

Summary: Starch is removed from tobacco leaves by an ethanol and perchloric acid extraction. The starch in the extract reacts with iodine at a pH of 4.5–4.7 to produce a blue color. The absorbance is measured at 660 nm.

Interferences: No chemical interferences are known.

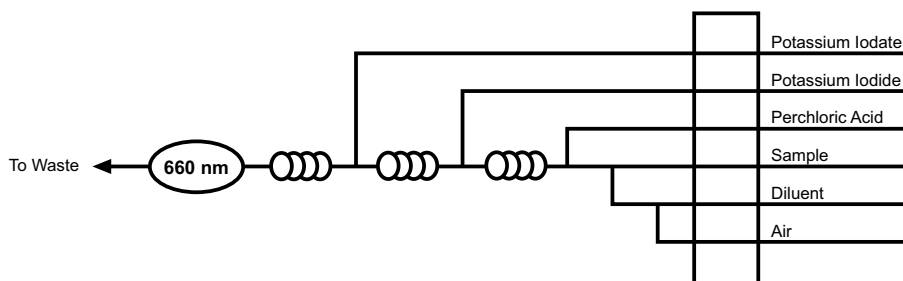
Performance Specifications:

| | |
|-------------------------------|-----------------|
| Range: | 10–5,000 mg/L |
| Throughput: | 40 samples/hour |
| Precision: | |
| 10 mg/L | <2% RSD |
| 500 mg/L | <1% RSD |
| 5,000 mg/L | <1% RSD |
| Method Detection Limit (MDL): | 0.5 mg/L |

Chemicals:

| | |
|--|------------------------------------|
| Brij®-35, 30% w/v (OI Analytical Part #A21-0110-33) | Potassium Iodate, KIO ₃ |
| Ethanol, 95%, C ₂ H ₅ OH | Potassium Iodide, KI |
| Perchloric Acid, HClO ₄ | Starch, soluble, from potato |

Basic Flow Diagram:



Selected References: Nielsen, J.P. *Ind. and Eng. Chem. Anal. Ed.* **1943**, *15*, 176–179.

Ward, G.N.; Johnston, F.B. *Chemical Methods of Plant Analysis*; Starch Method Number 3, Publication 1064; Canada Department of Agriculture, 1960; 57–58.

Brij is a registered trademark of ICI Americas.