



Performance

Measuring range :	(5) – 50 mg/l
Sampling time :	5 minutes
Detecting limit :	1.0 mg/l
Colour change :	White → Orange
Corrections for water temperature :	Unnecessary (0 – 40°C)
pH value :	pH 3.0 – pH 5.5
Relative standard deviation :	15 % (for 5 to 20 mg/l) 10 % (for 20 to 50 mg/l)
Shelf life :	3 years

Reaction principle

$\text{Fe}^{2+} + 1,10\text{-Phenanthroline (White)} \rightarrow \text{complex compound}$

Possible coexisting substances and their interferences (NOTE : Page 2-5)

Substance	Concentration	Interference	Changes colour by itself to
Zn	$\geq 5 \text{ mg/l}$	+	No ($\leq 100 \text{ mg/l}$)
Co	$\geq 5 \text{ mg/l}$	+	Orange ($\geq 1 \text{ mg/l}$)
CN^-	$\geq 20 \text{ mg/l}$	-	No ($\leq 100 \text{ mg/l}$)
Fe^{3+}	$\geq 50 \text{ mg/l}$	+	Pale orange ($\geq 50 \text{ mg/l}$)
Cu^+	$\geq 5 \text{ mg/l}$	-	Pale orange ($\geq 1 \text{ mg/l}$)
Cu^{2+}	$\geq 10 \text{ mg/l}$	+	Pale blue ($\geq 50 \text{ mg/l}$)
Ni	$\geq 5 \text{ mg/l}$	+	No ($\leq 100 \text{ mg/l}$)
Mn	$\geq 50 \text{ mg/l}$	-	No ($\leq 100 \text{ mg/l}$)
PO_4^{3-}	$\geq 100 \text{ mg/l}$	No	No ($\leq 100 \text{ mg/l}$)

Calibration method

Iron ion standard solution