Technical Bulletin

# Glucose Quick Test Strips

**Catalog Number MAS005**

## Product Description

Glucose ($C_6H_{12}O_6$) is found in food as either a natural component or as an additive. Not only is glucose added to food and beverages for its impact on taste, texture, and color, but also because it can serve as a preservative.

The Glucose Quick Test Strips are based on glucose dehydrogenase-catalyzed oxidation of glucose in which the formed NADH reduces a chromogenic reagent. The intensity of the product color is directly proportional to the glucose concentration in the sample. The semi-quantitative detection range of the kit is 0-720 mg/L (undiluted) glucose.

This kit is suitable for the detection of glucose in a variety of food and beverage samples.

## Components

The kit is sufficient for 10 tests

- Glucose Test Strips (10 strips) Catalog Number MAS005A — 1 Each
- Sample Development Tubes (400 µL of Development Reagent per tube) Catalog Number MAS005B — 10 Each

## Equipment Required but Not Provided

- Pipetting devices and accessories

## Precautions and Disclaimer

For R&D use only. Not for drug, household, or other uses. Please consult the Safety Data Sheet for information regarding hazards and safe handling practices.

## Storage/Stability

The kit is shipped at room temperature. Store components at 2-8 °C. Keep strips dry and out of direct sunlight.

## Preparation Instructions

Sample Preparation

For most sample types, no initial dilution is required. For red wine and milk samples, a 21-fold dilution of the sample is recommended. White wine, beer, serum, urine, and samples that are not expected to have very high levels of glucose should be diluted 5-fold.

Most fruit juices will require a 210-fold dilution. For samples requiring a 210-fold dilution, first make a 10-fold initial dilution by carefully transferring 100 µL of Sample into 900 µL of purified water. Mix 10-fold dilution thoroughly and use for Procedure.

## Procedure

1. Unscrew the cap of one of the Sample Development Tubes and add the Sample volume required according to Table 1.

   **Table 1.**
   Sample Dilutions

| Final Dilution | Volume of Sample to Add to Tube |
|---|---|
| 210-fold | 20 µL of 10-fold dilution of Sample |
| 21-fold | 20 µL |
| 5-fold | 100 µL |

2. Replace cap on the Sample Development Tube, securely close the tube, and invert the tube 3-4 times to mix the diluted Sample.
3. Unscrew cap and dip in one of the Glucose Test Strips, making sure to fully submerge the reaction pad at the end of the strip. Leave the strip submerged for 5 seconds and then remove the strip and shake gently to remove any excess liquid.
4. Allow the color to develop on the strip for 5 minutes.
5. Compare the color of the reaction pad of the strip with the provided Glucose Chart. Multiply the concentration on the chart by the Sample dilution factor (i.e., 5, 21, or 210) to determine the concentration of Glucose in the original Sample.

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