

Name: _____ Period: _____ Date: _____

Indicators Guided Notes – Student Edition

What are indicators and why do we use them?

A quick way to tell whether a solution is an acid, or a base is to use an _____. Indicators are chemicals made from the dyes which have been extracted from _____. These chemicals change color when placed in different solutions depending on whether that solution is an _____ or a _____.

Many different types of indicators are used in chemistry, however the two that are most used are _____ paper and _____ indicator.

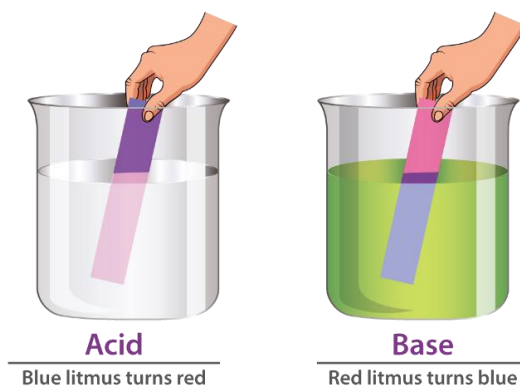
Litmus paper

Litmus is a chemical extracted from lichens which grow on the bark of trees and on rocks. It is either _____ or _____ in color. Litmus is usually found in the lab as blue or red _____ strips, although it also exists as a solution.



Lichen on the bark of a tree

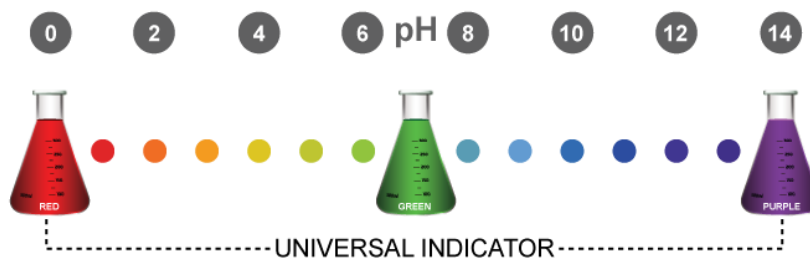
Blue litmus paper will turn _____ if placed in an _____ solution, it remains _____ when placed in a _____ solution. In contrast, _____ litmus will turn _____ in a _____ solution and stays _____ when placed in an _____ solution. Litmus only tells you whether a substance is an acid or a base, not how _____ that solution is.



Universal Indicator

Universal indicator is a mixture of several different _____ which enables us to see how _____ or _____ a substance is by changing _____. This color relates to the _____ which grades acids from _____ and bases from _____. Substances which are neither acid or base are termed _____ and have a pH of _____.

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Like litmus paper, universal indicator comes as either a _____ or as a paper strip. More information about the details of the pH scale can be found in lesson 3-10 of this unit.

Other Indicators

There are also other synthetic (_____) indicators which are used in chemistry. Some examples of these are outlined below in the diagram below:

