DEFINITION AND SCOPE OF THE TEST

Lactic acid is produced by the fermentation of lactose mainly through microbial activity. Its concentration depends on the total bacterial count and can be a useful indicator of the good state of preservation. So the determination of the concentration of lactic acid in the tomato finds a useful indicator of a good state of preservation. Furthermore, the concentration of lactic acid in the tomatoes must be within the limits of the law.

TEST PRINCIPLE

L-Lactic acid reacts, by an enzymatic reaction, with a phenolic derivate and forms a pink colored complex. The absorbance of the complex, read at 505 nm is directly proportional to the concentration of L-lactic acid in the sample.

COMPOSITION OF THE KIT AND REAGENTS

Reagent test kit *300250, suitable for 100 tests, contains:
- 1 box includes: 5 x reagent test kit *300251.

Reagent test kit *300251, suitable for 20 tests, contains:
- R1: 2 packages with 10 pre-filled cuvettes with 1 mL of buffer.
- R1a: dropper with an activator.
- R2: dropper with 1,5 mL of enzymatic solution.

For information on the hazards associated with reagents, consult the product’s safety data sheet.

Storage: reagents are stable up to the expiry date. Store at 2-8ºC.

PROCESSING – SAMPLE VOLUME – MEASURING RANGE

Sample: vegetable puree. Homogenize the sample in the bottle before taking it.

<table>
<thead>
<tr>
<th>Test</th>
<th>Measuring range (ppm)</th>
<th>Sample volume</th>
<th>Resolution (ppm)</th>
<th>Accuracy</th>
<th>Repeatability</th>
</tr>
</thead>
<tbody>
<tr>
<td>LactAc. puree</td>
<td>5 - 2100</td>
<td>10 µL</td>
<td>1</td>
<td>+/- 5%</td>
<td>CV &lt;3%</td>
</tr>
</tbody>
</table>

For samples with a value of lactic acid >2100 ppm use half of the sample volume (5 µL) and multiply the result by 2.
**TEST PROCEDURE**

**Reagent preparation**

Reagent R1: Before starting an analysis session, prepare a number of test cuvettes. Each cuvette is suitable for one single test. Follow the instruction below: **add 2 drop of R1a reagent** in the cuvette containing the R1 reagent and mix it gently.

Reagent R2: ready to use.

**Selection of the test, addition of the sample and incubation of the blank**

1. Press **Key 2** on keyboard to display available analysis on reading cell 2, or 0 to display all available analysis. Select the proper **Lactic acid puree** curve, confirm your selection by pressing **ENTER** (on display shows **INCUBAT. 5 MIN**).

Remove the cap of a cuvette (R1+R1a) and add in **10 µL** of sample. Close the cuvette and mix it gently. Place the cuvette in the incubation cells. **Repeat the operation for each sample to test.** It is possible to analyze a maximum of 14 samples for each test session.

2. Press **ENTER** to start the incubation.

**Note:**

- Homogenize the sample in the bottle before taking it.
- To prevent cross-contamination between samples, take the sample with pipette and discard it. Repeat the procedure for 2-3 times before transferring it to the reagent.
- Remove excess sample by wiping the outer surface of pipette tip gently using a blotting paper.
- Immerse the pipette tip in the reagent while dispensing sample. Press and release the piston of pipette several times to ensure all sample has been transferred.
- Mix the sample with reagent, after adding, by inverting the cuvette several times.

**Reading of the blank**

3. At the end of the incubation press **ENTER**. The display shows **INSERT BLANK**.

4. Invert the incubated cuvette to mix before inserting in the reading cell with the green light. Press **ENTER** to start the reading. The green light turns to red for a few seconds until the reading has completed. **Repeat this operation for each sample.**

5. To stop the blanks reading session press **ARROW KEY UP**. The display shows **INCUBAT. 2 MIN**.

**Addition of R2 and incubation of the sample**

6. Add **1 drop** of R2 reagent to each cuvette, mix it by inverting the cuvette 2-3 times and place it in one of the incubation cells. **Repeat this procedure for each sample to test.**

7. Press **ENTER** to start the incubation.

**Reading of the sample**

8. At the end of the incubation, press **ENTER**. The display shows **INSERT SAMPLE**.

9. Invert the incubated cuvette 2-3 times to mix and place it in the reading cell with the green light. Press **ENTER** to start the reading. The green light turns to red for a few seconds until the reading is completed. **Repeat this operation for each sample to test.**

10. The results, expressed in ppm of lactic acid, will be automatically printed and displayed at the end of the session.

11. Press **ENTER** and **ARROW KEY DOWN** to return to the test menu.

**SYSTEM STANDARDIZATION**

The system is supplied pre-calibrated and ready for use.
Results are expressed in accordance with the reference method.
It is also possible to standardize the system using samples with a known titration.
For information on the operating procedure, see the manual provided with the system.

For in-vitro use only