

Quality Matters: Stock Culture Maintenance Protocol

Key Words

Stock culture maintenance, microbiology, quality control organisms, storage, subculture, bacterial, fungal, reference strains, Culti-Loops

Goal

Detail suggested quality control organism stock culture maintenance and its impact on the performance of microbiology test results.

Background

Quality control organisms are a fundamental part of any quality assessment program for microbiology laboratories. To ensure organism viability, proper maintenance of these organisms is critical to achieving accurate control results for culture media and reagents.

It is important to safeguard the purity and identity of quality control stock cultures by limiting the potential for contamination or alteration of growth characteristics due to excessive sub-culturing.*

CLSI Standard, M22-A3, provides guidance for storage and processing of quality control organisms. A visual diagram outlining a recommended procedure for maintaining quality control stock and working cultures is shown on the following page.

Always review local regulatory guidelines and test manufacturer directions for maintaining microorganisms.

Custom Quality Control Organisms

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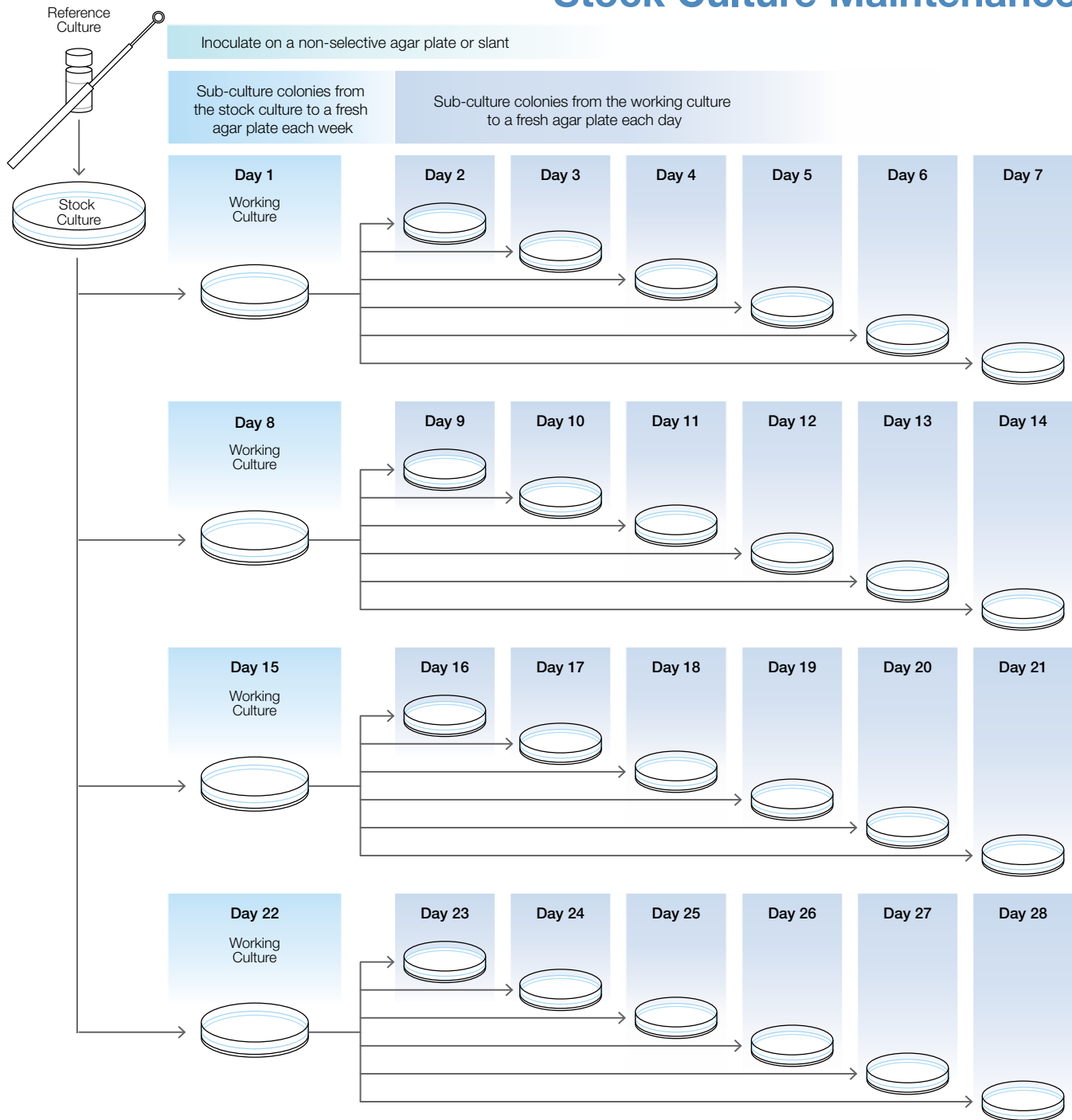
*Due to the innate growth characteristics of some microorganisms, not all strains are suitable for stock culturing; these include, but are not limited to, anaerobic organisms, fastidious organisms, and organisms used for susceptibility testing. Self validation is required for stock cultures of these organism types.



References:

1. CLSI M02-A10 Vol. 29 No. 1, Performance Standard for Antimicrobial Disk Susceptibility Tests; Approved Standard-Tenth Edition, January 2009.
2. CLSI M22-A3 Vol. 24 No. 19, Quality Control for Commercially Prepared Microbiological Culture Media: Approved Standard – Seventh Edition, April 2004.
3. CLSI M07-A8 Vol. 29 No. 2, Methods for Dilution Antimicrobial Susceptibility Tests for Bacteria that Grow Aerobically: Approved Standard-Eighth Edition, January 2009.

Stock Culture Maintenance



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