CARBOHYDRATE FERMENTATION WEE-TABS

PRINCIPLE / DISCUSSION:.
Rapid Fermentation Tablets are used in identifying fermentative bacteria through their ability to ferment carbohydrates and related compounds. Fermentation of the related carbohydrate creates acid changing the phenol red indicator to yellow. The long shelf life offered in this system makes it easy to do supplemental testing without the high costs normally associated with rare sugars in tube form. **Key fermentation tablets are developed for use with fermentative *Enterobacteriaceae* and are not recommended for other organisms. Key Fermentation tablets are not acceptable for testing with any *Neisseria* spp.**

ACTIVE INGREDIENTS:
Each tablet contains the respective carbohydrate in a final concentration of 5 mg. per tablet and other chemicals as listed: Dipotassium phosphate, Phenol Red, Hyamine, Sodium Chloride, and other trace additives to assure tablet hardness.

MATERIAL SAFETY DATA:
This product does not contain any materials known at this time to be hazardous.

STORAGE: Consult individual package labels for storage instructions.

MATERIALS REQUIRED:
Each carbohydrate is sold separately, ready to use in tubes in packs of 28 tubes. The complete list of available carbohydrates is given in the QUALITY CONTROL section. Rapid Fermentation tests require fresh 24 hour growth on culture media. Consult the Manual of Clinical Microbiology for recommended media for the specimen. The tests may be done from any media if sufficient colonies are available. The following items are required but not provided: Inoculating loop, Sterile pipette, Distilled water, pH 7.0-7.2.

PROCEDURE:
For the correct carbohydrate selection, consult the Manual of Clinical Microbiology. An oil overlay may be done to test for the ability to ferment carbohydrates anaerobically such as in the differentiation of Staphlyococcus from some other gram-positive cocci (1).

1. Add 0.25 ml of distilled water to the tube.
2. Inoculate with a visible loopful of the organism being tested. If doing multiple tests, make a heavy suspension of the organism into 1 ml. of water and add 1 drop of this suspension to each tube. Add oil overlay if desired. Incubate at 35-37^{O}C.

INTERPRETATION OF RESULTS
The tube should be observed for color change from red to yellow, indicating acid production. Fermentation may be apparent in 30 minutes and usually is complete within 6 hours. Hold tubes for 24 hours before discarding negative tests, however if doing so be sure to setup a known negative control as some can be false positive in 24 hours. If the negative control is positive, the test may be false positive. Gas production is shown by the appearance of bubbles near the bottom of the tube.

QUALITY CONTROL:
Each lot of KEY Fermentation tablets should be tested prior to use with organisms which produce known reactions. Suggestions are listed at the end of insert. The Manual of Clinical Microbiology should be consulted for detailed reactions and identification charts. Finished tests should be discarded in a manner conforming with accepted laboratory procedures for biohazardous materials. KEY Fermentation Tablets are for INVITRO DIAGNOSTIC USE ONLY.

CARBOHYDRATE FERMENTATION SUGGESTED QC TESTS

TEST	POSITIVE	NEGATIVE
K1020 Adonitol	Citrobacter diversus 2425	Escherichia coli 25922
K1070 Arabinose	Escherichia coli 25922	Proteus mirabilis 12453
K1120 Cellobiose	Enterobacter aerogenes 13048	Proteus mirabilis 12453
K1130 Dextrin	Enterobacter aerogenes 13048	Proteus mirabilis 12453
K1150 Dextrose	Escherichia coli 25922	Bordetella bronchiseptica 4617
K1180 Dulcitol	Salmonella Subgroup 5	Bordetella bronchiseptica 4617
K1230C Fructose	Escherichia coli 25922	Bordetella bronchiseptica 4617
K1240 Galactose	Klebsiella pneumoniae 33495	Bordetella bronchiseptica 4617
K1330 Inositol	Klebsiella pneumoniae 33495	Escherichia coli 25922
K1350 Inulin	Bacillus subtilis	Escherichia coli 25922
K1360 Lactose	Escherichia coli 25922	Bordetella bronchiseptica 4617
K1410 Maltose	Klebsiella pneumoniae 33495	Proteus mirabilis 12453
K1435 Mannose	Escherichia coli 25922	Proteus vulgaris 13315
K1430 Mannitol	Escherichia coli 25922	Proteus mirabilis 12453
K1440 Melibiose	Klebsiella pneumoniae 33495	Bordetella bronchiseptica 4617
K1540 Raffinose	Enterobacter aerogenes 13048	Escherichia coli 25922
K1550 Rhamnose	Citrobacter diversus 2425	Proteus vulgaris 13315
K1570 Salicin	Klebsiella pneumoniae 33495	Bordetella bronchiseptica 4617
K1600 Sorbitol	Klebsiella pneumoniae 33495	Bordetella bronchiseptica 4617
K1610 Sucrose	Klebsiella pneumoniae 33495	Bordetella bronchiseptica 4617
K1640 Trehalose	Proteus mirabilis 12453	Bordetella bronchiseptica 4617
K1680 Xylose	Proteus mirabilis 12453	Bordetella bronchiseptica 4617

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