



JH Biotech
Biotechnologies for Safer Agriculture

JH Biotech, Inc. Phone: (805) 650-8933 Fax: (805) 650-8942 E-mail: biotech@jhbiotech.com <http://www.jhbiotech.com>

BufferMate

**pH Reducer
Compatibility Agent**



BufferMate is a multipurpose, multifunction spray tank or irrigation water additive designed for use where the pH needs to be lowered into a more acidic range. BufferMate will help buffer spray tank solutions and makes fertilizer and pesticide tank mixes more stable. It is an organic based material that is natural and environmentally friendly. BufferMate is ideal for conditioning alkaline soils and water.

Compatibility Agent Calcium, iron, zinc and other nutrients often form precipitates with phosphorus under alkaline conditions. These precipitates collect in the bottom of mixing and spray tanks and can eventually clog lines and nozzles. BufferMate lowers the pH of the mixing water and prevent these precipitates from forming. By adding BufferMate to the spray tank, multiple products can be mixed and applied at once, saving time and money. (Note: Always conduct a jar test with new mixes prior to combining them in a tank.)

Buffering Agent BufferMate is an acidic material. Adding BufferMate to the spray tank or irrigation water will lower alkaline pH into a more desirable range. By applying BufferMate in a routine program, pH of calcareous soils can be lowered to a more desirable, acidic range.

Activator Many pesticides need to be applied with slightly acidic water. Many pesticides begin to hydrolyze and lose their efficacy under alkaline conditions. MixWell can help prevent hydrolysis and keep the pH in an ideal range for pesticide application and efficacy.

BufferMate can dissolve solid deposits and get them back into solution for easy clean-up. BufferMate also makes an excellent equipment cleaner for routine maintenance of irrigation and spray lines.

BufferMate spray adjuvant is exempt from EPA registration under FIFRA 25(b).

Active Ingredients:

B-Hydroxycarballylic acids	40%
Hydrosuccinic Acid	5%

Inert Ingredients

Water and Soy Protein	55%
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Total	100%
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Chelation and Nutrient Availability:

BufferMate has chelating properties that will reduce unwanted reaction in the spray tank such as calcium combining with carbonates. As a chelating agent, BufferMate can form bonds with metal ions, making them more available for plant uptake. BufferMate also increases the solubility of Calcium, Copper, Iron, Magnesium, Manganese and Zinc salts.

BufferMate can help dissolve precipitates that form inside spray tanks. Just add BufferMate to the final spray tank mix until the precipitate dissolves and re-enters the solution.

When applied to sodic soils, MixWell will increase the availability of both calcium and magnesium to the plant. BufferMate aids in the release of sodium from clay particles and helps leach out sodium from the root zone.

BufferMate makes an excellent cleaning solution. BufferMate can remove scale, iron bacteria, and deposit buildup in irrigation lines, mixing tanks, spray tanks, application equipment, etc.

BufferMate has strong anti-oxidant properties. This antioxidant action may prolong the useful life of spray solutions. When applied to fresh cut fruit and vegetables, it can extend their shelf life and reduce losses from rot and browning.

Compatibility:

Compatible with most pesticides and fertilizer solutions. BufferMate is acidic. Dilute with water prior to mixing with other nutrients. Always test new tank mixes on a few plants prior to any large scale applications.

High pH Soils:

Soil pH adjustment for lowering soil pH, begin with 1 - 2 gallons of BufferMate per acre, follow up with further treatments at 1 gallon per acre. When BufferMate is applied to the soil it will help to improve water absorption and prevent losses due to run off and evaporation, this translates into savings of both water and money. Organic components in BufferMate help improve soil structure and may assist in the release of sodium.



Calcium phosphate precipitate.

The addition of BufferMate makes a clear solution.

BufferMate for Typical Water*	
Ounces BufferMate per 100 gal.	Final pH
0	7.6
6	6.9
14	6.5
30	6.0
44	5.5

* Water qualities differ. Always check your final pH prior to application.



JH Biotech, Inc.
4951 Olivas Park Drive
Ventura, California 93003 USA

For labels and MSDS visit our website at www.jhbiotech.com or phone us at 805.650.8933