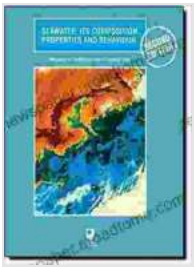
Seawater: Its Composition, Properties, and Behaviour

Seawater is a complex and fascinating substance that covers over 70% of the Earth's surface. It is composed of a variety of dissolved salts, gases, and organic matter, and its properties and behaviour vary greatly depending on its temperature, salinity, and depth.



Seawater: Its Composition, Properties and Behaviour

by Julia Adeney Thomas

4.5 out of 5

Language	: English
File size	: 3774 KB
Text-to-Speech	: Enabled
Screen Reader	: Supported
Word Wise	: Enabled
Print length	: 166 pages

This book provides a comprehensive overview of the composition, properties, and behaviour of seawater, and is essential reading for anyone interested in marine science, oceanography, or environmental science.

Composition of Seawater

Seawater is composed of a variety of dissolved salts, gases, and organic matter. The most abundant salt in seawater is sodium chloride (NaCl),which makes up about 85% of the total dissolved salts. Other major

salts include magnesium chloride ($MgCl_2$),calcium sulfate ($CaSO_4$),and potassium chloride (KCl).

Seawater also contains a variety of dissolved gases, including nitrogen, oxygen, and carbon dioxide. The concentration of these gases in seawater varies depending on the temperature, salinity, and depth of the water.

Organic matter is a relatively minor component of seawater, but it plays an important role in the marine ecosystem. Organic matter includes a variety of compounds, such as proteins, carbohydrates, and lipids. These compounds are produced by marine organisms, and they provide a source of food for other marine organisms.

Properties of Seawater

The properties of seawater vary greatly depending on its temperature, salinity, and depth. However, some general properties of seawater include:

- Seawater is a dense fluid. The density of seawater increases with increasing salinity and decreasing temperature.
- Seawater is a good conductor of heat. This property is important for regulating the Earth's climate.
- Seawater is a corrosive fluid. This property can damage metal objects that are exposed to seawater.
- Seawater is a source of minerals. Seawater contains a variety of minerals, including sodium, magnesium, calcium, and potassium.

Behaviour of Seawater

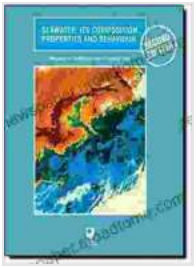
The behaviour of seawater is influenced by a variety of factors, including its temperature, salinity, and depth. Some general characteristics of the behaviour of seawater include:

- Seawater circulates around the globe in a complex system of currents. These currents are driven by a variety of forces, including the Earth's rotation, the wind, and the temperature differences between different parts of the ocean.
- Seawater is constantly evaporating and condensing. This process helps to regulate the Earth's climate.
- Seawater is a habitat for a variety of marine organisms. These organisms include fish, shellfish, and marine mammals.

Seawater is a complex and fascinating substance that plays an important role in the Earth's climate and ecosystem. This book provides a comprehensive overview of the composition, properties, and behaviour of seawater, and is essential reading for anyone interested in marine science, oceanography, or environmental science.

Further Reading

- NOAA Ocean Today: Seawater
- National Geographic: Seawater
- Encyclopedia Britannica: Seawater



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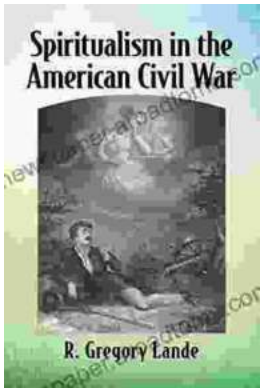

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