

1. The standard bicarbonate indicates a metabolic acidosis or alkalosis.
 - a.* When the standard bicarbonate is low, this is a sign of a metabolic acidosis.
 - b.* When the standard bicarbonate is high, this is a sign of a metabolic alkalosis.
2. The difference between the actual bicarbonate and the standard bicarbonate concentrations indicates a respiratory acidosis or alkalosis.
 - a.* When the actual bicarbonate is higher than the standard bicarbonate, this is a sign of a respiratory acidosis.
 - b.* When the actual bicarbonate is lower than the standard bicarbonate, this is a sign of respiratory alkalosis.
3. When the actual bicarbonate and standard bicarbonate are equal, this indicates respiratory balance.
 - a.* When the actual bicarbonate and standard bicarbonate are low and equal, this indicates an uncompensated metabolic acidosis.
 - b.* When they are high and equal, this indicates an uncompensated metabolic alkalosis.
4. When the standard bicarbonate is high or low, the actual bicarbonate must also be high or low. However, a low, normal, or high actual bicarbonate may occur with a normal standard bicarbonate concentration.