

### PiCOEXPLORER PAS-110-YU

## Measurement of Iron (Divalent + Trivalent) Ions

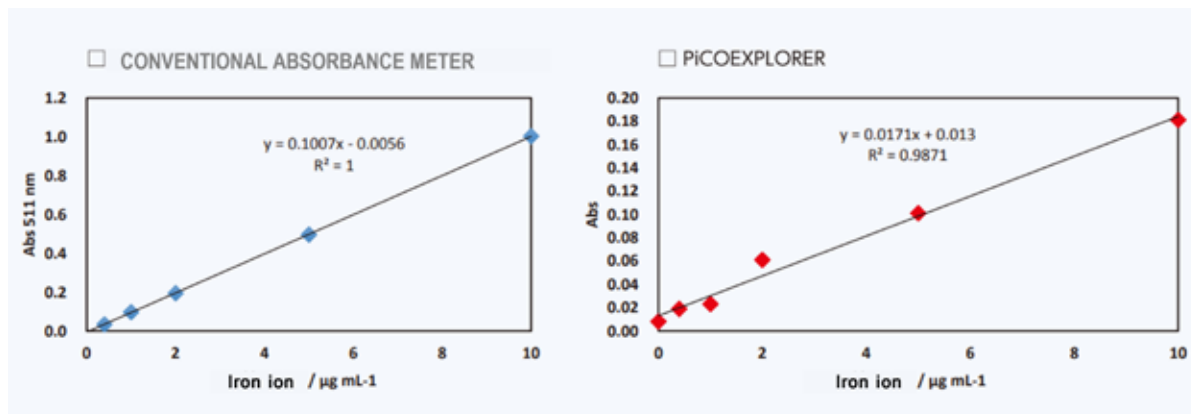
#### Overview

Iron (divalent + trivalent) ions were measured based on the o-phenanthroline Visual Colorimetric Method by Japanese Industrial Standard K 0102 57.1

#### Experimental Procedure

- (1) Dilute 1000 mg / L iron ion standard solution with pure water and adjust the standard solution.
  - (2) Add hydrochloric acid and hydroxylammonium chloride solution to the sample solution and shake.
  - (3) Add phenanthroline solution and shake, then add ammonium acetate solution. Shake.
  - (4) Add pure water and leave for 20 minutes.
  - (5) PiCOEXPLORER, and conventional light absorption meter (SHIMADZU UV1800) (511nm) to measure the absorbance and create a calibration curve.
- \* Wavelength range detected by color sensor B: 400 to 540 nm

#### Calibration Curves



#### Experimental Result

From the measurement results, PiCOEXPLORER showed good calibration curve with color sensor B for iron (divalent + trivalent) ions.  
 PiCOEXPLORER can be applied to the o-phenanthroline Visual Colorimetric Method.

**PiCOEXPLORER**

There is no need to wipe off the sensor for measurement.  
 Rapid measurement is possible.  
 \* Estimated measurement time 1 second / time

