

K971495 SWAB-IT ONPG/PYR

PRINCIPLE/DISCUSSION:

The combined ONPG/PYR swab is useful in speciating different types of organisms, including enterics, non-fermentors, streptococci, anaerobes, and staphylococci.

ONPG: The demonstration of beta-galactosidase is accomplished by the hydrolyzation of ortho-nitrophenol- β -D-galactopyranoside liberating ortho-nitrophenol with its characteristic yellow color.

PYR: The ability to enzymatically hydrolyze β naphthylamine from l-pyrrolidonyl β naphthylamine is demonstrated by reaction with an aminopeptidase reagent producing an orange to red color. MSDS for this item is available online @ Key Scientific.com.

STORAGE:

Store swabs and developer, tightly sealed, at 2-8C. All items may be used cold.

MATERIALS REQUIRED:

ONPG/PYR swabs require fresh 24 hour growth on culture media. Consult the Manual of Clinical Microbiology for recommended media for the specimen. The swabs are sold in packs of either 25 or 100 with reagents provided. Small tubes are required but not provided:

PROCEDURE:

- 1) Add 3- 5 drops of rehydrating fluid to a test tube.
- 2) Using the test swab, pick up several well isolated colonies, enough to make a visible paste on the swab.
- 3) Place the swab into the tube mixing well to allow the bacterial paste to be emulsified thoroughly into the water.
- 4) Incubate aerobically at 32-37degrees C. for 2 hours.

INTERPRETATION:

ONPG: The appearance of a yellow color at any time during the 2 hours is a positive result.

PYR: Add 1-2 drops of PEP reagent to the completed ONPG test. Observe for the immediate development of an orange to red color. Negative tests will remain yellow or clear. NOTE: Some organisms may produce a slight peach color. This is produced by the reagent and should not be mistaken for a positive reaction. If the organism being tested is taken from blood agar or other media containing tryptophane, interference will occur if the organism is indole positive. In this case red, purple, or navy blue will be positive while green, sky-blue, or yellow will be negative.

QUALITY CONTROL:

Known positive and negative test organisms should be run with each batch. We recommend the ATCC strains listed below. Dispose of all used material in a manner appropriate for biohazardous material.

ONPG PYR

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|----------------------------|---|---|
| Escherchia coli (25922) | + | - |
| Klebsiella pneumo. (33495) | + | + |
| Proteus vulgaris (8427) | - | - |

See the reference for more complete listings.

REFERENCES

(1) Manual of Clinical Microbiology, Fifth Edition, Chapter 36, "Enterobacteriaceae"; Chapter 28, "Staphylococcus"; Chapter 29, "Streptococci and Related Cocci."