

## Application Procedure for Manganese in Gasoline using AAS

### Introduction

This is procedure for Manganese analysis in gasoline by Atomic Absorption Spectrometer following ASTM method D3831-01

### Preparation of Working Standards

1. Prepare four working standards using the 4.0, 10.0, 20.0 mg Mn standards
2. Using micropipette, Add 100 $\mu$ L of bromine solution to each four separate tubes
3. Pipette 1mL of each of the four low-manganese standards into the tubes. Mix with the bromine solution
4. Deliver 9.0mL of methyl isobutyl ketone of each of the tubes. Mix well.

### Sample Preparations

1. Deliver 100 $\mu$ L of bromine solution into a tube
2. Add 1.0ml of the gasoline sample. Mix well.
3. Add 9.0mL of methyl isobutyl ketone. Mix well.
4. Aspirate the working standards and sample into the nebulizer and record absorbance of each

### Operating Conditions:

Aurora Instruments Trace Series	
Method Name	Flame
Element Name	Mn
Instrument Mode	Absorbance
Band Pass	0.2nm
Lamp Current	8.5mA
Acetylene Flow Rate for Air Burner	1.5 L/m
Integration Time	5 seconds
Wavelength	279.57nm
PMT Voltage	320V

### Results

