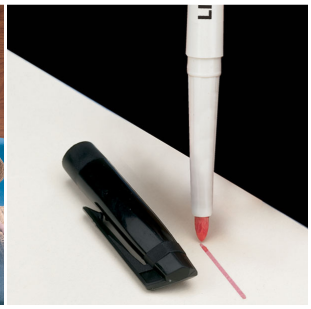
Buffered vs. Unbuffered

Calcium carbonate (chalk) is often added to paper pulp during the paper making process as a buffering agent. This buffering agent raises the pH level of the paper to the alkaline side of the scale (see below). You can measure pH levels using our **pH Testing Pen**. The addition of 3% calcium carbonate provides a pH of approximately 8.5 in paper, making it non-acidic. The reservoir of calcium carbonate also helps neutralize other acids in the environment that would normally make any paper become acidic over time.

Buffered

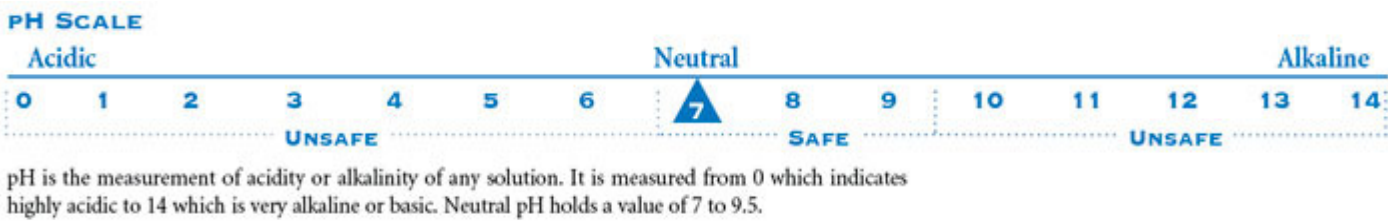
Most items in storage, especially in the **collectables** arena, would benefit from storage in a buffered enclosure. This is especially true for the vast majority of paper items. Because of its ability to neutralize acids and extend the life of paper, photographs, textiles, and artefacts, buffering is more often than not a benefit in **interleaving tissue**, **storage boxes**, **folders**, and other paper **enclosures**. For most photographic materials, including black and white prints, colour prints, and albumen prints, either **buffered or unbuffered enclosures** are satisfactory. There are, however, some exceptions.



Unbuffered

At one time, it was believed that photographs stored in buffered enclosures might be adversely affected by buffering. This is no longer believed to be true except for a couple of specific types of photographs. With dye transfer prints and cyanotypes, **unbuffered enclosures** should be used. The image substance of both these print types can be harmed by alkalinity.

The other concern over buffering comes from the inclusion of protein-based materials in buffered enclosures. It is generally believed that materials that come from animals should be stored in **unbuffered enclosures** or at least should not come in contact with buffered materials. These items include silk, wool, leather, feathers, animal specimens, horsehair, etc. The same can be said of blueprints as well.



pH is the measurement of acidity or alkalinity of any solution. It is measured from 0 which indicates highly acidic to 14 which is very alkaline or basic. Neutral pH holds a value of 7 to 9.5.