

K260 GLUCONATE

PRINCIPLE/DISCUSSION:

Key Gluconate Test Tablets are an aid in identifying the fluorescent group of pseudomonads, especially in the absence of pigment production. These organisms (*P. aeruginosa*, *P. fluorescens*, and *P. putida*) are able to oxidize gluconate to keto-gluconate, which will test positive for reducing sugars while gluconate in the original form will not. Key Benedict's Reagent will produce a color change in the presence of ketogluconate when added to the test and heated.

ACTIVE INGREDIENTS:

Each tablet contains 20 mg. of sodium gluconate.

STORAGE:

Store tightly covered in a dry place at room temperature.

MATERIALS REQUIRED:

Gluconate tablets are provided in packs of 50 tablets. Gluconate tablets require fresh 24 hour growth on media appropriate for the specimen. Consult a clinical microbiology manual for suggestions. The following items are required but not provided:

- small glass test tubes (e.g. 12 x 75)
- Inoculating Loop
- Purified water, pH 6.5-7.5
- Key Benedict's Reagent (cat.# K265, sold separately)

PROCEDURE:

- (1) Add one gluconate tablet to 1 ml. of water in a small glass test tube.
- (2) Inoculate heavily and incubate for 18-24 hours at 35-37°C.
- (3) After incubation, add 2-3 drops of Benedict's reagent.
- (4) Heat gently to boiling, and observe for color change.

INTERPRETATION OF RESULTS:

Development of a yellow to green color is a positive test, indicating that the gluconate has been oxidized.

LIMITATIONS:

An occasional strain may require longer incubation; in the absence of other criteria leading to positive identification a gluconate test incubated for 48 hours may be helpful.

QUALITY CONTROL:

Known positive and negative organisms should be tested with each bottle. Key suggests *Pseudomonas aeruginosa* ATCC 27853 as positive and *Pseudomonas cepacia* ATCC 25416 as negative. Dispose of all used material in a manner appropriate for biohazardous material.

REFERENCES:

- (1) 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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