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Preparation before installation of K9860/K1100 Automatic Kjeldahl Analyzer

I . Reagent preparation

(1) Boric acid solution (20g/L): weigh and dissolve 20.00g boric acid in distilled water, with volume defined in a 1,000mL measuring flask; shake it till evenly mixed. Add 100:1 mixture of methyl red and bromocresol green and make it uniformly mixed.

(2) Sodium hydroxide solution (400g/L): weigh and dissolve 400.00g sodium hydroxide in distilled water, with volume defined in a 1,000mL measuring flask; shake it till evenly mixed.

(3) Standard titration solution

a) Standard titration solution of sulfuric acid [$c(1/2H_2SO_4)=0.1000$ mol/L]: take and dilute 2.73mL concentrated sulfuric acid (density: 1.8419g/mL) with distilled water, with volume defined in a 1,000mL measuring flask; shake it till evenly mixed, and calibrate.

b) Standard titration solution of hydrochloric acid: take and dilute 8.30mL concentrated hydrochloric acid (concentration: 36%-38%) with distilled water, with volume defined in a 1,000mL measuring flask; shake it till evenly mixed, and calibrate.

(4) Standard solution of ammonium sulfate: take and dissolve 6.6065g dried ammonium sulfate (G/R) with distilled water, with volume defined in a 1,000mL measuring flask; shake it till evenly mixed.

(5) Mixing 1 part of methyl red was dissolved in 0.1% ethanol solution of 95% ethanol (1g / L) and 5 parts was dissolved in 0.1% bromocresol green ethanol solution of 95% ethanol (1g / L), please make it just before use. There are two states of methyl red, the state is OK on the left, the state is NG on the right in the below picture. (For example, 1.7mL 0.1% methyl red ethanol solution and 8.3mL 0.1% bromocresol green ethanol solution to 1000mL Boric acid solution) .





Note: methyl red requires the use of shiny purple crystals, red brown powder is not used

(6) Distilled water more than 10L.

II. Auxiliary instruments:

1. 1000mL volumetric bottles, 2pc; 2. 100ml volumetric bottles, 2pc; 3. 10ml single scale pipette, 2pc; 4. 10ml scale straws, 2pc; 5. 2000ml beakers, 2pc; 6. 1000ml beakers; 2pc 7. 100ml measuring cylinders, 2pc; 8. Glass rod, 2pc 9. Washing ear ball, 1pc; 10. Nitrogen tube brush, 1pc; 11. 1/10000 electronic balance, 1pc

Note: The above auxiliary instruments are necessary for the preparation of reagent in the first item, and they are no longer needed in actual debugging.

III Installation conditions:

1. Power supply: stable standard 220V AC power supply.
2. Water source: Please place the pre-installation position of the instrument within 1m of the upper water source and the discharge water source.
3. Work table: stable instrument operating table, more than 150cm×80cm.
4. Water nozzle: our instrument uses bayonet type convenient interface; your nozzle diameter should be between 10mm-17mm.
5. Ventilation kitchen: the digestion device needs to be equipped with ventilation kitchen, ventilation kitchen should have a stable standard 220V AC power supply, 16A power socket, need to be equipped with a separate air switch, leakage switch and reliable ground wire. (If the waste discharge system WD03 fume hood is purchased, it needs to be equipped with water source and





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drainage pool, and the water nozzle is G1/2 pipe thread).



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