

## Results Review Auto and Manual Verification using Remisol Advance

### Safety Message

Use universal precautions when handling patient samples or human source derived calibration verification material.

### Purpose

To outline the procedure for the reviewing and tech verification of laboratory test results for the DxC and Dxl instruments that fail autoverification by the Remisol middleware rules.

### Definitions

Autoverification is an automated, postanalytical process that reviews and releases clinical laboratory test results according to pre-established laboratory criteria to the patient's medical record without human intervention.

### Policy

Laboratory criteria for autoverification as defined in a set of logic tables or diagrams within Remisol Advance Data Manager middleware.

Results that fall into the following categories will require tech review and verification:

1. result value below or above the validation range
2. results affected by hemolysis, lipemia or icterus
3. result value fails delta check
4. result values that will require dilution and calculation
5. anion gap <3 or >20
6. non-blood samples, e.g. CSF, urine, pleural fluid, peritoneal fluid















### DxC Analytes List

- Acetaminophen
- Albumin
- Alkaline Phosphatase (ALP)
- Alanine Aminotransferase (ALT)
- Ammonia
- Aspartate Aminotransferase (AST)
- Blood Urea Nitrogen (BUN)
- Calcium
- Carbamezepine
- CK
- Chloride
- Carbon Dioxide (CO<sub>2</sub>)
- Creatinine
- C Reactive Protein (CRP)
- Direct Bilirubin (DBIL)
- Digoxin
- Ethanol (ETOH)
- Glucose
- K (potassium)
- Lactic Acid
- Lactate Dehydrogenase
- Lipase
- Magnesium
- Na (Sodium)
- Phenobarbital
- Phosphorus
- Phenytoin
- Salicylate
- Total Bilirubin
- Theophylline
- Total Protein
- Uric Acid
- Vancomycin
- Valproic Acid

### Dxl Analytes

1. Beta-hCG
2. BNP
3. Troponin I
4. PTHIO

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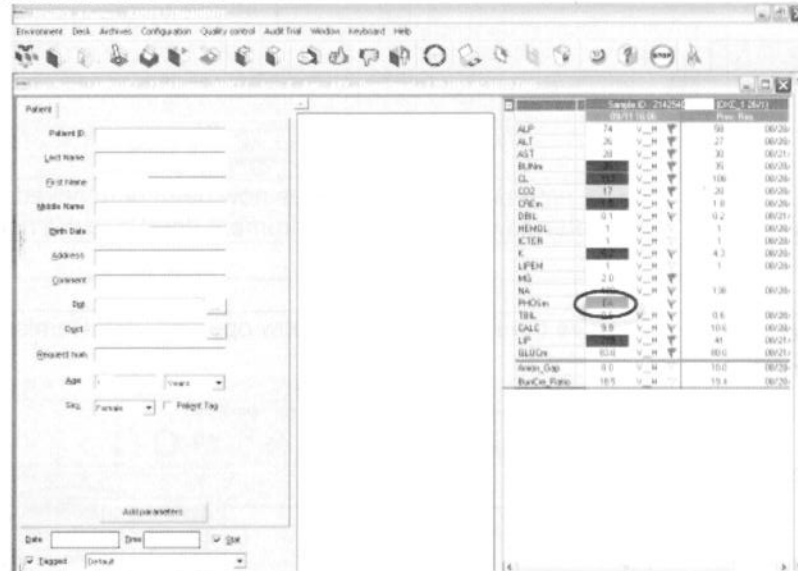
<p><b>Verify that no Assay or Instrument is Blocked</b></p>	<p>1. Determine whether or not recovered QC is in need of troubleshooting prior to proceeding to review and release results.</p> <p>When there are no blocked results, the following visual indications are observed:</p> <table border="1" data-bbox="678 415 1154 529"> <tr> <th>In EQC</th> <th>In Remisol Advance</th> </tr> <tr> <td></td> <td></td> </tr> </table> <p>When EQC collects a result that is set up to trigger a message and/or an action; a message is displayed in EQC and Remisol (as defined in the Set-up &gt; QC Message Filter Setup menu.)</p> <table border="1" data-bbox="678 632 1154 745"> <tr> <th>In EQC</th> <th>In Remisol Advance</th> </tr> <tr> <td></td> <td></td> </tr> </table>	In EQC	In Remisol Advance			In EQC	In Remisol Advance		
In EQC	In Remisol Advance								
									
In EQC	In Remisol Advance								
									
	<p>2. Verify that no assay or instrument is blocked by EQC by clicking on Remisol Advance's STOP button:</p> 								
	<p>2. There are two tabs on the top left of the window: By Remisol and By EQC. Select By EQC. To Re-enable any of these, highlight the line and select the Re-enable button in the lower right of this window.</p> 								





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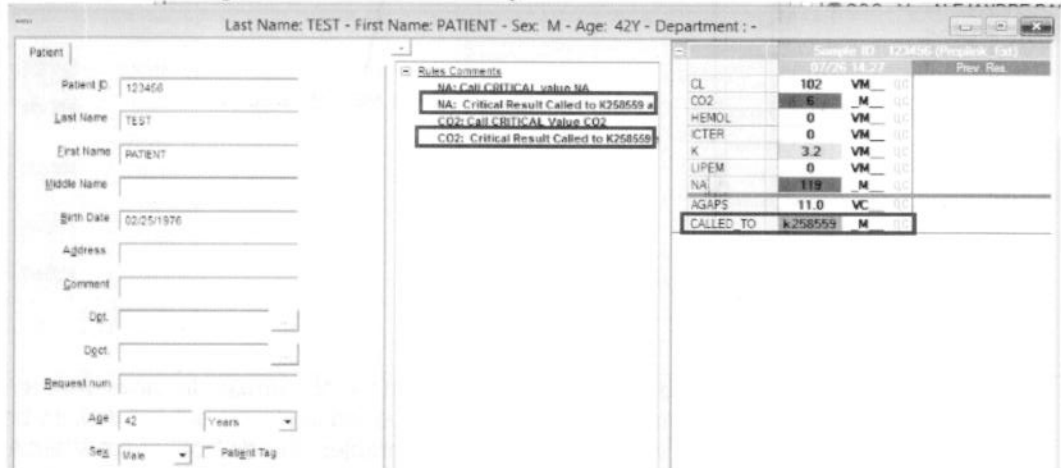
**Review and Verify Results Held Back by Remisol Autoverification Rules**

3. Double click on the sample in the window and it should open up the Request Sheet Window. Review results and determine whether or not results need rerun, dilution or other action:



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4. a. If a critical value require comments, enter in the space "CALLED TO", click save disk icon , verify that critical comments populated then click thumbs up icon  to manually validate result.



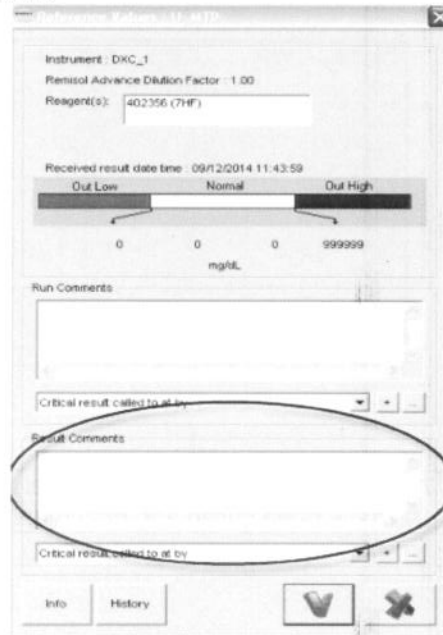
Patent | Last Name: TEST - First Name: PATIENT - Sex: M - Age: 42Y - Department: -

Rules Comments

- NA: Call CRITICAL Value NA
- NA: Critical Result Called to K258559
- CO2: Call CRITICAL Value CO2
- CO2: Critical Result Called to K258559

Sample ID	K258559 (Progluk Test)	Prev. Res.
07/26/14/27		
CL	102 VM UC	
CO2	5 M UC	
HEMOL	0 VM UC	
ICTER	0 VM UC	
K	3.2 VM UC	
LIPEM	0 VM UC	
NA	119 M UC	
AGAPS	11.0 VC UC	
CALLED TO	K258559 M UC	

- b. If a result require comments to be entered, double click on the result and it will open a comment window:



Reference Values - 11 - MTP

Instrument: DKC\_1  
 Remisol Advance Dilution Factor: 1.00  
 Reagent(s): 402356 (7HF)

Received result date time: 09/12/2014 11:43:59



Out Low: 0    Normal: 0    Out High: 99999  
 mg/dL

Run Comments:

Critical result called to at by:

**Result Comments:**

Critical result called to at by:

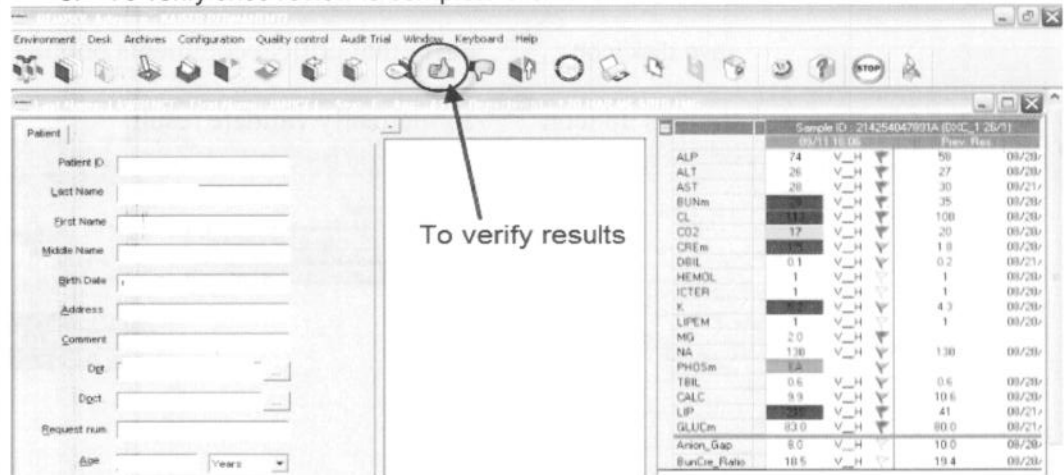
Info    History        

Type the comment in the Result Comments window for results to cross over to LIS. Click on green check mark when done. To cancel comment entry click on red x.

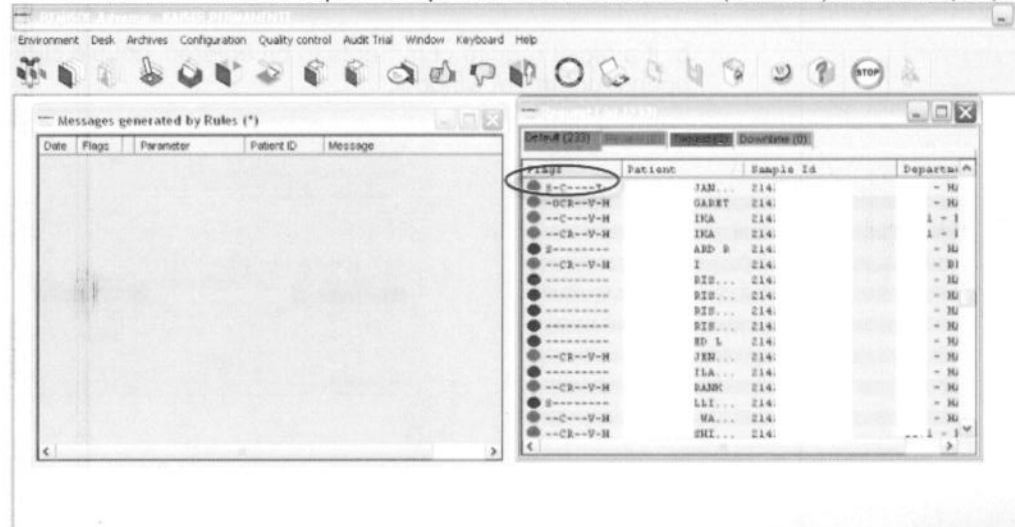
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### Review and Verify Results Held Back by Remisol Autoverification Rules

5. To verify once review is complete click on:



6. Periodically review the Default list of samples for any overdue samples held up that may have accidentally opened in review but not verified before sample window was closed. Open samples that do not have a V(alidated) and an H(ost).



7. Print Exception Report (Critical Value Review) and verify that all critical values have been called and documented.

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### References

- Remisol Advance version 1.4 User Guide-October 2009, Beckman Coulter inc., Brea, California 94304, 2009
- Remisol Advance version 1.5-EQC User Guide-October 2011, Beckman Coulter inc., Brea, California, 2011.
- Remisol Advance version 1.9 User Guide-March 2013, Beckman Coulter Inc, Brea, California, 94304, 2013.




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## Results Review Auto and Manual Verification using Remisol Advance

### Document History Page

Change type: New, Major, Minor etc.	Changes Made to SOP – describe	Signature responsible person/date	Lab Manager reviewed/ date	Med. Director Reviewed/ Date	Date change implemented
<b>NEW</b>		M.Acosta 09-12-14	J.Wolf 09-15-14	S.Wirio M.D. 09-16-14	09-16-14
<b>Major</b>	<ul style="list-style-type: none"> <li>Revised how to enter critical comments in Remisol.</li> <li>Added PTHIO on Dxl Analytes.</li> </ul>	 7/26/18	 7.30.18	 8/5/18	8/5/18