K1538N PYR STRIP

PRINCIPLE/DISCUSSION:
Enzymatic hydrolysis of PYR (L-pyroglutamic acid ß-naphthylamide, aka pyrrolydonyl-ß-naphthylamide) releases free ß-naphthylamine which is detected and shown by the color change after adding PEP reagent.

ACTIVE INGREDIENTS/MSDS:
The strips contain L-pyroglutamic acid ß-naphthylamide. Naphthylamides have been identified as possible carcinogens however when used as directed the strips present no hazard. PEP reagent contains a small amount of hydrochloric acid, is poisonous, mildly corrosive, and stains clothing and hands. Handle with care. Consult poison control center if ingested.

MATERIAL REQUIRED:
The tests require fresh 24 hour growth on plated media. Consult a suitable manual for recommended media for the specimen. The following items are required but not provided:

- Purified water, pH 6.5-7.5
- Slide
- Loop or sterile stick for harvesting

INSTRUCTIONS:
(1) Place the strip onto a slide and moisten with a loopful of water. Do not use excessive water. The strip should be only wet enough to hold it in place.
(2) Smear with a paste of the organism from a fresh pure 24 hour culture plate or slant.
(3) Wait 2-5 minutes (at room temperature) then add 1 drop of PEP reagent. Wait at least 1 but not more than 2 minutes for color to develop.

INTERPRETATION:
The appearance of a dark pink to red color is positive. Pale pink or colorless is negative.

PYR FOR STAPH:
Because of the difficulty of the timing to read the reaction, we no longer recommend these strips for Staphylococcus. PYR is available in several tablet forms which are recommended for this purpose.

STORAGE:
Store strips and reagent tightly covered in the dark at 2-8^{o}C. Strips may be used cold. Do not freeze reagent.

QUALITY CONTROL:
Each lot should be tested with known positive and negative organisms. Some suggested strains are listed. Dispose of all used material in a manner appropriate for biohazardous material.
E. faecalis 29212 = POSITIVE
S. agalactiae 13813 = NEGATIVE
(*Positive PYR and Indole may be shown by testing with *Citrobacter diversus* and positive indole only can be shown with *E. coli*). When using K1538N for Staphylococci we recommend *S. lugdunensis* ATCC 700328 as POSITIVE and *S. aureus* ATCC 25923 as NEGATIVE.

REFERENCES:
(1) Manual of Clinical Microbiology, Seventh Edition, Chapter 27, *Enterobacteriaceae*.
(2) Manual of Clinical Microbiology, Seventh Edition, Chapter 17, *Streptococcus*.
(3) Manual of Clinical Microbiology, Seventh Edition, Chapter 16, *Staphylococcus* and *Micrococcus.*
(4) Chagla, Abdul, Alexander A.. Borczyk, John E. Aldom, Sergio Dalla Rosa, & Donald D. Cole. July 1993. Evaluation of the L-Pyrrolidonyl-ß-Naphthylamide Hydrolysis Test for the Differentiation of Members of the Families *Enterobacteriaceae* and *Vibrionaceae*. Journal of Clinical Microbiology. P. 1946-1948.

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