample.



Step2: Enzymes in Reagent B catalyze the stoichiometric conversion of fructose into a colored product.



[Sample and standard solution]

Sample solutions should be prepared to contain D-fructose at a concentration of 25 to 500 mg/L, while ensuring that the coexisting D-glucose concentration is 1000 mg/L or less. (See [Precautions])

The D-fructose standard solution (100 mg/L) should be used as supplied.

[Procedure]

- Pipette 0.05 mL each of pure water (for blank), the standard solution and the sample solutions into separate cuvettes.
- Add 0.5 mL of Reagent A to each cuvette, mix gently, and incubate at room temperature for 10 minutes. (Step1)
- Add 0.5 mL of Reagent B to each cuvette, mix gently, and incubate at room temperature for exactly 20 minutes.(Step2)
- Read the absorbances at 555 nm with a spectrophotometer.
- Calculate the slope of the calibration curve as follows:

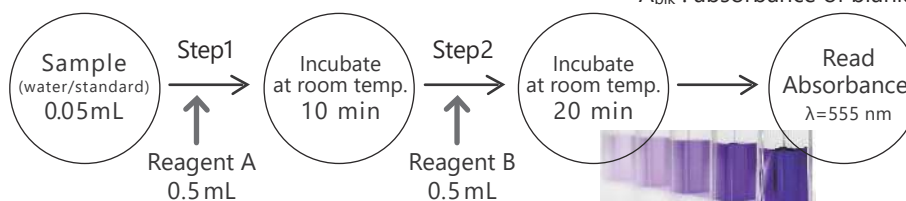
$$\text{Slope} = (A_{\text{std}} - A_{\text{blk}}) / 100$$

$$A_{\text{std}} : \text{absorbance of colored standard solution (100 mg/L)}$$

$$A_{\text{blk}} : \text{absorbance of blank solution}$$
- Calculate D-fructose concentration of the samples as follows:

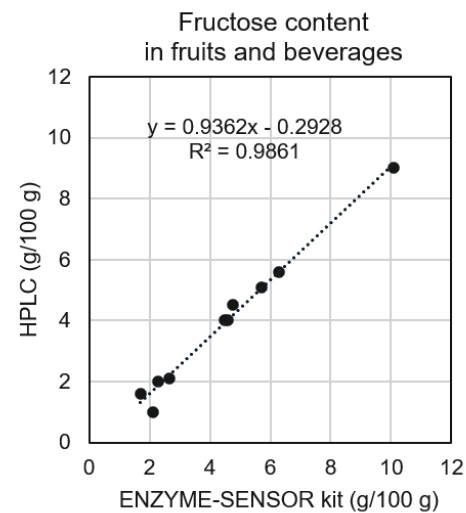
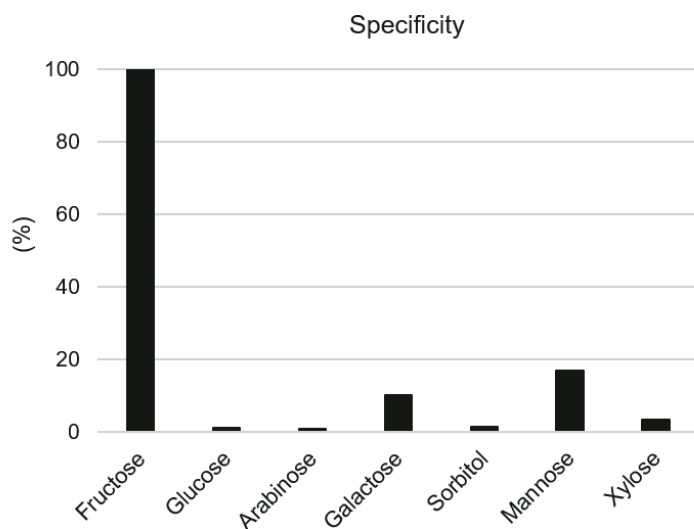
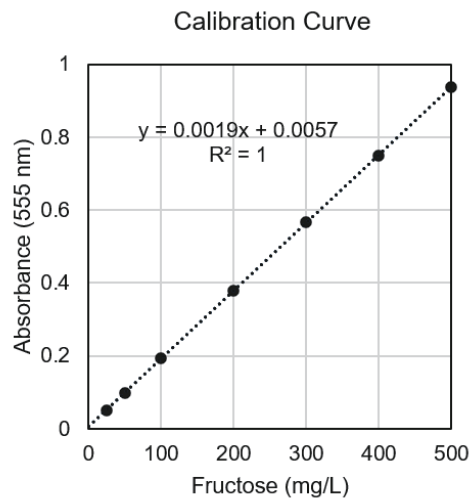
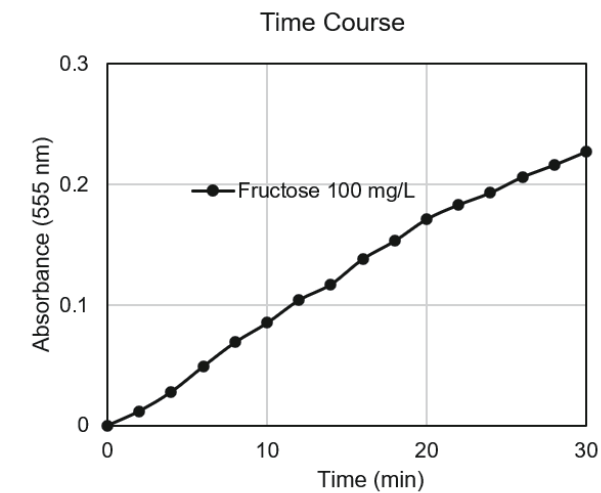
$$\text{D-fructose concentration (mg/L)} = (A_{\text{sample}} - A_{\text{blk}}) / \text{Slope}$$

$A_{\text{sample}} : \text{absorbance of colored sample solution}$
 $A_{\text{blk}} : \text{absorbance of blank solution}$



[Precautions]

- Store the reagents at 2 - 8°C.
- Bring the reagents close to room temperature (20-30°C) before use.
- Because this assay is based on a rate method, the time after addition of Reagent B (20 min) must be strictly and accurately controlled.
- Samples containing high concentrations of reducing substances other than vitamin C (e.g., polyphenols) cannot be measured. Vitamin C is enzymatically removed by Reagent A during the Step1 reaction.
- For samples containing more than 1000 mg/L of D-glucose, dilute the sample or mix the cuvette gently several times in Step 1.
- The reaction scale may be adjusted as appropriate according to the cuvette size in use; however, do not alter the volume ratios between the sample (or standard solution) and the reagents.



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