

## Patulin(PAT) Fluorescence Quantitative

### Rapid Test Kit

**Order Code: YRACM5001-001**

#### Introduction

This quantitative rapid test is used for the determination of patulin in vegetables, fruits, and their by-products, based on fluorescence immunochromatography analysis technology. The whole process includes two parts: sample preparation and detection. It takes about 20 min for sample preparation and 10 min for detection.

#### Application

Applicable for the rapid test of patulin in vegetables, fruits, and their by-products on-site or in laboratory.

#### Performance Information

<b>Linear range</b>	10-200µg/kg (ppb)
<b>Limit of detection</b>	10µg/kg (ppb)
<b>Limit of quantitation</b>	20µg/kg (ppb)
<b>Inter-batch variability</b>	CV≤15%
<b>Intra-batch variability</b>	CV≤15%

#### Storage and Shelf Life

Storage: Store at 2-8°C. Do not freeze. Keep away from direct sunlight, moisture and heat.

Shelf Life: 18 months.

#### Test Kit Components (25/50 Tests/ Kit)

Components	25T	50T
Test cassettes	25	50
YRFQ Diluent	1	2
PAT Derivatization reagent, 1.2mL	1	1
Quantitative curve ID chip	1	1
Instruction manual	1	1

#### Materials required but not provided (available from BIOEASY)

1. Special Matched Reader: **YR-SF21 FIA scanner**
2. Special Matched Incubator: **BIOEASY Incubator**
3. Single channel pipette (10-100µL, 20-200µL, 100-1000µL), centrifuge (suitable for 50mL centrifuge tube), centrifuge tube (1.5mL, 50mL), scale, timer, vortex mixer.
4. Distilled water, anhydrous ethanol.

#### Test Preparation

1. Turn on the reader. Insert the ID chip and click "**Read ID Chip**" to load the curve. The ID chip from one lot only needs to be read once.
2. Turn on the incubator. Set the target temperature to 30°C and the timer to 10 minutes.
3. Take out the YRFQ diluent, the PAT derivatization reagent, and the required number of test cassettes, place them on the bench to come to room temperature.
4. Turn on the constant-temperature water bath and set the temperature to 40°C.

#### Sample Preparation

##### ➤ Fresh vegetable and fruit sample

1. Weigh 50g ± 0.1g of the sample into a blender cup, add 50mL of distilled water, and thoroughly blend to homogenize.
2. Weigh 10g of the homogenized suspension into a 50mL centrifuge tube, then add 10mL of

anhydrous ethanol.

➤ **Fruit and vegetable juice samples**

Weigh 5g ± 0.1g of the sample into a 50mL centrifuge tube, add 5mL of distilled water, followed by 10mL of anhydrous ethanol.

➤ **Dried vegetable and fruit samples**

1. Weigh 50g±0.1g of sample into a homogenizer cup, add 100mL distilled water, and thoroughly homogenize to obtain a uniform suspension.
2. Weigh 10g of the homogenized suspension into a 50mL centrifuge tube, then add 10mL anhydrous ethanol.
1. Shake using:
  - (1) A vortex mixer (≥2500 rpm) for 3-5 minutes, or
  - (2) A shaker (≥250 rpm) for 15 minutes.
2. After shaking, centrifuge at 4000 r/min for 2 minutes or filter through filter paper.
3. Pipette 790µL YRFQ diluent into a 1.5mL centrifuge tube, then add 200µL supernatant, then add 10µL of derivatization reagent. Mix well and incubate in a constant-temperature water bath at 40°C for 10 minutes. This is the **Detection Solution**.

## Test Procedure

1. Insert the cassette into the incubator with the QR code facing inward.
2. Pipette 100µL of the test solution into the sample well of the cassette. Push the cassette all the way into the incubator and automatically incubate for 10 minutes.
3. After the reaction is complete, insert the test card into the fluorescence reader with the QR code facing inward. Select the sample type as "Original", then click "Start Test" to read the result(complete the result reading within 1 minute after the reaction ends.)
4. If the test result exceeds the upper limit of the linear range, dilute the extracted supernatant with 50% ethanol aqueous solution, mix well, and retest.

## Precautions

1. Operate in an environment of 20-30°C.
2. Do not mix test cassettes and ID chips from different lots.
3. Upon receipt, check for precipitation in the derivatization reagent. Store the derivatization reagent at -20°C in the dark. Remove it from the black sealed bag only when ready to use, and restore it immediately after use.

4. Store the kit at 2-8°C in a cool and dry place. Return the kit to room temperature before use, but avoid prolonged exposure to humid environments and light.
5. The test cassettes are disposable. Do not touch the white film surface in the center of the test cassette.
6. The test cassette should be used within 30 min after opening the bag. It's recommended to use it immediately.
7. This product is only used for preliminary screening, and the test results are only for the currently extracted samples. The final result shall be subject to the official arbitration detection methods.
8. No special safety or disposal precautions are needed.
9. If you have any questions regarding the sample preparation methods, test results, or other specific cases, please contact your distributor or the manufacturer for further assistance.



Address: Unit 11A, 1 – 3 Endeavour Road Caringbah NSW 2229  
Mailing Address: PO Box 4109 Bexley North NSW 2207  
E-mail: [info@fmcgis.com.au](mailto:info@fmcgis.com.au)  
Telephone: (02) 9540 2288 or 1300 628 104  
Fax: (02) 9012 0320