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| Quantitative Loop Calibration Using Wire-Sized Drill Bits |
| **Purpose** | This procedure provides instruction for QUANTITATIVE LOOP CALIBRATIONCalibrated loops are widely used in laboratories, primarily for quantitative urine cultures. As that minute quantities of material are transferred with these loops (0.001 ml,) it is essential that these loops be maintained to deliver accurately. Wire sized drill bits are used to verify the diameter of the loops and hence the contained volume. This procedure is also known as the GO, NO-GO method.This procedure applies to laboratory personnel who perform culture set-up. |
| **Policy Statement** |
| **Materials** | **Supplies** |
|  | 1. New or in-use 0.001 ml quantitative loop.
2. #53 drill bit
3. # 54 drill bit
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| **Procedure** | 1. Calibration of the 0.001-ml loop
2. Carefully slip the 0.001-mL loop over the **non-fluted** end of the # 54 drill bit. If the loop is calibrated properly it **will** fit over the drill bit.
3. Repeat above procedure with the # 53 drill bit. If the loop is calibrated it **will not** fit over the drill bit.
4. Discard the loop if it fits over the # 53 drill bit.
5. Calibration should be performed on a monthly basis and whenever a new quantitative loop is put into use.
6. Record results in the Orange QC book and on the Desk 3 maintenance schedule.
7. Inspect the calibrated loop daily for a break in the weld, corrosion, or a buildup of incinerated material.
8. Recalibrate the loop anytime it has been altered by adjustment or damage.
9. A loop that is no longer a “true circle” may not measure correctly and should be replaced.
10. The Specifications of the Loops are:

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| **Contained Volume** | **Inside Diameter** | **Appropriate Drill Size** |
|  |  | **GO** **mm** **NO-GO** **mm** |
| 0.01 ml | 4 +/- 0.03 mm | 22 3.99 21 4.04 |
| 0.001 ml | 1.45 +/- 0.06 mm | 54 1.40 53 1.51 |

**References**1. Loop Calibration Standard, Standard Methods for the Examination of Daily Products, Microbiological and Chemical. 11th Edition. American Public Health Assoc., Inc. Monoject Scientific. Elizabeth A. Chatman.
2. Clinical Microbiology Procedures Handbook. Vol. 1 pp. 3.12.16 American Society for Microbiology, Washington, D.C. 2010. Lynne Garcia. Editor
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| **Method Performance Specifications** |
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| **Training Plan/ Competency Assessment** | **Training Plan** | **Initial Competency Assessment** |
| 1. Employee must read the procedure
2. Employee will observe trainer performing the procedure.
3. Employee will demonstrate the ability to perform procedure, record results and document corrective action after instruction by the trainer.
 | 1. Direct observation.
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| **Historical Record** | **Version** | **Written/Revised by:** | **Effective Date:** | **Summary of Revisions** |
| 1 | Becky Carlson | 01/11/1991 | Initial Version |
| 1.1 | EM | 09/06/2005 | Reformatted |
| 1.2 | Tina Gronquist | 08/11/2014 | Reformatted |
|  | 2 | Becky Carlson | 4/4/2015  | Re-numbered from MC 811 |  |  |
| 3 | Susan DeMeyere | 2/26/2018 | Added location of documentation |
| **Archived by:** |  | **Archived Date:** |  |