NEWBORN SCREENING QUALITY ASSURANCE PROGRAM

Quality Control Assaying and Reporting Instructions for Second-tier Quality Control Analytes

CAUTION
The base serum and red blood cells used for preparing blood spot specimens at the Centers for Disease Control and Prevention (CDC) have been tested and found to be negative for Anti-HIV1,2 and O subtypes, Anti-HCV, HBsAg, Anti-HBc, and Chagas Disease (T.cruzi) by chemiluminescent immunoassay (ChLIA); HIV, HCV, HBV, and WNV by nucleic acid testing (NAT) and RPR (flocculation). Because no test method offers complete assurance that these or other infectious agents are absent, treat all specimens as potentially infectious and follow universal precautions. For more information on bloodborne pathogens, visit https://www.cdc.gov/niosh/topics/bbp/.

SPECIMEN QUALITY STATEMENT
NSQAP strives to create specimens that mimic newborn dried blood spots. Prepared specimens have been certified for the enriched analytes and may depart from established visual criteria for assessing specimen quality. These lab-created specimens are fit for the purposes of proficiency testing.

ASSAY and REPORT INSTRUCTIONS INCLUDE THE FOLLOWING ANALYTES

- **Second-tier Maple Syrup Urine Disease and Phenylketonuria by LC-MS/MS (MSUD-PKUQC)**
  Alloisoleucine, Isoleucine, Leucine, Phenylalanine, Tyrosine, Valine
- **Second-tier Methylmalonic/Propionic Acidemia and Homocystinuria by LC-MS/MS (MMA-HCYQC)**
  Malonic Acid, Methylmalonic Acid, Ethylmalonic Acid, 2-Methylcitric Acid, Total Homocysteine
- **Second-tier Congenital Adrenal Hyperplasia by LC-MS/MS (CAHQC)**
  17α-Hydroxyprogesterone, 4-Androstenedione, Cortisol, 11-Deoxycortisol, 21-Deoxycortisol

STORAGE
1. For daily use, store QC materials use at 4°C for one month; store QC materials reserves at -20°C±10°C. Securely seal all zip-closures on bags for storage. (Exercise caution when removing sheets of blood spots from bags stored at -20°C ±10°C. Allow storage bags to acclimate to ambient temperature before opening.)
2. Use a humidity indicator card and desiccant in bags used to store QC materials for daily use. Each time you remove QC materials from the bag for daily use, check the condition of the enclosed humidity indicator card. If the card indicates elevated humidity, reactivate the card and the desiccant packets according to instructions on the working bag label.

ASSAYING AND REPORTING INSTRUCTIONS
1. Punch all dried blood disks for analysis from within the blood spots on the specimen cards.
2. During the transition phase from old to new QC lots, perform duplicate assays for the old and new QC lots in the same analytic runs. After the transition, use only the new QC lot.
3. Download the QC specimen certification data, QC data entry form and data report form instructions from the NSQAP resources website.
4. Carefully enter your results and method code number on the appropriate data-report form. Report duplicate results (not average) for one run per day for five different days. Any deviation from this criteria will not be accepted. Record all results as integers or decimals. Enter <LOD for values below your limit of detection.
5. Submitted forms that do not fulfill the laboratory information, method reporting, or result reporting requirements specified in the instructions will not be accepted.
6. Submit your completed Excel QC Data Report Form to NSQAP at nsqapdmt@cdc.gov. If you have any QC questions, contact Irene Williams at NSQAPDMT@cdc.gov or 770-488-7024.
Late data will not be accepted for any reason. If data are not reported once within two QC events, your laboratory will be inactivated for the analytes not reported.

CDC QC materials supplement method or kit controls and only are intended for periodic use.

To view dates for future shipments, see the NSQAP Shipping Schedule at the NSQAP Resources website.

Thank you for participating in our program for laboratory quality assurance. For questions, comments, and requests concerning these QC materials, call the NSQAP office at (770) 488-4582 or send an email to NSQAPDMT@cdc.gov and include your laboratory code in the email subject line.