

Summary: Reducing sugars react with *p*-hydroxybenzoic acid hydrazide (PAHBAH) in an alkaline solution to form a yellow color. Calcium is used to enhance the color development, and the absorbance is measured at 410 nm.

Interferences: No chemical interferences are known for this method.

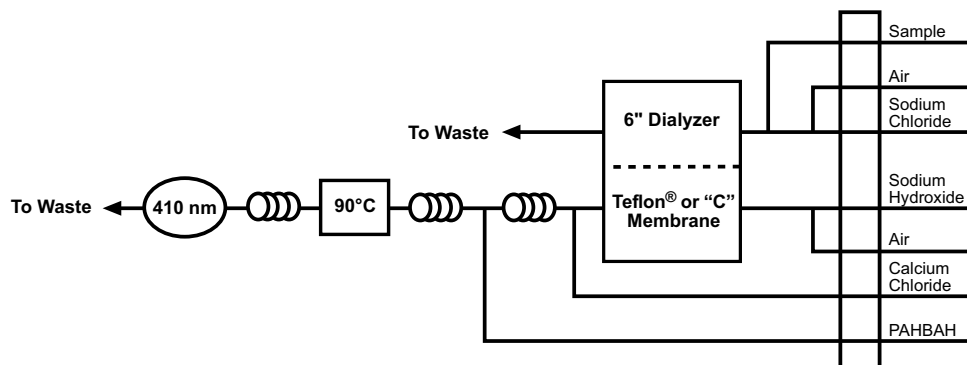
Performance Specifications:

Range:	50–1,500 mg/L
Throughput:	30 samples/hour
Precision:	
50 mg/L	<5% RSD
500 mg/L	<3% RSD
1,500 mg/L	<2% RSD
Method Detection Limit (MDL):	1.5 mg/L

Chemicals:

Acetic Acid, glacial, $\text{CH}_3\text{CO}_2\text{H}$	Citric Acid, $\text{H}_3\text{C}_6\text{H}_5\text{O}_7$
Benzoic Acid, saturated aqueous, $\text{C}_6\text{H}_5\text{CO}_2\text{H}$	Glucose, $\text{C}_6\text{H}_{12}\text{O}_6$
Brij [®] -35 (OI Analytical Part #A21-0110-33)	Hydrochloric Acid, concentrated, HCl
Calcium Chloride Hexahydrate, $\text{CaCl}_2 \cdot 6\text{H}_2\text{O}$	<i>p</i> -Hydroxybenzoic Acid Hydrazide (PAHBAH), $\text{HOOC}_6\text{H}_4\text{CONHNH}_2$
	Sodium Hydroxide, NaOH

Basic Flow Diagram:



Selected References: Davis, R.E. A Combined Automated Procedure for the Determination of Reducing Sugars and Nicotine Alkaloids in Tobacco Products using a New Reducing Sugar Method. *Tobacco Science* **1976**, 146–151.

Ferraro, J.J.; Caccavo, F.A.; Saifer, A. *p*-Hydroxybenzoic Acid Hydrazine Procedure for Serum Glucose Adapted to the Technicon Method SMA-2/60 and Compared with other Glucose Methods. *Clin. Chem.* **1976**, 22 (2), 263–266.

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