Prepared Media Quality Control (QC) Procedure

Purpose:

This procedure is used to detail performance testing procedures of plated media for the purposes of meeting CLSI M220A3 standards. This includes ensuring growth of N gonorrhoeae and inhibition of other organisms on selective media and growth of N gonorrhoeae on nonselective media.

Materials needed:

- Safety equipment including a minimum of eye protection, gloves and laboratory outer clothing
- Out of every new lot or shipment pull 2 plates of Chocolate (Choco) agar
  - 1 for sterility
  - 1 for growth of *Neisseria gonorrhoeae* (GC)
- Out of every new lot or shipment pull 4 plates of Selective Media (Modified Thayer Martin-MTM or Martin Lewis-ML) for the following Quality Control Testing
  - 1 for sterility
  - 1 for growth of *Neisseria gonorrhoeae* (GC)
  - 1 for inhibition of *Staphylococcus epidermidis*(SE)
  - 1 for inhibition of *Escherichia coli* (EC)
- Fresh (~24 hour growth) stock cultures utilizing manufacturer's instructions of:
  - *Neiserria gonorrhea*, ATCC 43069 (GC)
  - *Staphylococcus epidermidis*, ATCC 12228 (SE)
  - *Escherichia coli*, ATCC 25922 (EC)
- Sterile, disposable loops or alternate inoculating equipment
- Candle jar
- Media QC Log Book

Procedure

1. Plate the media with the appropriate organism as identified in the table below.
   There are many variations and personal preferences for "plating out" organisms. In general inoculate plates with a colony of the specified organism and then streak for isolation. The initial area inoculated should cover between a quarter and a third of the total area of agar used.

Purpose	Chocolate	Martin Lewis	MTM
Sterility	Yes	Yes	Yes
Growth of GC	Yes	Yes	Yes
Inhibition of SE		Yes	Yes
Inhibition of EC		Yes	Yes

2. Invert and incubate the plates, as well as the Sterility check plates, in a candle jar.
3. Check for growth on all plates after overnight incubation. Record all colony characteristics on the log sheet.
4. For plates with GC perform an Oxidase test and record the reaction on the log sheet.
5. After approximately 48 hours from incubation check for growth of SE and EC. Record all colony characteristics on the log sheet.
6. After approximately 24, 48 and 72 hours examine the sterility plate. Record all results on the log sheet.
7. pH checks need to be run on each type, lot, and shipment of agar as well. They can be run on the sterility plates after the 72 hours of incubation; alternatively they can be run on the sterility plates before incubation as long as this is noted on the plate and log sheet to account for any possible microbial contamination that may be introduced by the pH meter probe.
8. Document all items noted on the Media QC logs, including organism morphology consistent with expected results, product deterioration, physical defects, sterility, etc.
9. Notify the Supervisor immediately if any concerns and/or defects are noted. As appropriate, remove any media from use until the issue is resolved.
10. The shipment of plates can then be released for use. Note: It is acceptable to place plates in use during QC testing. HOWEVER, results cannot be released until all QC procedures have been completed ensuring all media meet acceptable performance standards for testing.

References

- Becton Dickinson BBL Chocolate II Agar product insert L007361, Revision 08, September 2007
- Becton Dickinson BBL Martin-Lewis Agar product insert L007390, Revision 08 September 2007
- BD letter dated August 2015
- Procedure Manual, University Health Network/Mount Sinai Hospital Microbiology Department, MI\QC\v17, Revision date October 2, 2014
- Microbiologics, Instructions for use: Lyfo Disk, Kwik-Stik, Kwik-Stik Plus. Pl.179.Eng Rev A
- Microbiologics, Recommended Growth Requirements: Lyfo Disk and Kwik-Stik Microorganisms. TIB.081 Revision 2010.Feb.19
- Microbiologics, Maintenance of Quality Control Strains, TIB.246 Revision A

Appendices

400-001-06-04-Media QC Logs