



Effects of salinity, temperature, acidity, alkalinity and DO in the growth of crabs in Trang.

# Our Team



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# Introduction



# Introduction



# Objectives



**To study the effects of salinity, temperature, acidity, alkalinity and DO in the water on the growth of sea crabs in Trang in different places.**

# Materials



pH Meter



Salinity Meter



Thermometer

# Materials



DO Meter

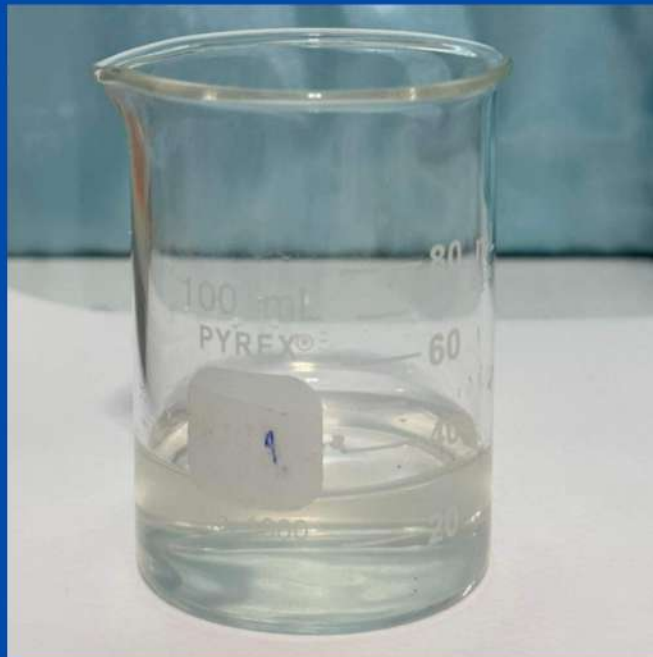


Water 100 mL from  
Trang Urban forest

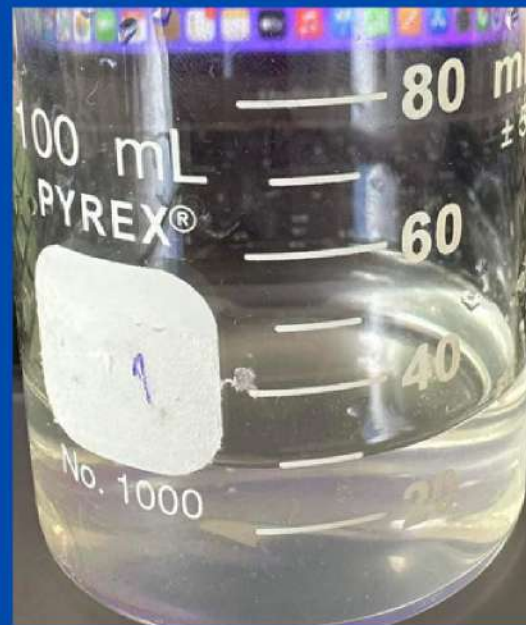


Water 100 mL from  
Pak Meng beach

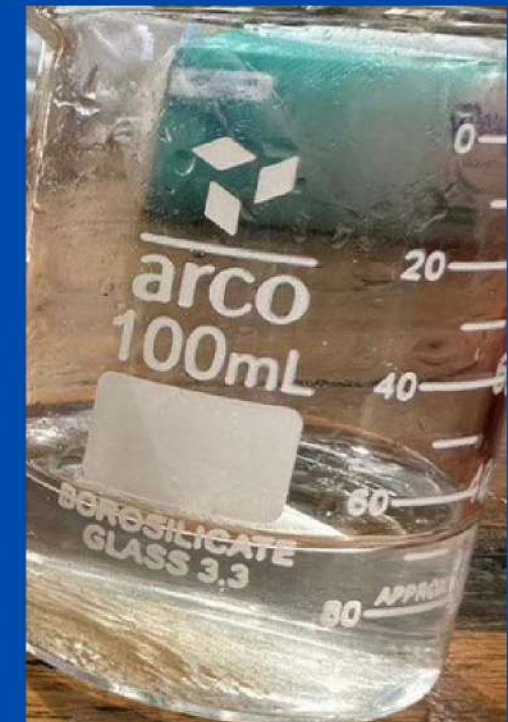
# Materials



Water 100 mL from  
Kantang hot spring  
forest park



Water 100 mL from  
Thungmalam  
mangrove forest



Water 100 mL from  
Nong Samet  
mangrove forest



# **Experimental methods**

***Part 1 Preparation of water samples***

***Part 2 Water Measurement***

***Part 3 Comparison and analysis***

# Experimental methods

## *Part 1* Preparation of water samples

Water samples were collected from 5 sources in volume of 100mL:



# Experimental methods



Trang Urban forest,  
Trang Province,  
Thailand



Pak Meng beach,  
Trang Province,  
Thailand



Kantang hot spring  
forest park, Trang  
Province, Thailand

# Experimental methods



Thungmalam mangrove forest, Trang Province, Thailand



Nong Samet mangrove forest, Trang Province, Thailand

# Experimental methods

## *Part 2 Water Measurement*

Take 100 mL water samples from 5 sources :



# Experimental methods



Find the value by using a pH Meter to measure the acid-base value, use a Salinity Meter to measure the salinity of the water, use a Water thermometer to measure the temperature in the water and use the DO Meter to measure the amount of oxygen in the water.

# Experimental methods

## *Part 3 Comparison and analysis*



# Experimental methods

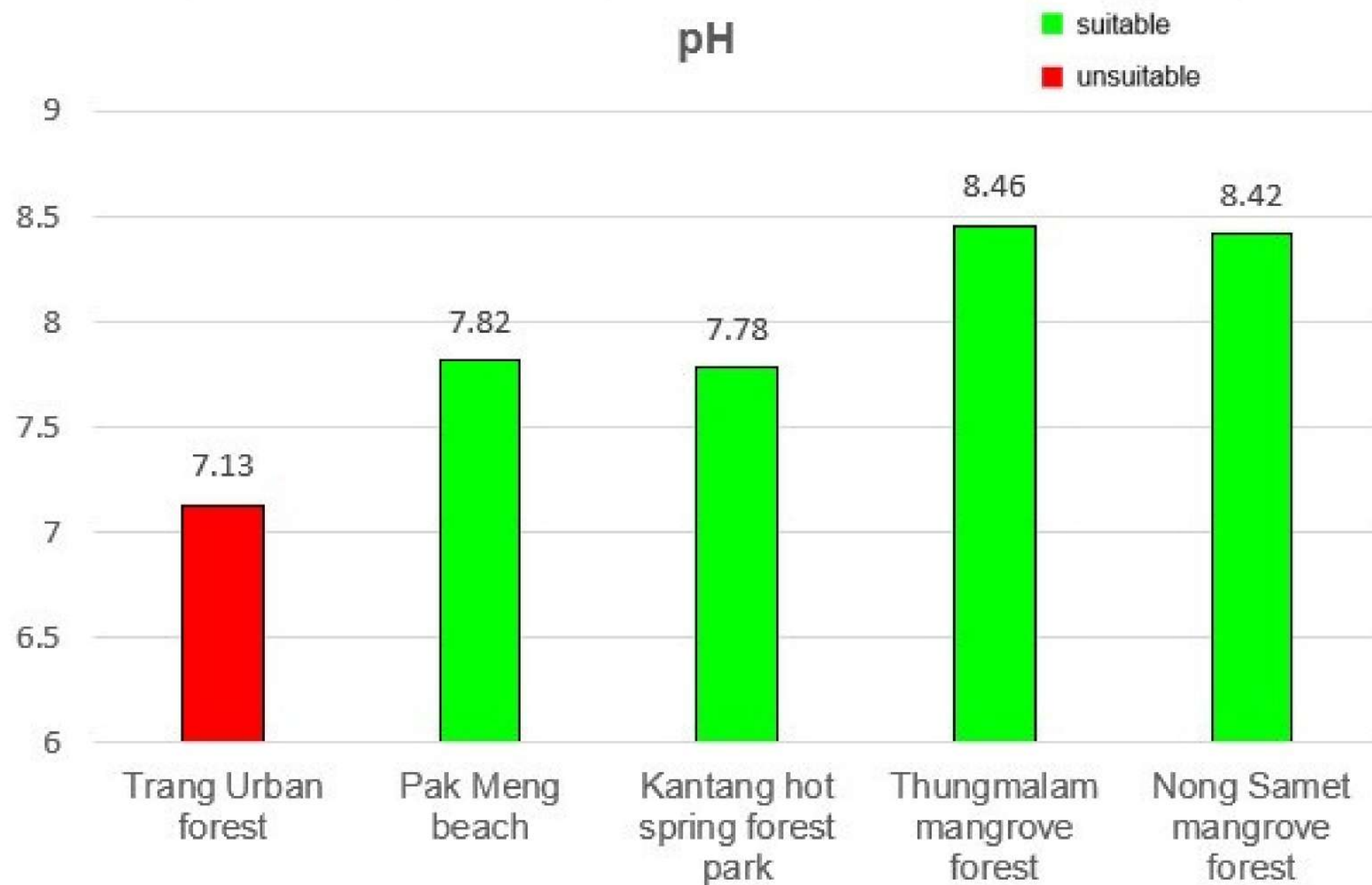


Compare and analyze salinity, temperature, acidity and alkalinity. And the amount of dissolved oxygen in the water obtained from different locations.



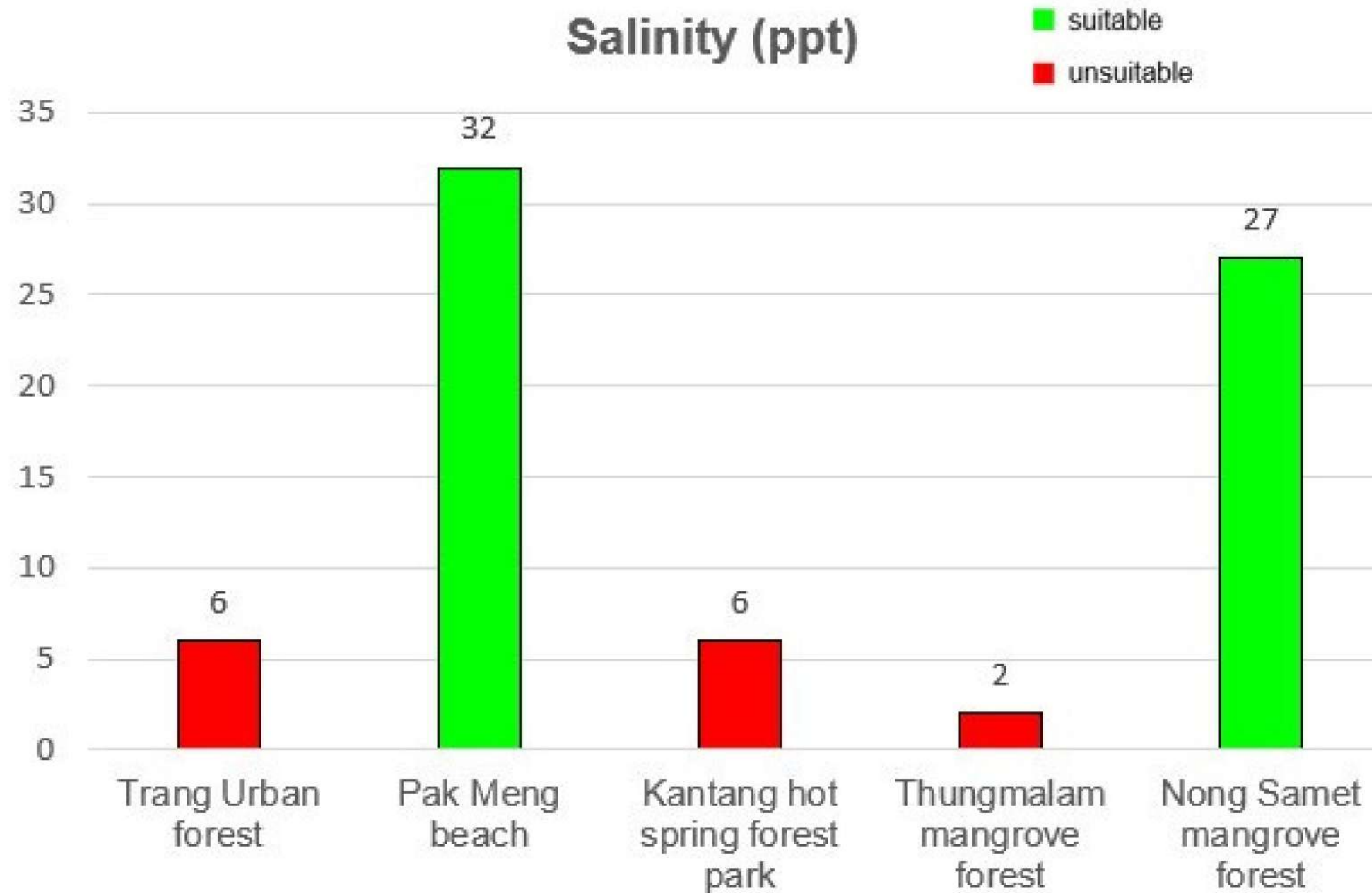
# **Result and Discussion**

# Result and Discussion



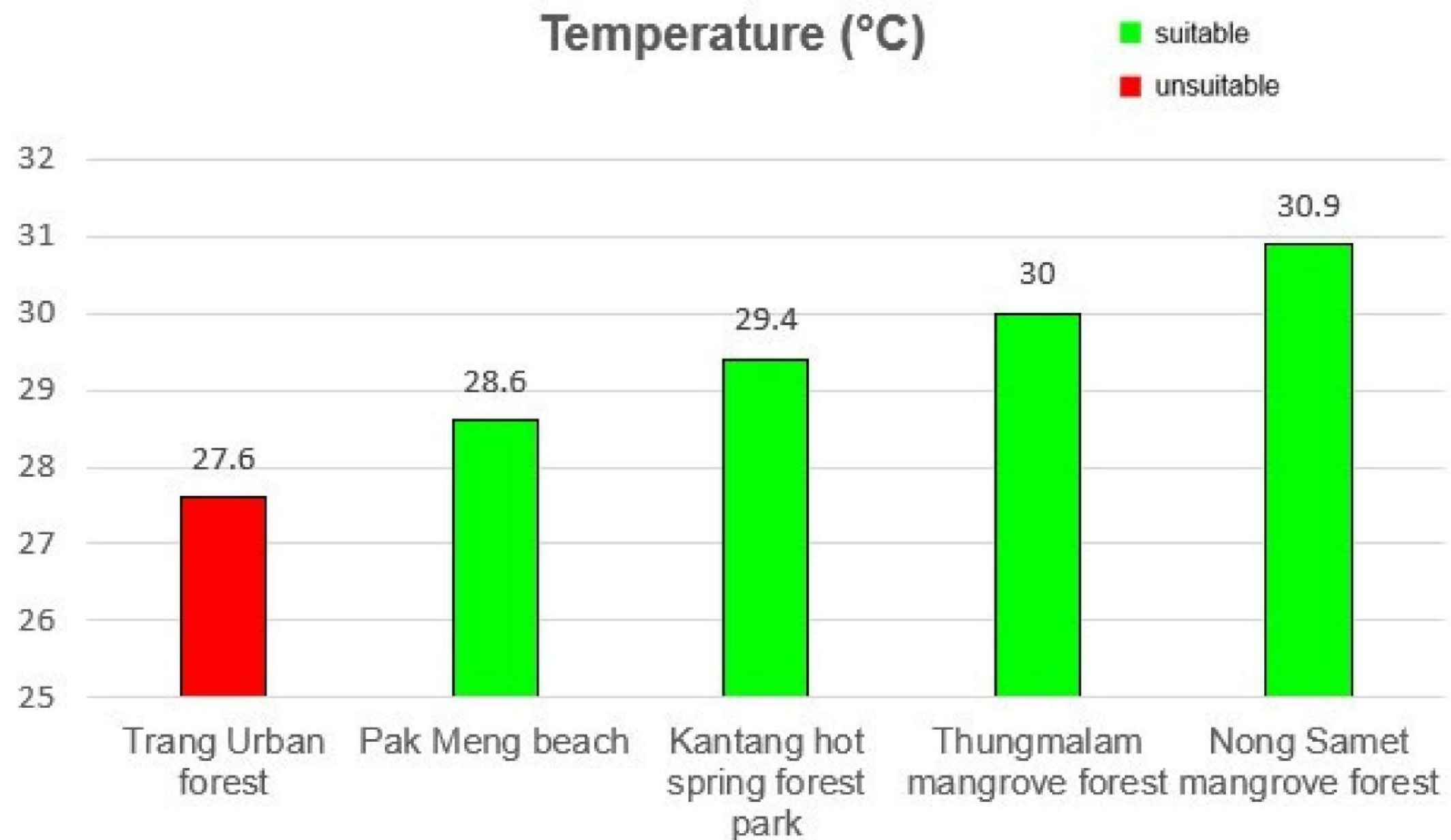
Water source	Appropriate values for the growth of sea crabs	Measured value
Trang Urban forest	7.5-8.5	7.13
Pak Meng beach	7.5-8.5	7.82
Katang hot spring forest park	7.5-8.5	7.78
Thungmalam mangrove forest	7.5-8.5	8.46
Nong Samet mangrove forest	7.5-8.5	8.42

# Result and Discussion



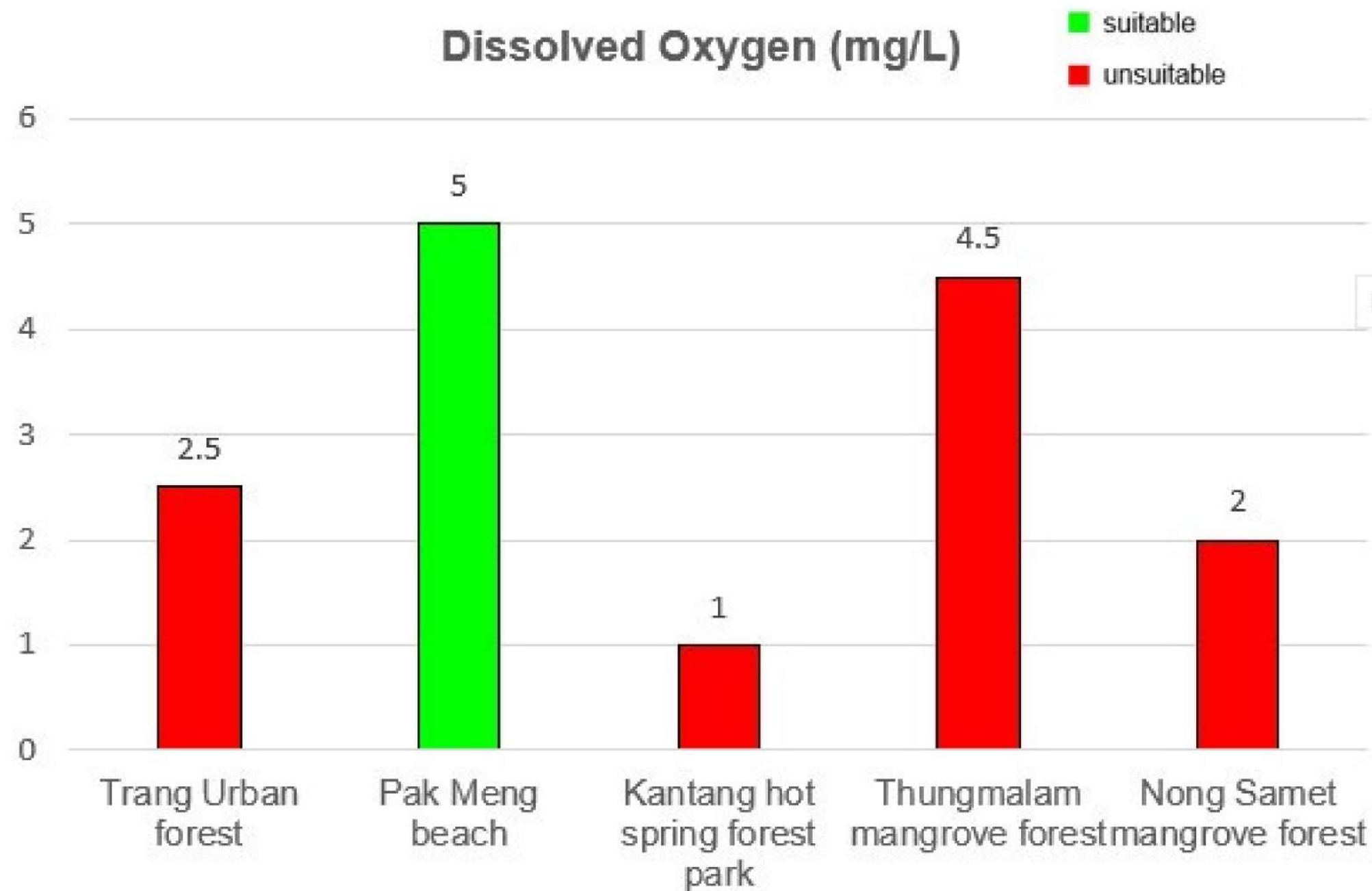
Water source	Appropriate values for the growth of sea crabs	Measured value
Trang Urban forest	25-32 ppt	6 ppt
Pak Meng beach	25-32 ppt	32 ppt
Katang hot spring forest park	25-32 ppt	6 ppt
Thungmalam mangrove forest	25-32 ppt	2 ppt
Nong Samet mangrove forest	25-32 ppt	27 ppt

# Result and Discussion



Water source	Appropriate values for the growth of sea crabs	Measured value
Trang Urban forest	28 - 32°C	27.6°C
Pak Meng beach	28 - 32°C	28.6°C
Kantang hot spring forest park	28 - 32°C	29.4°C
Thungmalam mangrove forest	28 - 32°C	30.0°C
Nong Samet mangrove forest	28 - 32°C	30.9°C

# Result and Discussion



Water source	Appropriate values for the growth of sea crabs	Measured value
Trang Urban forest	4.2 - 5.7 mg/L	2.5 mg/L
Pak Meng beach	4.2 - 5.7 mg/L	5.0 mg/L
Katang hot spring forest park	4.2 - 5.7 mg/L	1.0 mg/L
Thungmalam mangrove forest	4.2 - 5.7 mg/L	4.5 mg/L
Nong Samet mangrove forest	4.2 - 5.7 mg/L	2.0 mg/L

# ***Conclusions***

From the study, it was found that the Pak Meng Beach areas suited well for sea crabs growth with pH = 7.82, salinity = 32 ppt, water temperature 28.6 °C, and oxygen content in the water = 5.0 mg/L, all 4 values are suitable for the growth of sea crabs when compared to the graphs, it showed that the sea crabs grew well in Pak Meng Beach areas.

**Thank you  
for your attention**