

Technical Bulletin

Histamine Quick Test Strips

Catalog Number MAS007

Product Description

Histamine ($C_5H_9N_3$) is a biogenic amine naturally present in many foods and body cells in amounts without toxicological significance. It is also a contaminant mostly found in *Scombridae* family fishes, such as tuna and mackerel, as well as other seafood products when they are improperly handled or stored. The consumption of foods containing high levels of histamine may lead to an allergy-like food poisoning known as scombroid poisoning.

The Histamine Quick Test Strips are based on the histamine dehydrogenase-catalyzed oxidation of histamine in which the formed electron mediator reduces a formazan (MTT) reagent. The intensity of the product color is directly proportional to histamine concentration in the sample.

This kit is suitable for the detection of histamine levels between 0 and 200 ppm in a variety of food and beverage samples. This kit is intended to be used as an initial screen for the presence of histamine. Negative results **do not** guarantee the absence of histamine.

Components

The kit is sufficient for 10 tests

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| • Histamine Test Strips
(10 strips)
Catalog Number MAS007A | 1 Each |
| • Extraction Buffer
Catalog Number MAS007B | 8 mL |
| • Sample Tubes
Catalog Number MAS007C | 10 Each |

Reagents and Equipment Required but Not Provided

- Pipetting devices and accessories
- PVPP [Poly(vinylpolypyrrolidone)]
(Catalog Number 77627 or equivalent)
- Eppendorf® tubes, or equivalent
- Microcentrifuge

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

Seafood

1. Weigh 500 mg of seafood and place it in a Sample Tube.
2. Add 500 μ L of Extraction Buffer to the Sample Tube and homogenize sample.
3. Centrifuge the Sample Tube for 5-10 minutes at full speed. Retain the supernatant for assay (Dilution Factor = 2).

Seafood – Alternative Procedure

If a balance, pipettes, or homogenizer are not available, an alternative approach may be used.

1. Use a 1 mL transfer pipette to add Extraction Buffer to an empty Sample Tube until the liquid reaches the 0.5 mL mark on the tube.
2. Add enough seafood to raise the level of the liquid to the 1 mL mark on the tube.
3. If a homogenizer is not available, briefly mash the tissue until it breaks apart and vigorously shake the tube for 2 minutes.
4. Centrifuge the Sample Tube for 5-10 minutes at full speed. Regain the supernatant for assay (Dilution Factor = 2).

Red Wine

1. Weigh 40 mg of PVPP powder in an Eppendorf tube.
2. Transfer 400 μ L of wine to the tube containing PVPP.
3. Shake the tube for 5 minutes.
4. Centrifuge the tube for 5–10 minutes at full speed.
5. Transfer 200 μ L of Extraction Buffer to a Sample Tube.
6. Transfer 200 μ L of the wine supernatant from Step 4 to the Sample Tube.
7. Replace cap, securely close the vial, and invert the Sample Tube 3-4 times to mix the diluted Sample (Dilution Factor = 2).

Procedure

1. Unscrew the cap of the Sample Tube containing the prepared Sample solution. Dip one of the Histamine Test Strips into the solution. Make sure to fully submerge the reaction pad at the end of the strip. Leave the strip submerged for 5 seconds and then remove and shake gently to remove any excess liquid.
2. Let the color develop on the strip for 5 minutes.
3. Compare the color of the reaction pad of the strip with the provided Histamine Chart. Multiply the concentration on the chart by the Sample dilution factor (i.e., 2) to determine the Histamine concentration in the original Sample.



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