FORENSIC TOXICOLOGY LABORATORY
OFFICE OF CHIEF MEDICAL EXAMINER
CITY OF NEW YORK

PREPARATION OF QUALITY CONTROL FOR COLOR TESTS

ANALYTES

Color tests (CT) are routinely used to test for the presence of acetaminophen and salicylates in urine. One negative and one positive control for each analyte must be included with each individual batch for salicylates. For acetaminophen, a minimum of one positive and one negative control are included in the batch. An additional positive control is included for each additional group of tubes placed in the water bath together.

CERTIFIED NEGATIVE URINE

1. Collect urine from laboratory volunteers who have not taken either drug within the past week.
2. Assign a lot number based on the date collected. Validate negative matrix in triplicate by the respective color test and in duplicate by HPLC for salicylates and acetaminophen. (Refer to appropriate section of SOP Manual for procedures for individual analytes).

   Validation is accepted if the color tests are negative and HPLC analyses show no contribution from the analytes.
3. Label as certified negative urine.

PREPARATION OF POSITIVE QUALITY CONTROL (QC) SAMPLES

Each analyte is made up individually.

1. Fortify negative matrix with stock solutions that have been previously validated by HPLC as follows:

   ACETAMINOPHEN - 50 mg/L

   Add 5 mL of 1000 mg/L Acetaminophen stock solution to a 100 mL volumetric flask and Q.S. to the mark with certified negative urine. Mix well. Assign a lot number. Transfer 1 mL aliquots to appropriately labeled 12 x 75 mL tubes and freeze. Stable 6 months.

   SALICYLATES – 100 mg/L

   Add 10 mL of 1000 mg/L salicylate stock solution to a 100 mL volumetric flask and Q.S. to the mark with certified negative urine. Mix well. Assign a lot number. Transfer 1 mL aliquots to appropriately labeled 12 x 75 mL tubes and freeze. Stable 6 months.

2. Validate new control solution against the currently used control solution by appropriate color test and HPLC in triplicate.

ACCEPTANCE CRITERIA

All positive controls must result in a color reaction appropriate to the analyte.

All negative controls must produce no color change.

RECORD QC VALIDATION RESULTS

Enter following information into the control log:

Analyte and matrix
Lot number
Date of QC validation
Analyst initials