KAISER PERMANENTE®
COLORADO LABORATORY

MAINTENANCE – Beckman/Counter Access II

PRINCIPLE

Daily, weekly, and as-needed maintenance is performed on the Beckman Coulter Access II to help prevent analyzer malfunction and maintain its cleanliness.

SCOPE

Medical Technologists and Medical Laboratory Technicians

EQUIPMENT AND MATERIALS

1. Beckman Coulter Access II Analyzer(Franklin Facility ID# 982972/SN #504760)
2. Beckman Coulter Access reaction Vessels Ref#81901
3. Beckman Coulter Access Waste Bags Ref#81904
4. Transfer Pipettes Item # 9990 5580
5. Fiber-free polyester swabs
6. 2.0 mL sample cups(3 for maintenance)

PROCEDURE

1. **Daily Maintenance –**In order to keep the Access 2 system running properly, perform daily maintenance once every 24 hours.

   a. Check the System Status
      - From Main Menu select F6 (Maintenance Review)
      - Select “Check the Zone Temperatures” then,
      - Select “Check the Supplies and Waste Containers”

   b. Inspect the Fluidic Module
      - From Main Menu F8 (Configure) then F7 (PC Admin)
      - From PC Admin
      - Select “Check the Backup” then,
      - Select “Inspect the Fluidic Module”

   c. Clean the Wash Carousel Probe Exteriors
      - From Main Menu F8 (Configure) then F7 (PC Admin)
      - Select “Clean the Wash Carousel Probe Exteriors”
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d. Prime the Substrate
   - From Main Menu F7 (Diagnostics) then F2 (Prime Fluidics)
   - “Prime the Substrate”

e. Run the Daily Clean System Routine
   - From Main Menu F1 (Sample Manager) then,
   - F4 (Maintenance Request) then
   - Select “Run the Daily Clean System”
   - Select F1 (OK)
   - Place 2.0 mL cups in rack positions 1,2 and 3.
   - Pipette 2.0 mL Contrad 70 into cup #1.
   - Pipette 2.0 mL 1/5 Citranox/deionized water into cup #2.
   - Pipette 2.0 mL deionized water or wash buffer into cup #3.
   - Select F1 (Load Rack)
   - Load the Rack
   - Press Run
   - The system cleans the probe interiors (15 minutes)
   - Wait until the status bar indicates the cleaning is complete
   - Unload the rack
   - Initial the Maintenance Log

2. **Weekly Maintenance-**In order to keep the Access 2 system running properly, perform weekly maintenance once every seven days.

   a. Clean the Instrument Exterior

   b. Check for Fluid in the Waste Filter bottle

   c. Inspect and clean the Primary Probe.

   d. Replace the Aspirate Probes.
   -Turn the instrument off
   -open the front panel and top cover
   -Remove the aspirate probe from the wash arm
   -Disconnect the probe tubing from the barbed fitting.
   -Install a clean aspirate probe
   -Repeat for the other two probes.
   -Close the front panel and top cover.
   -Turn the instrument on.
   -Clean the removed aspirate probes within one hour while they are still wet.
   ****Caution**: Handle the aspirate probes with extreme care. The probes are fragile, and will not function properly if bent.

e. Cleaning the aspirate probes

1. Pre-cleaning the Aspirate Probes
   -Fill a beaker with 20 mL of Contrad 70.
   -Fill a beaker with 50 mL of deionized water
   -Dip a new aspirate probe brush into the Contrad 70
   -Insert and remove the probe brush in the probe until all the residue is removed.
   -Repeat for the other 2 aspirate probes.

2. Cleaning the Aspirate Probes with Contrad 70 Cleaning solution
   -Assemble the syringe
   -Draw the Contrad 70into the syringe
   -attach the probe to the syringe
   -Empty the syringe into the beaker
   -Rinse the probe by drawing Contrad 70 into the syringe; empty it into the beaker.
   -Remove the probe from the syringe.
   -Repeat for the other two aspirate probes.

3. Cleaning the Aspirate Probes with distilled water.
   -Draw distilled water into the syringe
   -Attach the probe to the syringe
   -empty the syringe into the sink
   -Rinse the probe twice by drawing water into the syringe; empty it into a sink.
   -Remove the probe from the syringe
   -Clean the exterior of the probe with alcohol.
   -Position the probe on absorbent paper for 10 minutes to drain.
   -Repeat for the other two probes
   -Initial the maintenance log.

f. Run Daily Maintenance.
   -See “Daily Maintenance”

g. Run System Check.-You perform the system check routine as part of weekly maintenance to verify system performance. During weekly maintenance, the three System Checks (washed, unwashed, and substrate) are run together. You can also run the System Check routine more often, or perform individual checks.
   a. From Main Menu chose F1-Sample Manager
   b. Type Rack ID-Press F4-Maintenance Requests
   c. Request Maintenance-Select System Check (and Daily clean System, if running weekly maintenance.)-F1 OK
   d. Place 2.0 mL sample cups in rack positions 7, 8, 9 and 10.
   e. Pipette 2.0 mL undiluted System check solution into cup 7.
   f. Pipette at least 1.0 mL wash buffer into cup 8.
   g. Leave cup 9 empty.
   h. Pipette 1.0 mL 1/501 system check solution into cup 10.

i. From “Maintenance Request” screen press Load Rack F1.
j. Load Rack
k. Press Run
l. System performs system checks (40 Minutes)
m. If results are acceptable enter values and initial maintenance log.
n. If results are unacceptable troubleshoot , rerun, and/or call technical service.

3. Bi-Annual Carryover test-In order to evaluate automatic pipetting systems for carryover a twice per year “Carryover” test is performed.

a. A known high Beta HCG sample is run in cup #1.
b. A known negative sample is run in cup #2
c. A successful test is one in which the result for the negative sample in cup #2 is <2.
d. Test is printed, reviewed, signed by supervisor or designee and stored for future reference in the Access Maintenance notebook.

REPORTING RESULTS

Results are transmitted to the LIS and if necessary, may be reported directly from the Access printout.

REFERENCE RANGE

Not applicable.

LIMITATIONS OF THE PROCEDURE:

DISTRIBUTION

- KP Laboratory Website - Policies and Procedure - MOL Chemistry Section
- Regional Reference Laboratory - QA Manager Document Control

REFERENCES

1.Tietz NW (ed). *Fundamentals of Clinical Chemistry*. ed. 3. Philadelphia: WB Saunders; 328.329; 1987.
2.Corcoran RM, Durnan SM. Albumin Determination by a Modified Bromcresol Green Method. *Clin. Chem.* 23(4):765; 1977.
3. Tietz NW. *Textbook of Clinical Chemistry*. Philadelphia: WB Saunders; 589; 1986.
4. Young DS. *Effects of Drugs on Clinical Laboratory Tests*. ed. 4. Washington D.C.: AACC
5. VITROS ALB Slides Test Methodology sheet.