Global Water CENTER



Water Quality Equipment Selection Tool

Use this template to compare different equipment options for water quality testing. Add equipment names in the second and third columns. Additional columns may be added as required.

Note - for further information, refer to WHO's *A guide to selecting drinking-water quality field testing equipment (in preparation, expected 2026).*

The best choice of field testing equipment will depend on these factors:

1. Ability To Meet Testing Requirements
2. Availability and Cost
3. Ease of Use
4. Power and Equipment Needs
5. Portability and Storage Considerations

Water Quality Equipment Selection	Equipment 1	Equipment 2
1. ABILITY TO MEET TESTING REQUIREMENTS		
What is the name and brand of the equipment (e.g. Hach 2100Q Turbidity meter)?		
What parameter(s) does this equipment test?		
What method is the equipment using for testing (e.g. test strip, colour comparison, digital reading, etc)?		
Where equipment/method is used for regulatory (compliance) monitoring, does it adhere to any criteria set out in drinking-water quality regulations?		
What is the unit of the result(s) (e.g. unitless (like for pH), presence/absence, mg/L, MPN, etc)?		
How accurate and precise is the equipment (i.e. does it give a range of +/- a certain value)?		
Does this provide qualitative (presence/absence) or quantitative (concentration) results?		
What is the lowest value the equipment can measure for each parameter (e.g. 0.1 mg/L for free chlorine)? *This is called the detection limit.		
Is the detection limit below the regulation value you will be comparing your number to (e.g. DL of 0.1 mg/L for free chlorine is below the regulatory value of 0.2 mg/L)?		
What is the highest value the equipment can measure for each parameter (e.g. 3 mg/L for chlorine)?		
Is your expected result lower than the highest value the equipment can measure?		
Are there any water characteristics that will negatively impact the result (e.g. turbidity, pH)?		

Water Quality Equipment Selection	Equipment 1	Equipment 2
2. AVAILABILITY AND COST		
Can you buy the equipment locally?		
What are the supplies needed to run the test? (e.g. calibration solution, nutrient, DPD powder, sample bags/containers)		
Can you buy the supplies locally?		
Is there any additional equipment is needed to run the test (e.g. incubator, glassware, scale, etc)?		
Can you buy the additional equipment and/ or spare parts locally?		
What is the expected lifespan of the equipment?		
What is the cost of the consumables? Where will this money come from?		
What is the estimated cost per test after initial equipment purchase?		
3. EASE OF USE		
What is the current level of training of your team? Are they able to use the equipment or be trained on how to use the equipment?		
Does the equipment need to be calibrated? If yes, is there sufficient technical capacity to conduct this?		

Water Quality Equipment Selection	Equipment 1	Equipment 2
How must the equipment be maintained?		
How long does the test take - technician active time?		
How long until results are available - total time including waiting time?		
Does the test make any hazardous waste?		
What are the waste disposal requirements?		
How easy is it to interpret the results of the test?		
4. POWER AND EQUIPMENT NEEDS		
Does any of the equipment require power? If no, move on to Section 5.		
If yes, is there power available where the equipment will be used?		
Does the equipment run on batteries? If yes, what type? Are they available locally, rechargeable, solar compatible, etc?		
If the equipment is plug in, is it compatable with the available power source? If not, is a converter available?		
Are there any miscellaneous equipment needs (e.g. ultraviolet light, deionized water, portable electric incubator)?		

Water Quality Equipment Selection	Equipment 1	Equipment 2
5. PORTABILITY AND STORAGE CONSIDERATIONS		
Is the equipment portable enough for remote locations (i.e. weight and size; possible to carry by motorcycle, bike, walking)?		
How durable is the equipment for transport and field conditions?		
For microbial testing, is there sufficient space for incubators?		
What work space is required (clean, flat area, permanent counterspace)?		
What are the storage requirements for equipment and supplies (temperature, humidity)?		
What is the shelf life of the supplies?		