

Basic Water Treatment Training

Aquasolve College of Science & Technology (ACST)

Programme Overview

Duration: 5 days (40 hours)

Level: Foundational

Target Audience: New water plant operators, technicians, and WASH practitioners

Module 1: Water Quality Fundamentals

- Physical water quality parameters (turbidity, colour, temperature)
- Chemical parameters (pH, TDS, hardness, alkalinity)
- Microbiological parameters (E. coli, total coliforms)
- WHO and Ghana EPA drinking water standards
- Water testing equipment and procedures

Module 2: Coagulation & Flocculation

- Theory of coagulation and floc formation
- Coagulants: Alum, PAC, ferric chloride
- Jar testing procedures and dose optimisation
- pH adjustment for effective coagulation
- Common coagulation problems and solutions

Module 3: Sedimentation & Filtration

- Sedimentation tank design and operation
- Filtration media: sand, anthracite, multimedia
- Backwashing procedures and frequency
- Filter performance monitoring
- Troubleshooting low filter efficiency

Module 4: Disinfection

- Chlorination: free chlorine vs combined chlorine
- Chlorine dosing calculations
- Contact time requirements (CT values)
- Residual chlorine testing
- Alternative disinfection: UV, ozone

Module 5: Plant Operation & Maintenance

- Daily operational checks and record-keeping
- Preventive maintenance schedules

- Common equipment failures and repairs
- Safety procedures and PPE requirements
- Basic troubleshooting guide

Certification

Upon successful completion of this programme, participants receive an ACST Basic Water Treatment Certificate recognised by the Ghana Water Company Limited (GWCL) and Community Water and Sanitation Agency (CWSA).

Course Fee & Registration

Fee: GHS 2,500 per participant (includes training materials, certificate, and lunch)

Next Intake: Contact Aquasolve for upcoming dates

Registration: Email victoria@aquasolvewater.com or call 054 946 9787