

**Summary:** Samples containing sucrose are hydrolyzed with invertase to form reducing sugars (monosaccharides). Reducing sugars then 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:** There are no known chemical interferences with this method.

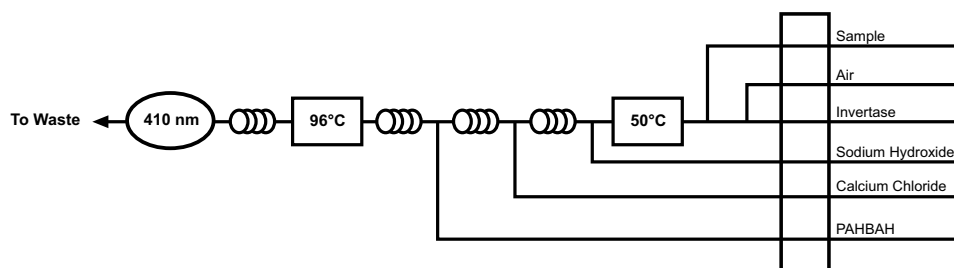
**Performance Specifications:**

Range:	5.0–500 mg/L
Throughput:	30 samples/hour
Precision:	
5.0 mg/L	<5% RSD
250 mg/L	<3% RSD
500 mg/L	<2% RSD
Method Detection Limit (MDL):	1.0 mg/L

**Chemicals:**

Acetic Acid, glacial, $C_2H_3OOH$	Citric Acid, $H_3C_6H_5O_7$
Benzoic Acid, saturated aqueous, $C_6H_5COOH$	Glucose, $C_6H_{12}O_6$
Brij <sup>®</sup> -35, 30% w/v (OI Analytical Part #A21-0110-33)	Hydrochloric Acid, concentrated, HCl
Calcium Chloride Hexahydrate, $CaCl_2 \cdot 6H_2O$	<i>p</i> -Hydroxybenzoic Acid Hydrazide (PAHBAH), $HO C_6H_4 CONHNH_2$
	Invertase, grade VII, from baker's yeast
	Sucrose, $C_{12}H_{22}O_{11}$

**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 Sci.* **1976**, 146–151.

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

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