



PYR Reagent

R043

Intended use

PYR Reagent is used for detection of pyrolydonyl arylamidase enzyme activity of β -hemolytic Streptococci and Enterococci.

Composition**

Ingredients

N,N -Dimethylaminocinnamaldehyde	1.0 gm
Hydrochloric acid (concentrated)	1.0 gm
Distilled water	99.0 ml

**Formula adjusted, standardized to suit performance parameters

Directions

1. Inoculate test culture on PYR Agar (M1489) and incubate at 35-37°C for 18-24 hours.
2. Add 1 drop of PYR Reagent (R043) directly to suspected colony
3. Observe for colour change after 2 minutes
4. Formation of red colour indicates PYR positive organism.

Principle And Interpretation

The PYR reagent is used for detection of Pyrolydonyl arylamidase enzyme activity of β -hemolytic streptococci and Enterococci. The chromogenic mixture of PYR Agar (M1489) serves as a substrate for PYR enzyme. The PYR reagent reacts with β -naphthylamine by the production of a bright red precipitate indicating a positive reaction.

Type of specimen

The specimen is any isolated colony on primary or subculture plates

Specimen Collection and Handling

1. For clinical samples follow appropriate techniques for handling specimens as per established guidelines.
2. For food and dairy samples, follow appropriate techniques for sample collection and processing as per guidelines.
3. For water samples, follow appropriate techniques for sample collection, processing as per guidelines and local standards. After use, contaminated materials must be sterilized by autoclaving before discarding.

Warning and Precautions

In Vitro diagnostic use only. Read the label before opening the container. Wear protective gloves/protective clothing/ eye protection/face protection. Follow good microbiological lab practices while handling specimens and culture. Standard precautions as per established guidelines should be followed while handling clinical specimens. Safety guidelines may be referred in individual safety data sheets.

Limitations

1. A false-negative result can be obtained if the disk is too moist or culture to be tested is not pure.

2. Weak, pale results occur with the disk test for *Staphylococcus aureus*; positive results may need to be confirmed with other tests or with the tube PYR test.
3. False-negative tests result if selective media or tube biochemical agars are used to provide inoculum.
4. *Escherichia coli* and indole-positive *Proteus* species cultures obtained from a rich tryptophan containing media may lead blue-green color. This result concluded as a negative reaction

Performance and Evaluation

Performance of the medium is expected when used as per the direction on the label within the expiry period when stored at recommended temperature

Quality Control

→ **Appearance** : Yellow coloured solution.

→ **Clarity** : Clear solution without any particles.

Cultural Response : Biochemical identification was carried out by adding PYR reagent (R043) in 18-24 hours old culture grown in PYR Agar (M1489) or in PYR Test well of KB005 or KBD005.

Organism	Growth	PYR Test
<i>Escherichia coli</i> ATCC 25922 (WDCM 00013)	Good-luxuriant	Negative reaction
<i>Enterococcus faecalis</i> ATCC 29212 (WDCM 00087)	Good-luxuriant	Positive reaction (red colouration around colony)

Storage and Shelf Life

Store between 10-30°C in tightly closed container and away from bright light. Use before expiry date on label. On opening, product should be properly stored in dry ventilated area protected from extremes of temperature and sources of ignition. Seal the container tightly after use.

Disposal

User must ensure safe disposal by autoclaving and/or incineration of used or unusable preparations of this product. Follow established laboratory procedures in disposing of infectious materials and material that comes into contact with clinical sample must be decontaminated and disposed of in accordance with current laboratory techniques.

Reference

1. Isenberg, H.D. Clinical Microbiology Procedures Handbook. 2nd Edition. Vol. 2.
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4. Rice E.W., Baird, R.B., Eaton A. D., Clesceri L. S. (Eds.), 2012, Standard Methods for the Examination of Water and Wastewater, 22nd ed., APHA, Washington, D.C.
5. Wehr H. M. and Frank J. H., 2004, Standard Methods for the Microbiological Examination of Dairy Product 17th Ed., APHA Inc., Washington, D.C.
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8. PYR Test. Procedure Manual Toronto Medical Laboratories / Mount Sinai Hospital Microbiology Department



Storage temperature



Do not use if package is damaged



In vitro diagnostic medical device



CE Marking



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Revision : 01/2022

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