

MATERIAL AND EQUIPMENT

Field Material and Equipment

Profile Study of Wetland

a set of rubber raft with an air pump

80 - 100 m-nylon strings

20 m tape measure

bamboo poles

Water Sampling

a set of rubber raft with an air pump

a pair of rubber boot

working suit

gloves

1 L-plastic bottles for water samples

basket

pH-meter

thermometer

tissue paper

washing bottle

a watch

paper and pencil

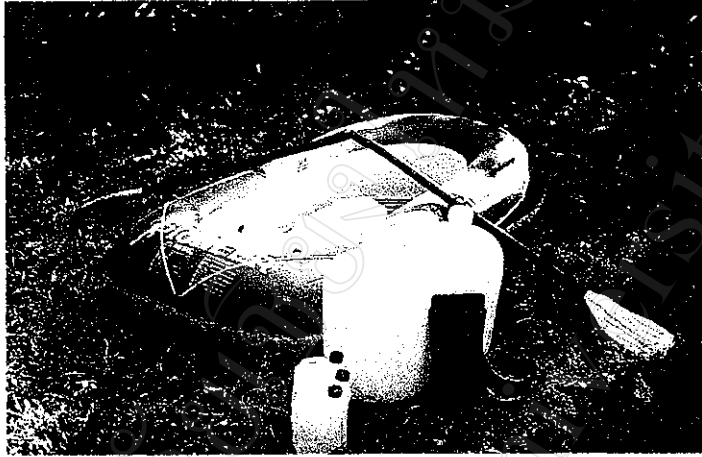


Figure 4. Field equipment for water sampling.



Figure 5. Apparatus for water sampling.

Laboratory Material and Equipment

Apparatus

beaker 100 ml

beaker 100 ml

BOD bottles 300 ml

burette 50 ml

cylinders 100 ml

cylinders 50 ml

Erlenmeyer flasks 250 ml

Erlenmeyer flasks 50 ml

filter papers Whatmann No. 1

pipette 1 ml

pipette 2 ml

pipette 5 ml

pipette 25 ml

rubber suction

titration set

volumetric flasks 100 ml

volumetric pipette 25 ml

volumetric pipette 50 ml

Chemicals

Aluminium hydroxide : $\text{Al}(\text{OH})_3$

Aluminium sulfate : $\text{Al}_2(\text{SO}_4)_3$

Ammonium chloride : NH_4Cl

Ammonium hydroxide : NH_4OH

Ammonium molybdate reagent : $(\text{NH}_4)_6\text{Mo}_7\text{O}_{24} \cdot 4\text{H}_2\text{O}$

Cleaning solution

EDTA stabilizer reagent : $\text{Na}_2\text{EDTA} \cdot 2\text{H}_2\text{O}$

Feroin Indicator

Glycerol

Manganous sulfate : $\text{MnSO}_4 \cdot 4\text{H}_2\text{O}$

Mercuric iodide : Hg_2I (red)

Nitric acid : HNO_3 (conc.)

Phenol (pure)

Phenolphthalien disodium salt

Potassium bi-iodate : $\text{KH}(\text{IO}_3)_2$

Potassium dichromate : $\text{K}_2\text{Cr}_2\text{O}_7$

Potassium dihydrogen Phosphate : KH_2PO_4 AR

Potassium iodide : KI

Potassium nitrate : KNO_3 AR

Silver sulfate : Ag_2SO_4

Sodium azide : NaN_3 AR

Sodium hydroxide : NaOH

Sodium iodide : NaI

Sodium thiosulfate : $\text{Na}_2\text{S}_2\text{O}_3$ (BDH/Merk)

Stannous chloride reagent : $\text{SnCl}_2 \cdot 2\text{H}_2\text{O}$

Starch Powder

Sulfuric acid : H_2SO_4 (conc.) AR

Zinc sulfate : $\text{ZnSO}_4 \cdot 7\text{H}_2\text{O}$

Equipment

hot air oven : set at 150 °C

incubator : set at 20 °C

spectrophotometer : Spectronic 21



Figure 6. Apparatus for chemical analysis.

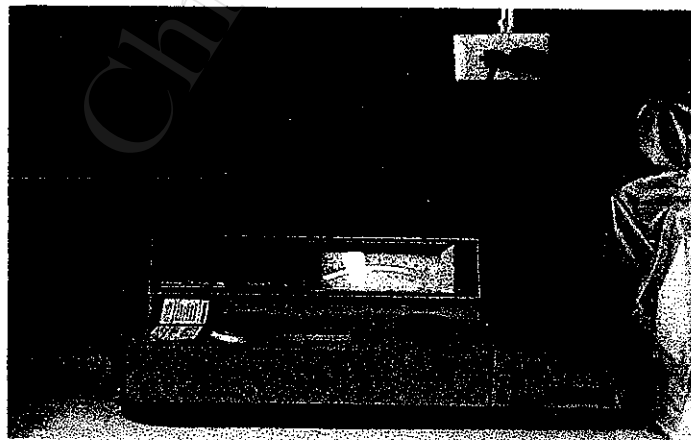


Figure 7. Spectrophotometer : Spectronic 21