



Assessment Date: ____/____/____ Student: _____ Examiner: _____
Words Read Correctly (WRC): _____ Errors: _____ Notes: _____

Physical vs Chemical Properties Part 2

Similarly, if you were to take a teaspoon of salt and mix it with a	15
teaspoon of sugar, both the salt and sugar would continue to be salt	28
and sugar. They would remain the same substance they were	38
before they were mixed. If you wanted to do so (and it would surely	52
take a long time), you could take a microscope, separate the two,	64
and once again have a teaspoon of salt and a teaspoon of sugar.	77
Neither was changed chemically. It was only a physical mixture.	87
Chemical Properties	89
Chemical properties are not things you can observe except during a	100
chemical reaction. They are based on the structure of the atoms or	112
molecules that make that substance. Chemical properties include	120
how something reacts to water. For example, iron rusts when	130
exposed to water but gold does not. The key to understanding a	142
chemical property is change. You know it is a chemical property if	154
the substance changes. The rust is a new substance and no longer	166
iron. A chemical property is something that causes a substance to	177
change into another substance. In other words, a chemical property	187
is the way it reacts to another substance.	195
Chemical Mixtures and Chemical Reaction	200
Unlike physical mixtures, where the individual things that combine	209
remain what they were before joining the mixture, in a chemical	220
mixture, the two or more substances combine chemically to form a	231
new substance. Chemical mixtures are not easily reversed and	240
some cannot be reversed. Iron and water create a chemical mixture	251
and form the new substance we know as rust. This reaction cannot	263
be reversed back to water and iron because parts of both the water	276



molecule and the iron have combined into a new molecule.

286

Similarly, if you were to take a teaspoon of salt and mix it with a teaspoon of sugar, both the salt and sugar would continue to be salt and sugar. They would remain the same substance they were before they were mixed. If you wanted to do so (and it would surely take a long time), you could take a microscope, separate the two, and once again have a teaspoon of salt and a teaspoon of sugar. Neither was changed chemically. It was only a physical mixture.

Chemical Properties

Chemical properties are not things you can observe except during a chemical reaction. They are based on the structure of the atoms or molecules that make that substance. Chemical properties include how something reacts to water. For example, iron rusts when exposed to water but gold does not. The key to understanding a chemical property is change. You know it is a chemical property if the substance changes. The rust is a new substance and no longer iron. A chemical property is something that causes a substance to change into another substance. In other words, a chemical property is the way it reacts to another substance.

Chemical Mixtures and Chemical Reaction

Unlike physical mixtures, where the individual things that combine remain what they were before joining the mixture, in a chemical mixture, the two or more substances combine chemically to form a new substance. Chemical mixtures are not easily reversed and some cannot be reversed. Iron and water create a chemical mixture and form the new substance we know as rust. This reaction cannot be reversed back to water and iron because parts of both the water



molecule and the iron have combined into a new molecule.