**Does age of testing chemicals matter?**

Yes, the age of testing chemicals does matter. Over time, chemical solutions can degrade due to various factors such as exposure to air, light, contaminants, temperature changes, and chemical reactions within the solution itself. As a result, the values of the solutions may drift away from their intended values.

For instance, in the case of pH calibration solutions, this drift can lead to inaccurate calibration of pH meters, which in turn affects the accuracy of pH and TA measurements. Another frequently used chemical is Sodium Hydroxide, NaOH. Over time, NaOH solutions can absorb carbon dioxide from the atmosphere, leading to the formation of sodium carbonate (Na2CO3) and water (H2O) through a reaction known as carbonation. Carbonation can alter the concentration and pH of the NaOH solution, affecting its ability to accurately perform tasks such as titrations or pH adjustments. As a result, aged NaOH solutions may not provide the expected results and can lead to errors in experimental procedures.

To minimize the effects of these factors and maintain the accuracy of chemical solutions, it's crucial to store them properly in a dark, temperature stable environment, and in tightly sealed containers to prevent exposure to air and carbon dioxide. Additionally, periodic monitoring of the solution's expiration date, concentration and pH, along with replacement, when necessary, can help ensure reliable results in winemaking tests and processes.