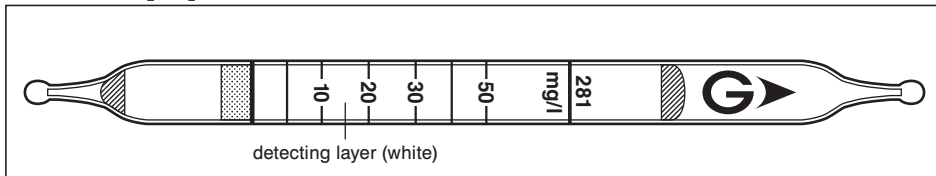


Iron (II) Fe^{2+}

No.281



Performance The minimum scale value (5mg/l) is not printed on the tube, but only the scale line is printed.

Measuring range	(5) to 50 mg/l
Sampling time	5 min
Detecting limit :	1.0 mg/l
Colour change :	White → Orange
Corrections for water temperature :	Unnecessary (0 to 40°C)
pH value :	pH 3.0 to 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

$\text{Fe}^{2+} + 1,10\text{-Phenanthroline} \rightarrow \text{Complex compound}$

Possible coexisting substances and their interferences

Substance	Concentration	Interference	Changes colour by itself to
Zinc Zn^{2+}	$\geq 5 \text{ mg/l}$	+	No ($\leq 100 \text{ mg/l}$)
Cobalt Co^{2+}	$\geq 5 \text{ mg/l}$	+	Orange ($\geq 1 \text{ mg/l}$)
Cyanide ion CN^-	$\geq 20 \text{ mg/l}$	-	No ($\leq 100 \text{ mg/l}$)
Iron(III) Fe^{3+}	$\geq 50 \text{ mg/l}$	+	Pale orange ($\geq 50 \text{ mg/l}$)
Copper(I) Cu^+	$\geq 5 \text{ mg/l}$	-	Pale orange ($\geq 1 \text{ mg/l}$)
Copper(II) Cu^{2+}	$\geq 10 \text{ mg/l}$	+	Pale blue ($\geq 50 \text{ mg/l}$)
Nickel Ni^{2+}	$\geq 5 \text{ mg/l}$	+	No ($\leq 100 \text{ mg/l}$)
Manganese Mn^{2+}	$\geq 50 \text{ mg/l}$	-	No ($\leq 100 \text{ mg/l}$)
Phosphate ion PO_4^{3-}	$\geq 100 \text{ mg/l}$	No	No ($\leq 100 \text{ mg/l}$)

Calibration method

Iron standard solution