

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 keto-gluconate when added to the test and heated.

ACTIVE INGREDIENTS:

Each tablet contains 20 mg. of sodium gluconate

MATERIAL SAFETY DATA:

These tablets do not contain any materials known at this time to be hazardous. Key Benedict's Reagent (sold separately) does not contain any chemicals known at this time to be hazardous.

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 35-37C.

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(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 35-37C.

(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.



KEY SCIENTIFIC PRODUCTS, INC
1113 EAST REYNOLDS STREET
STAMFORD, TEXAS 79553
VOICE 800-843-1539
FAX 888-440-4208
WWW.KEYSCIENTIFIC.COM

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