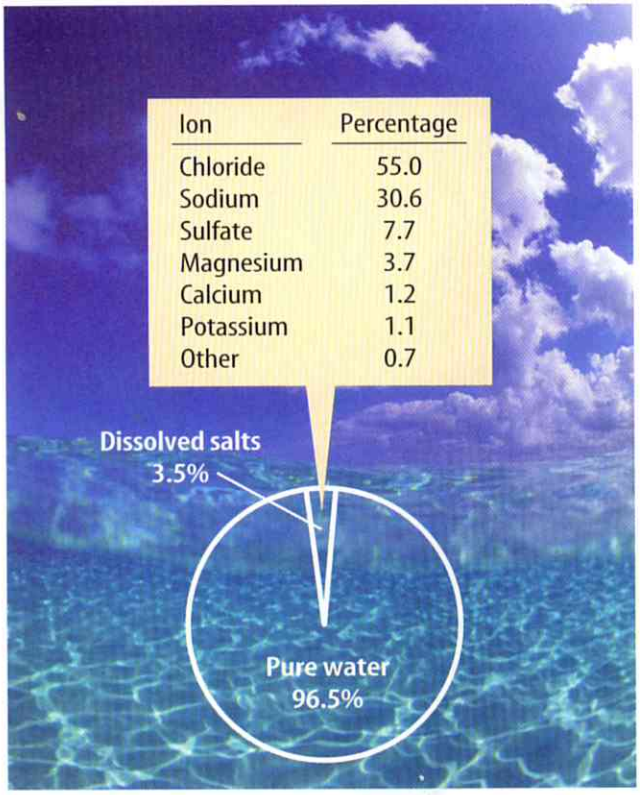

Figure 3 Ocean water contains about 3.5 percent dissolved salts. **Calculate** *If you evaporated 1,000 g of seawater, how many grams of salt would be left?*

Salts The most abundant elements in s water are the hydrogen and oxygen that make u water. Many other ions are found dissolved i seawater. When seawater is evaporated, thes ions combine to form materials called salts Sodium and chloride make up most of the ion in seawater. If seawater evaporates, the sodiu and chloride ions combine to form a salt calle halite. Halite is the common table salt you use season food. It is this dissolved salt and simil ones that give ocean water its salty taste.

Salinity (say LIH nuh tee) is a measure of th amount of salts dissolved in seawater. It usua is measured in grams of dissolved salt per kil gram of seawater. One kilogram of ocean wat contains about 35 g of dissolved salts, or 3.5 pe cent. The chart in **Figure 3** shows the most abu dant ions in ocean water. The proportion a amount of dissolved salts in seawater rema nearly constant and have stayed about the sa for hundreds of millions of years. This tells y that the composition of the oceans is in balance. Evidence th scientists have gathered indicates that Earth's oceans are n growing saltier.

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Removal of Elements Although river volcanoes, and the atmosphere constan add material to the oceans, the oceans are considered to be i steady state. This means that elements are added to the oceans about the same rate that they are removed. Dissolved salts a removed when they precipitate out of ocean water and becom part of the sediment. Some marine organisms use dissolved s to make body parts. Some remove calcium ions from the wa to form bones. Other animals, such as oysters, use the dissol calcium to form shells. Some algae, called diatoms, have si shells. Because many organisms use calcium and silicon, th elements are removed more quickly from seawater than e ments such as chlorine or sodium.

Desalination Salt can be removed from ocean water b process called desalination (dee sa luh NAY shun). If you h ever swum in the ocean, you know what happens when y skin dries. The white, flaky substance on your skin is salt. As water evaporates, salt is left behind. As demand for freshw increases throughout the world, scientists are working on te nology to remove salt to make seawater drinkable.

Desalination
evaporating sea
denses on a glas
that uses solar e
passing it throug
Freshwater also
seawater freezes,
than the remain
separated from
produce freshwa

Importance of
- Oceans are a so minerals.
- Oceans allow fo of goods such a

Origin of Ocean
- Scientists hypo years ago, wate tions cooled an clouds. Oceans torrential rains

Composition of
- Ocean water cor
- Oceans are cons

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