

# MALIC ACID IN WET WIPES FOR SKIN HEALTH

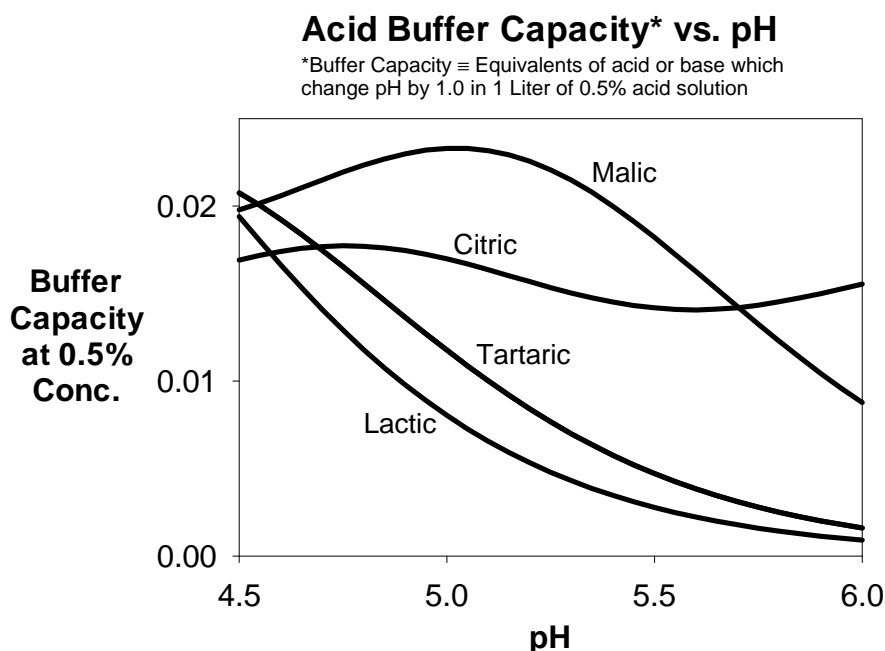
Bartek Malic Acid is preferred in wet wipes for skin health because of its higher buffer capacity at the pH of the skin acid mantle. Skin health is improved because the pH of the moistened skin is more stable. This is especially important in wet wipes for baby skin care.

The skin acid mantle should be maintained at pH 4.5 to 6.0 for several reasons:

- the stratum corneum lipid structure, which acts as a protective barrier in the skin, is destabilised at pHs greater than 6.0 or less than 4.5
- odours are generated by bacteria that grow on proteins in perspiration at pHs greater than 6.0
- to neutralise alkaline substances found in nose discharges and the by-products of urine and faecal matter

## Malic Acid Improves pH Stability

As shown in the graph at right, Malic Acid has a greater buffer capacity than other acids over most of the desired pH range. This is due to Malic Acid's  $pK_{a2}$  of 5.11, almost in the middle of the desired pH range.



As a result, skin that is moistened with a wet wipe containing malic acid would be better able to maintain the desired pH range of 4.5 to 6.0.

**RECOMMENDATIONS FOR USE:** The Malic Acid level would depend on the water level and the surfactants used in the liquid preparation for moistening the wet wipes. A typical use level is 0.5% of the liquid preparation.

**BARTEK**

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