

BacterLab Division



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BIOCHEMICAL REAGENTS

BacterTest™ FeCl₃

Reagent is used to perform the Phenylalanine deaminase (PAD) test

Code: 06002



1. INTENDED USE

BacterTest™ FeCl₃ is a reagent kit combined with the PAD biochemical medium or paper plate to perform the Phenylalanine deaminase (PAD) test. The Phenylalanine test is based on the detection of phenylpyruvic acid in the medium. If phenylpyruvic acid is present in the medium (positive test), a blue color of iron (III) phenylpyruvate appears.

2. PRINCIPLES

In the Phenylalanine deaminase test (PPA), bacteria capable of producing the enzyme phenylalanine deaminase will deaminate phenylalanine, converting it to phenylpyruvic acid (PPA). PPA can then react with FeCl₃, producing a characteristic green complex.

3. TYPICAL COMPOSITION

FeCl ₃	12 g
axit clohydric (HCl)	2,5 mL
distilled water	97,5 mL

4. PREPARATION

- The reagent dropper bottle is ready.

5. INSTRUCTIONS FOR USE

- Bacteria are cultured in a prepared medium containing phenylalanine (Phenylalanine Agar) after 24 – 48 hours at 37°C.
- Adding 1 – 2 drops of FeCl₃ to the bacterial culture medium.
- Observing the color change of the medium, reading and recording the results

6. RESULTS

- Observe the color change of the environment:
 - + Green= Positive (bacteria are able to degrade phenylalanine)
 - + Yellow or no change= Negative (bacteria are not able to degrade phenylalanine).

7. QUALITY CONTROL

BacterLab ensures the quality of each product batch by testing with ATCC reference strains.

Reference strains	Growth	Phenylalanine deaminase test
<i>E. coli</i> ATCC 35218	Good growth	(–): Green
<i>P. mirabilis</i> ATCC 14153	Good growth	(+): Yellow or no change

8. STORAGE AND TRANSPORT CONDITIONS

- Storage: 8 – 25°C.
- Transportation: Ambient temperature.

9. PACKAGING

- Packaging: 100 mL/ dropper bottle or as per customer request.

10. SHELF LIFE

- Expiration Date: 12 months from the manufacturing date.

11. BIBLIOGRAPHY

- Phenylalanine Deaminase Test- Principle, Procedure, Results

Available at: <https://microbenotes.com/phenylalanine-deaminase-test/>