

Confirmation for overseas Installation & commissioning

Customer: _____ (Seal)

Confirmer: _____ (Signature)

Telephone: _____

confirmation date: _____

Installation date: _____

Please check the lab condition for installation and tick with “√” which had already be prepared .

5E-CLT2311 Automatic Chlorine Analyzer

1) Equipment and tools preparation

- Floor space: 1000 mm (W) × 4000 mm (L) × 700 mm (H)
- Power supply 220V/50Hz, power \geq 3.5KW (grounded well)
- Oxygen, purity 99.5%.
- Please confirm the connectors of cylinder are according with Chinese standard (G5/8"-RHF) (the screw thread is on the outside), so that it can match with the reducing valve the instrument is equipped, if not, please prepare the reducing valve(gauge for cylinder is 0-25MPa, gauge for outlet is 0-1MPa) by yourself

- | | |
|--|---|
| <input type="checkbox"/> Beaker 2L 1 pc | <input type="checkbox"/> Beaker 50mL 1 pc |
| <input type="checkbox"/> Dropper bottle brown-100ml 1 pc | <input type="checkbox"/> Grinding jar (brown) 500mL 1 pc |
| <input type="checkbox"/> Pipette 50mL 1 pc | <input type="checkbox"/> Graduated cylinder 500mL 1pc |
| <input type="checkbox"/> Wash bottle(plastic) 1 pc | <input type="checkbox"/> Tube brush 1 pc |
| <input type="checkbox"/> Rubber pipette bulb 1 pc | <input type="checkbox"/> Volumetric flask brown-1000ml 2 pc |
| <input type="checkbox"/> Plastic bottle (1000ml) 10 pc | <input type="checkbox"/> Glass rod 2 pc |
| <input type="checkbox"/> Ultrapure Water Polishing System 1 pc | <input type="checkbox"/> Electric furnace 1 pc |
| <input type="checkbox"/> Muffle furnace 1 pc | <input type="checkbox"/> Drying Oven 1 pc |
| <input type="checkbox"/> Analytical balance 1pc | <input type="checkbox"/> Medical syringe 1 pc |
| <input type="checkbox"/> Glove (plastic) 1 pc | |

2) Chemical preparation

Chemical reagent for the Chlorine experiment:

-
- | | | | |
|--------------------------|--------------|--------------------------------|----------|
| <input type="checkbox"/> | GR | NaOH | 1 bottle |
| <input type="checkbox"/> | GR | KNO ₃ | 5 bottle |
| <input type="checkbox"/> | GR | H ₂ SO ₄ | 1 bottle |
| <input type="checkbox"/> | GR | NaCl | 1bottle |
| <input type="checkbox"/> | GR | AgNO ₃ | 1 bottle |
| <input type="checkbox"/> | GR | KCl | 1 bottle |
| <input type="checkbox"/> | AR | Silica Sand 25~50mesh | 1 bottle |
| <input type="checkbox"/> | Purification | Agar-agar | 1 bottle |

3) Solution Preparation

- NaOH Solution: 10g/L (dissolve 10g NaOH of GR grade in 1000ml water).
- Saturated Calomel Electrode filling solution: Saturated KCl solution
- Sulfuric Acid Solution: Concentration (1+23) (V+V). Dilute 40mL GR grade pure solution in 920mL water, mix well.
- KNO₃ Solution: Dissolve 200g GR (Guaranteed reagent) grade of Potassium Nitrate (KNO₃) in 1000ml water, mix until completely dissolved.
- Saturated KNO₃ Solution: Dissolve enough GR (Guaranteed reagent) grade of Potassium Nitrate(KNO₃) in 500ml water till saturation.
- Standard NaCl solution: The concentration of Cl ion is 0.20mg/L (accurately weigh 0.3298g GR grade NaCl pre-baked at 500-600°C for 1h in little water, then transfer it to 1000mL volumetric flask, dilute to the mark and mix well).
- Standard AgNO₃ Solution : 0.01411mol/L (Accurately weigh 2.3969gGR grade AgNO₃ pre-baked at 110°C for 1h in little water), transfer it to a 1000ml volumetric flask and dilute to mark, then mix well.
- Saturated Calomel Electrode filling solution: Saturated KCl solution
- Preparation of Salt Bridge: Dissolve 5g KNO₃ and 0.75g agar powder in 25mL water by heating, after boiling, remove bubbles, and immediately fill the solution to a U-shape tube(put a rubber tube to the shorter end). Cool the U-shape tube until the agar in tube changes white, and then place it in saturated KNO₃ solution (the same with the external salt bridge solution).

Note: distilled water with resistivity greater than 3MΩ must be used in solution preparation.