K9131B BUTYRATE DISCS

DISCUSSION:
Branhamella (Moraxella) catarrhalis, once thought to be non-pathogenic, is now considered a possible agent in respiratory infections. Because this organism can be found at the same sites as pathogenic *Neisseria spp*. and shares some physiological and biochemical characteristics, it is important to have a screening test for differentiation of *Branhamella catarrha*lis(1,2). Used in conjunction with other tests, butyrate discs achieve this by demonstrating the enzymatic hydrolysis of bromo-chloro-indolyl butyrate which creates a blue reaction. *Neisseria spp*. do not hydrolyze this substrate and will remain colorless.

QUALITY CONTROL:
Butyrate discs should be tested with known positive and negative organisms as outlined in the Manual for Clinical Microbiology. We suggest *B. catarrhalis* ATCC 25240 (positive) and *N. gonorrheae* ATCC 19424 (negative). All finished tests should be discarded in a manner appropriate for biohazardous materials.

STORAGE:
Store in tightly closed bottle at <0°C, in the dark.

MATERIALS REQUIRED:
Butyrate discs are provided in a bulk pack of 50 discs. The test requires fresh 24 hour growth on plated chocolate, blood agar, or other appropriate culture media. Also required but not provided:

- Loop or stick for harvesting colonies,
- Pipettes,
- Purified water (pH 6.5-7.5).

INSTRUCTIONS FOR USE:

1. Place a disc onto a slide and moisten slightly, using enough water to keep the disc moist throughout incubation but do not over moisten. As an alternative, you may place a disc in a tube with 1 drop of water.
2. Inoculate with a visible paste of the organism in question, then wait for 5-15 minutes. (Incubation is not necessary.) At 5 minutes, the reaction in a tube will be brighter than the reaction on a slide. The color reaction will darken upon standing using either method. Do not hold the test longer than 30 minutes as false positives will occur.
3. The development of a blue color indicates *Branhamella catarrhalis*. A negative test will be colorless.

LIMITATIONS:
This is only part of the overall scheme for identification. Further tests are necessary for confirmation. Many strains of *Moraxella* as well as some other organisms are also butyrate esterase positive while most *Neisseria* spp. are negative.

REFERENCES:
1. Riou, J.Y. et al.:"hydrolyse de la tributyrine par les Neisseria et les Branhamella". (French). Ann.Microbiol. (Inst. Pastuer)132A, 159-169 (1981) 2. Riou, J.Y., Guibourdenche: "Branhamella catarrhalis. New Methods of bacterial diagnosis." Drugs 31, (suppl. 3), 1-6 (1986)

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