

2006 World Water Monitoring Day in Hong Kong




**Report by
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The handy kits used for monitoring water quality





The tests measured the following aspects (measurements) of water quality:


1. Temperature
2. Water Temperature
3. Dissolved oxygen (DO)
4. pH
5. Turbidity


Date of Sampling One	21 st October 2006	
Venue of Sampling One	Fei Ngo Shan (at high altitude)	
	Temperature (°C)	28
	Water Temperature (°C)	22
	Dissolved Oxygen (ppm)	4
	pH	8
	Turbidity (JTU)	0

Date of Sampling Two	22 nd October 2006	
Venue of Sampling Two	Near the shore of Yat Tung Estate, Tung Chung	
	Temperature (°C)	30
	Water Temperature (°C)	28
	Dissolved Oxygen (ppm)	8
	pH	7
	Turbidity (JTU)	0

Date of Sampling Three	22 nd October 2006	
Venue of Sampling Three	Near the shore of Sha Lo Wan	
	Temperature (°C)	30
	Water Temperature (°C)	26
	Dissolved Oxygen (ppm)	8
	pH	8
	Turbidity (JTU)	0

Date of Sampling Four	22 nd October 2006	
Venue of Sampling Four	Near Sha Lo Wan Village, Very close to human settlement	
	Temperature (°C)	30
	Water Temperature (°C)	26
	Dissolved Oxygen (ppm)	8
	pH	6
	Turbidity (JTU)	0

Date of Sampling Five	2 nd November 2006	
Venue of Sampling Five	Exit of Piper's Hill Road to Tai Po Road	
	Temperature (°C)	26
	Water Temperature (°C)	22
	Dissolved Oxygen (ppm)	8
	pH	7
	Turbidity (JTU)	40

Date of Sampling Six	2 nd November 2006	
Venue of Sampling Six	The hill side near the public car park of Kowloon Reservoir	
	Temperature (°C)	26
	Water Temperature (°C)	22
	Dissolved Oxygen (ppm)	8
	pH	8
	Turbidity (JTU)	40

Temperature



Low Range °C



High Range °C



GREEN

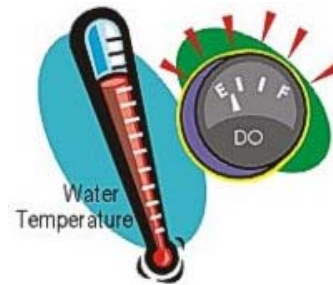
Temperature is very important to water quality.

→ which affects

1. the amount of DO in the water,

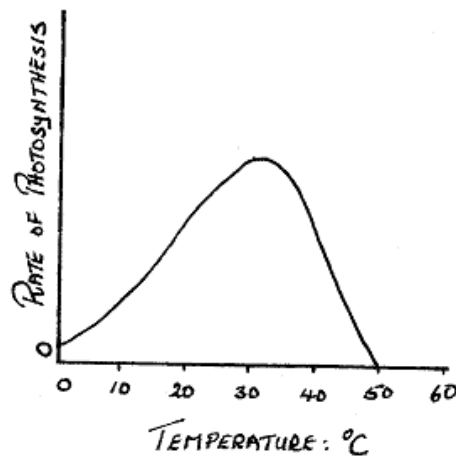


Cold water can hold more dissolved than **warm water**.



oxygen

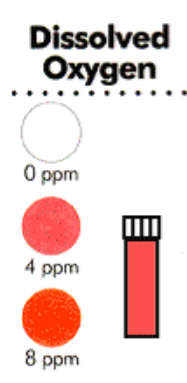
2. rate of photosynthesis by aquatic plants, and



3. the sensitivity of organisms to toxic wastes, parasites and disease.

The unit: degree Celsius (°C)

Dissolved Oxygen (DO)

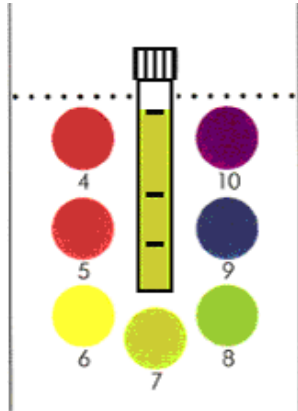


- It is important to the health of an ecosystem.
- Most aquatic organisms need Oxygen to survive.
- Natural waters with high dissolved oxygen levels are most likely healthy and stable environments and are capable of supporting a diversity of aquatic organisms.

The low levels of DO could be due the high level of bacteria from sewage pollution or large amount of rotting plants, which could be seen in the water. This can also cause large fluctuations in DO level throughout the day, which can affect the ability of plants and animals to thrive.

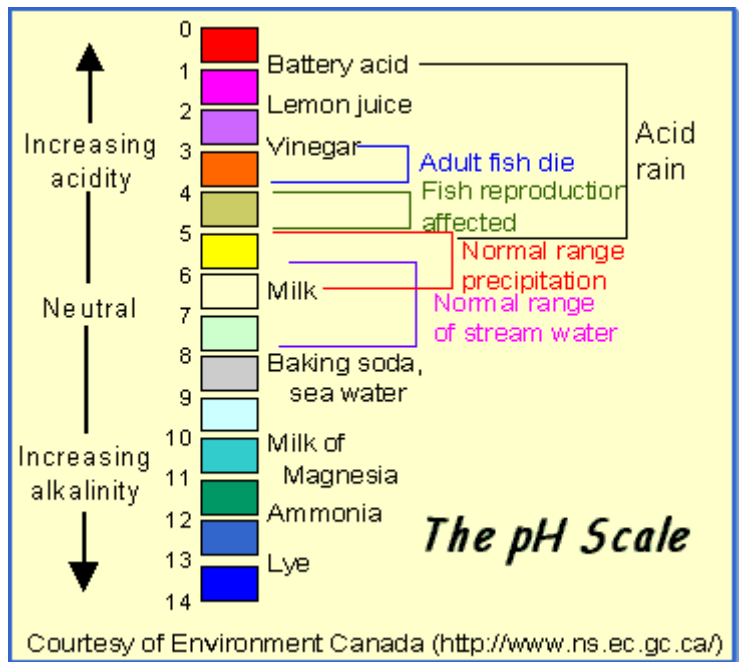
The unit for the amount of DO: ppm, ppt or mg/L

pH



- pH is one of the key parameters to measure acidic or basic quality of water
- Controls many chemical and biochemical processes in water
- Most aquatic organisms are adapted to a specific pH level and may die if the pH value changes slightly

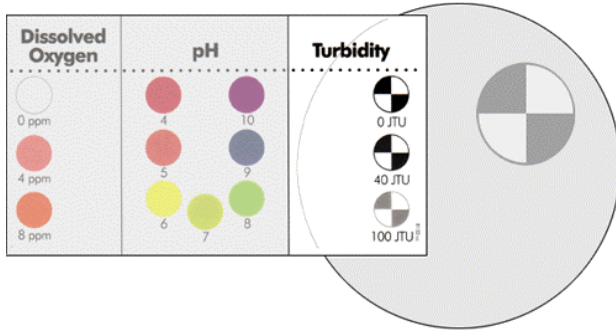
Typical range for pH = 7.2 to 8.8
 pH for water quality in HK = 6.0-8.0
 State Standard = between 6.0 to 9.0





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Turbidity

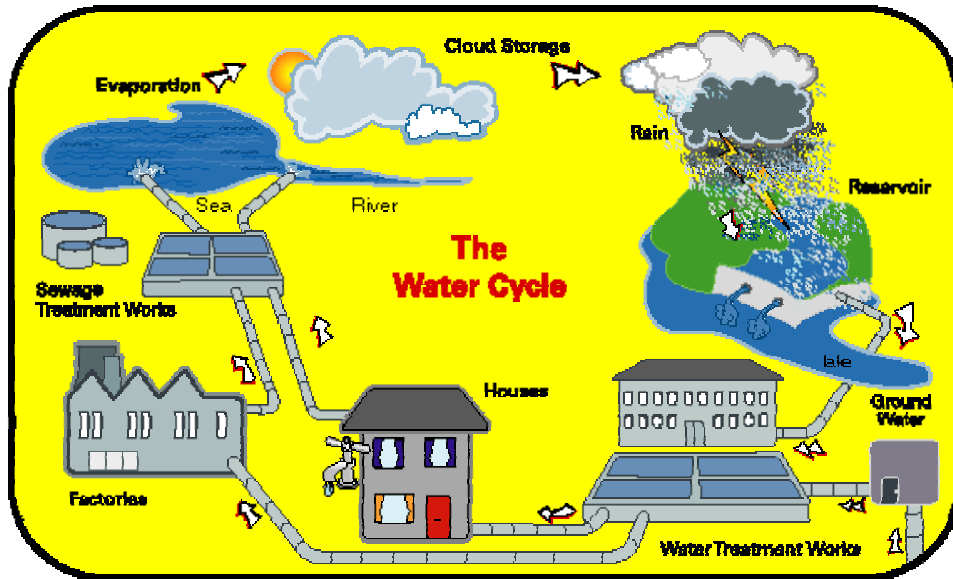


- Turbidity is the measure of the relative clarity of water.
- Turbid water is caused by suspended and colloidal matter such as clay, silt and inorganic matter, and microscopic organisms.
- prevent sunlight from reaching plants below the surface, that decreases the rate of photosynthesis, so less oxygen is produced.
- Turbidity may harm fish and their larvae.

The unit=JTU



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After joining the education and promotional activities “World Water Monitoring Day 2006 on October 18”, we know that water of high quality is very scarce.



Such event can also raise our awareness and participation in the protection of world water resources and quality.