

## Sport & Water – The Chemistry of Solutions

Water offers a huge platform for competition in the world of sport; from swimming to scuba diving, sailing to water polo there are a range of activities which take place in the water nearly as vast as the raft of sports that are land based. Having explored some of the chemistry associated with solutions, and how their properties can affect performances in water sports, answer the following questions to see how much you have learnt.

1. A solution is a liquid which has a substance dissolved in it. What is a liquid that will dissolve a solid called?

**Fact**  
The Dead Sea has nearly nine times as much salt dissolved in its waters as does the Mediterranean Sea.

2. What does the term soluble mean and what is the opposite of the term soluble?

3. When a solution will dissolve no more solid it is said to be fully \_\_\_\_\_. (Fill in the missing word.)

4. What is the universal solvent and why is it known as this?

5. What is another term for water resistance?

6. Does the density of a solution increase or decrease with an increase in the saturation level of a solution?

7. What factors can you suggest for why a swimmer may be faster in a pool than in the sea, if swimming with the same effort? (Include buoyancy and water resistance in your answer as well as two other factors.)

**Fact**  
When a substance is dissolved in a solvent it can sometimes colour the resulting solution.