

AMIDES AND ORGANIC SALTS

PRINCIPLE/DISCUSSION:

The alkalization of amides and organic salts can be a tool to identify non-fermentative bacilli when other tests are inconclusive. Key Scientific offers tablets for amides and salts.

ACTIVE INGREDIENTS:

Each tablet contains 2 mg of the respective salt or amide.

STORAGE:

Store tightly covered and with desiccant in a dry place at room temperature.

MATERIALS REQUIRED:

Each substrate is sold separately in bottles of 50 tablets:

K010 Acetamide
K090 Asparagine
K300 Glutamine
K630 Tartrate

Amide and Organic Salt Tablets require fresh 18-24 hour growth on media appropriate for the specimen. The following items are required but not provided:

- Stoppered test tubes,
- Boiling water bath,
- Sterile distilled water,
- Pipette or inoculating loop.

PROCEDURE:

(1) Place one tablet and 1 ml of distilled water in a stoppered or capped tube.

(2) Boil in a boiling water bath for 10 minutes to kill any vegetative cells which might be present.

(3) Cool. With a sterile pipette, inoculate with 2 drops of a heavy bacterial suspension made by mixing a sufficient number of colonies to equal McFarland 5, in 1.5-2.0 mls of sterile distilled water. This should be sufficient to inoculate all 7 tubes. If you are only testing with one or two substrates, you may simply inoculate the media with a loopful of growth.

(4) Incubate at 35-37°C for 4-6 days, observing daily for a color change.

INTERPRETATION:

A color change from yellow to purple is a positive result, indicating that the amide or salt has been alkalized.

QUALITY CONTROL:

Tablets should be tested with known positive and negative organisms. Dispose of used materials in a manner appropriate for biohazardous materials.

SUGGESTED ORGANISMS & EXPECTED REACTIONS:

1. *Pseudomonas aeruginosa*
2. *Acinetobacter anitratus*
3. *Pseudomonas maltophilia*
4. *Acinetobacter Iwoffii*
5. *Flavobacterium sp.*
6. *Pseudomonas fluorescens*
7. *Pseudomonas stutzeri*
8. *Pseudomonas putida*
9. *Pseudomonas alcaligenes*
10. *Alcaligenes odorans*
11. *Alcaligenes faecalis*
12. *Moraxella nonliquifaciens*
13. *Moraxella osloensis*
14. *Moraxella phenylpyruvica*

TEST	1	2	3	4	5	6	7	8	9	10	11	12	13	14
Acetamide	+	-	-	-	-	-	w	-	-	+	+	-	-	-
Allantoin	+	-	-	-	-	w	-	-	-	-	-	-	-	-
Asparagine	+	+	+	w	+	+	+	+	+	+	+	-	-	+
Formate	+	+	+	-	+	+	w	+	w	+	+	-	-	+
Glutamine	+	+	+	w	+	+	+	+	+	+	+	-	-	+
Niacinamide	-	-	-	-	-	-	-	-	-	+	+	-	-	-
Tartrate	-	-	-	-	-	-	w	w	-	-	+	-	-	-

*w=weak or a small percentage of positive reactions

REFERENCES:

- (1) Canadian Journal of Microbiology, Volume 16, 1970 "Salient features of nonsaccharolytic and weakly saccharolytic nonfermentative rods" by M.J. Pickett and M.M. Pedersen.
- (2) Canadian Journal of Microbiology, Volume 16, 1970 "Characterization of saccharolytic nonfermentative bacteria associated with man" by M.J. Pickett and M.M. Pedersen.



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