Procedure   
Dignity Health Central Coast Service Area

**SUBJECT**: Beckman DxH Basic Operation

**ORIGIN**: Hematology

**NUMBER**: 7500.H.30

|  |  |  |
| --- | --- | --- |
| **Applies to:** | | |
| Santa Maria Campus,  Marian Regional Medical Center | Arroyo Grande Campus,  Marian Regional Medical Center | French Hospital Medical Center |
| St. John’s Pleasant Valley Hospital | St. John’s Regional Medical Center | |

# Principle:

To provide instructions necessary for the operation of the Beckman DxH.

# Clinical utility:

The DxH analyzer is a quantitative, multiparameter, automated hematology analyzer for the diagnostic use in screening patient populations found in clinical laboratories.

# Specimen Collection:

If a specimen has been refrigerated, allow it to equilibrate slowly to room temperature (15ºC to 30ºC) before analysis.

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| --- | --- | --- | --- | --- |
| Sample Type | Container | Minimum Volume | Storage Temperature | Stability |
| Whole blood | EDTA purple top  EDTA pink top  Sodium citrate blue top |  |  | 48 h |

# Quality Control:

## Quality Control Material

Quality Controls material used is Latron (628024), 6C Cell control (A59925), and Retic-X control (628028).

## Frequency

Quality control is performed at 1000 (6C and Retic Levels 1 and 3) and 2200 (6C and Retic Level 2) daily. Latron is performed daily after shutdown.

## Performing Quality Control

### Gently mix Latron (stored at ambient temperature) by inversion five to eight times. Avoid foaming.

### Remove 6C and Retic control tubes from refrigerator and warm to ambient temperature for 10 to 15 minutes.

### After warming, roll tube slowly between the palms of the hands eight times in an upright position

### Invert the tube and slowly roll it between the palms eight more times.

### Finally gently invert the tube (side to side) eight times.

### Run Controls

#### Both Analyzers

##### Place the controls in cassette and place cassette in the Input Buffer. Control(s) will process on both DxH analyzers

#### QC Only Mode: use to rerun a control on a specific DxH within a workcell. Patient specimens will be routed to the other available module for analysis.

##### Select the specific DxH from the System Status screen.

##### Select the Offline icon.

##### Double-click for the DxH status.

##### Select **QC Only** from the navigation bar, from the QC Only dialog box, select the **QC Only** checkbox and **OK**.

##### Place instrument online.

##### Process controls by placing in the Input Buffer of specific instrument.

##### Place DxH offline, select **QC Only**, deselect the checkbox, and check **OK** to exit QC Only.

##### Place DxH online.

### Verify results in LIS

### Return the tube(s) to the refrigerator within 30 minutes.

### NOTE: If a result exceeds assay limit, refer to System HELP or Instructions for Use for suggested actions.

# Procedure:

## Running Samples: the System Manager distributes samples to ensure maximum efficiency in testing by keeping travel lanes clear and directing samples to the most available module.

### Single-Tube Presentation: used for pediatric (heel or fingerstick) tubes and short draw tubes (use test location furthest to the left to minimize processing time).

#### Select the Single-Tube Presentation icon at the top of any screen.

#### From the Select Instrument dialog box, select the down arrow for the name of the instrument to place in single-tube processing mode and select **OK**

#### Place the specimen on the bar-code reader platform of the Single-Tube Presentation Station with the bar code facing the SPM to allow the Single-Tube Presentation Bar-Code Reader to scan the specimen label or use handheld scanner.

#### If the bar code label is unreadable enter the **Specimen Accession Number** and press **Enter**.

#### Verify the Specimen Accession Number and test request. Thoroughly mix the specimen.

#### Place the specimen into the correct Single-tube position (Left side: closed or open tubes and Right side: open only – microtainer collection vial).

#### Do not place a closed tube or a 16mm diameter tube in the right position of the Single-tube Presentation Station. Doing so could result in an incomplete aspiration and an erroneous result.

#### Retrieve the tube from Single-Tube Station. Select **Exit** and **Yes.**

### Cassette Presentation: used for full draw tubes.

#### DxH must be online to run samples.

#### The SPM default test order is CD (CBCD). All patient test orders are managed through the LIS.

#### Load the specimens into the cassettes with barcode facing outward through the cassette window.

#### Place the cassettes into the input buffer furthest to the right if available. The SPM automatically begins cycling the cassettes.

#### After the SPM cycles the samples, retrieve any abnormal printouts and review the sample results in the LIS.

#### Allow cassette to fully exit into the furthest (left) available Output buffer.

# Interpretation of Results:

## Results with no errors or flags do not print. These may be reviewed in LIS and if acceptable resulted immediately.

## Follow instructions on the printouts or refer to Spurious Result Protocol (7500.H.CC.31) to resolve errors. The LIS will accept all results, even with flags.

## See the procedure for review criteria to judge review of slide, manual differential or pathology review required.

## Repeat suspicious specimens or specimens with “delta” flags as determined by the LIS.

# Limitation of Procedure:

## Clotted specimens must be recollected.

## Very lipemic specimens may require saline replacement (see 7500-H-51).

## Check for sample integrity and proper labeling if results do not match previous and recollect specimens if needed.

## Refer to Beckman DxH Operator’s Manual for full explanation of all flags and flagging parameters.

## Report any analyzer issues in the DxH-900 Log. Stating problem, corrections and any reference numbers assigned by service.

# References:

## UniCel® DxH 900 Coulter® Cellular Analysis System and Unicel DxH Slidemaker Stainer II Coulter Cellular Analysis System, Instructions for Use. Revision AB (December 2017) System Manual.