

# SUPPLEMENTARY INFORMATION ON USE OF Q-BAT™ TABLETS <sup>1, 2, 3</sup>

The attached table lists the percentages of given acids (lactic or acetic) required in the specified volume of sample to achieve a final yellow color (= positive test) after **one tablet has completely dissolved**. Sample volumes of 3.0 ml or less will give a yellow-orange color as a positive test; above 3.0 ml, a more distinct yellow color is observed. For sample volumes less than 5.0 ml it is recommended that the final volume be adjusted to 5.0 ml with distilled water prior to reading the color. This will assure a true yellow color for positive test on these low volume samples. In either case, the **positive** test means that the amount of acid indicated — **or more** — can be present in the sample, particularly in those from acid fermentations. Frequent sampling of acid fermentations is required to determine when a positive test first develops which also indicates that the amount of acid tested (Table 1) has been reached for the amount of sample tested.

A red color indicates a negative test and means that the percent of lactic or acetic acid specified in the table for the particular sample volume used has not been reached or is less than that listed.

<sup>1</sup> Tablets prepared for the Pickle Packers International, Inc., St. Charles, Illinois 60174, USA, by Chr. Hansen's Laboratory, Inc., 9015 West Maple Street, Milwaukee, Wisconsin 53214, USA.

<sup>2</sup> For further details on the Q-BAT procedure see: "A Quick Test for Cucumber Brine Acidity," Bell, T. A., Etchells, J. L. and Kelling, R. E. *J. Food Sci.* 36 (7): 1036-1038. 1971. This article is available from the authors (Box 5578), Raleigh, North Carolina 27607, USA, or from Pickle Packers International (see address above).

<sup>3</sup> This Supplementary information was prepared by R. S. Porubcan, Chr. Hansen's Laboratory, Inc., Milwaukee, and revised by J. L. Etchells and T. A. Bell, U. S. Food Fermentation Laboratory, Southern Region, USDA, ARS, and Department of Food Science, N. C. State University, Raleigh, North Carolina 27607, USA.

Q-BAT™ Tablets perform essentially a chemical titration so that the percent acid can be determined; but no claim is made that the procedure has the same degree of accuracy as the usual, more expensive and demanding titration technique using standard alkali to a specified end-point with an indicator or pH meter. Information on the statistical analysis of the accuracy of the tablets and their use is available for those so desiring this type of material.

Tablets can be compounded to suit any given requirement for a fermentation industry or other industries requiring the need for acidity determinations.

## TABLE 1

**Supplementary Information:** For use of Q-BAT™ tablets in determining various levels of acidity calculated as lactic or acetic in brined or pickled vegetable products including fruits (i.e. olives). a, b.

ml of Sample	% Lactic acid	% Acetic acid
1.0	3.00	2.00
1.5	2.00	1.33
2.0	1.50	1.00
2.5	1.20	0.80
3.0	1.00	0.66
3.5	0.86	0.57
4.0	0.75	0.50
5.0	0.60	0.40
6.0	0.50	0.33
7.0	0.43	0.29
8.0	0.38	0.25
9.0	0.33	0.22
10.0	0.30	0.20
12.0	0.25	0.17
15.0	0.20	0.13

a. "A Quick Test for Cucumber Brine Acidity." Bell, T. A., Etchells, J. L., and Kelling, R. E. *J. Food Sci.* 36 (7): 1036-1038. 1971

b. See reverse side for explanation needed to use the above tabulated figures properly.



# SCIENCE

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