

QuantiQuik™ Pyruvate Quick Test Strips

Catalog Number: QQPYR10

DESCRIPTION

PYRUVATE, a key intermediate in cellular metabolic pathways, can be converted to a variety of things such as carbohydrates, fatty acids, and energy depending on the pathway. It can also be converted to alanine and ethanol. In the beverage industry, monitoring levels of pyruvate during alcoholic fermentation can be important for production of beer, wine, and spirits. Some brewers even add sodium pyruvate to their beer to alter the flavor and give the beer more body. In regards to health, abnormal levels of pyruvate have been linked to various liver diseases and metabolic disorders.

BioAssay Systems' QuantiQuik™ Pyruvate Test Strips are based on pyruvate oxidase catalyzed oxidation of pyruvate in which peroxidase reduces the formed peroxide and oxidizes a chromogenic reagent. The intensity of the blue product is directly proportional to pyruvate concentration in the sample.

Product Information

Catalog No: QQPYR10

Number of Tests: 10 per package (larger sizes available upon request).

Contents:

- Test Strips: QTY 10
- Sample Dilution Tubes: 10 × 400 µL H₂O per tube
- Instruction Manual

Shipping/Storage: The kit is shipped and stored at room temperature. Keep strips dry and out of direct sunlight.

Expiry: 6 months upon receipt.

Product Accessories

Most samples require either a 2×, 5×, or 9× dilution. These dilutions can be performed either with a pipetteman, if available, or with single use transfer pipettes that can be purchased separately. We offer the following:

- Ten 50 µL Transfer Pipettes (for 9× sample dilutions), Cat. No. TP50
- Ten 100 µL Transfer Pipettes (for 5× sample dilutions), Cat. No. TP100
- Ten 400 µL Transfer Pipettes (for 2× sample dilutions), Cat. No. TP400

SENSITIVITY (DETECTION LIMIT)

- Samples requiring a 2× dilution (e.g. serum and plasma): 100 µM, 8.7 mg/L pyruvate
 - Samples requiring a 5× dilution (e.g. beer, acidic samples, etc): 250 µM, 22 mg/L pyruvate
 - Samples requiring a 9× dilution (e.g. white wine and urine): 450 µM, 39 mg/L pyruvate
- Samples with pyruvate levels below these detection limits (pre-dilution) will likely not be able to be quantified.*

TEST PROCEDURE

Samples: For white wine and urine samples we strongly recommend diluting samples 9×. Other acidic samples (beer, fruit juice, etc.) should be diluted 5×. Serum and plasma should be diluted 2×. For other samples, please contact Technical Support at info@bioassaysys.com for dilution recommendations.

1. Unscrew the cap of one of the Sample Dilution tubes.
2. For samples requiring a 9× dilution, use a 50 µL transfer pipette (a pipetteman can also be used if available), and carefully transfer 50 µL of sample to a Sample Dilution tube. For samples requiring a 5× dilution, use a 100 µL transfer pipette and carefully transfer 100 µL of sample to a Sample Dilution tube. For samples requiring a 2× dilution, use a 400 µL transfer pipette and carefully transfer 400 µL of sample to a Sample Dilution tube. (To use the transfer pipette: Squeeze top bulb of pipette and dip into sample and release bulb to take up sample. Next, place pipette tip into the Sample Dilution tube and squeeze bulb again to release sample. *Important:* remove pipette from the Sample Dilution tube before releasing bulb).
3. Replace cap, securely close the vial and invert the vial a couple of times to mix diluted sample.
4. Unscrew cap and dip in one of the test strips making sure to fully submerge the tan reaction pad at the end of the strip. Leave submerged for 5 seconds and then take out and shake a couple times to remove any drops clinging to strip.
5. Let color develop on strip for 5 minutes.
6. Compare the color of the reaction pad of the strip to the color on the provided Pyruvate Chart shown on the test strip bag. Multiply the concentration on the chart by the dilution used (i.e. 2, 5, or 9) to determine the pyruvate concentration in the sample.