

ACIDITY OF MILK INCREASED BY BORACIC ACID.

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WHILE making some investigations with milk preservatives, the writer noticed that sweet milk in which a small quantity of boracic acid (preservaline) was dissolved, required what appeared to be an abnormally large quantity of one-tenth normal alkali to neutralize it and much more than water in which the same amount of "preservaline" was dissolved. One-half gram of preservaline was dissolved in 500 cc. water, and twenty cc. of this solution required one cc. of one-tenth normal alkali to produce the pink color, when phenolphthalein was used as an indicator in titrating. Before adding preservaline the water had a neutral reaction.

One-half gram preservaline was dissolved in 500 cc. of sweet milk, and twenty cc. of it required eight cc. of one-tenth normal alkali to give the pink color, although before adding the preservaline twenty cc. of this same milk gave the pink color with only four cc. of one-tenth normal alkali.

The same amount of preservaline increased the acidity of a given quantity of milk four times as much as it did the acidity of the water.

The writer is unable to explain this reaction, but it gives a simple means of detecting preservaline or boracic acid in milk, as normal milk will smell or taste sour when it contains as much natural acidity as is represented by eight cc. of one-tenth normal alkali to twenty cc. milk. This represents 0.36 per cent. lactic acid, and it can be safely stated that milk which contains over three-tenths per cent. lactic acid and neither tastes or smells sour, has been adulterated with some preservative, probably boracic acid.

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