# Field Safety Notice

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| To: | Laboratory Directors |
| From: | Roche Diagnostics |
| Date: | 11 May 2009 |

Re: AMPLILINK 3 Series Anomaly; Possible impact to Diagnostic and Blood screening results

**Issue**

Roche Molecular Diagnostics has become aware of a unique series of events involving the COBAS® AmpliPrep instrument running AMPLILINK software version 3.2.2 that results in specimens being amplified and detected with the wrong test parameters.

**Investigation**

A complaint was investigated in which specimens that were ordered to be tested for HBV were actually amplified and detected according to test parameters for HCV. The customer was using AMPLILINK 3.2.2 software on the COBAS® AmpliPrep / COBAS® TaqMan® 48 system.

The investigation determined that specimens to be tested for HBV and HCV viral levels were co-mingled on the same K carrier and subsequently all specimens were tested according to only the HCMCAP48 test definition file parameters.

The investigation determined this error can occur on either the COBAS® AmpliPrep / COBAS® TaqMan® 48, COBAS® AmpliPrep / COBAS® TaqMan® (docked) or **cobas** s 201 System (docked) running AMPLILINK Software versions 3.1 or 3.2 series up to and including version 3.2.2. The investigation determined that blood screening sites are not currently affected since all required conditions for the anomaly to occur do not exist.

The issue occurs only if all of the following events take place:

1. Configuration/Workflows using COBAS® AmpliPrep / COBAS® TaqMan® 48, COBAS® AmpliPrep / COBAS® TaqMan® (docked) or **cobas** s201 System (docked)
2. Two different test assays are being run on the same COBAS® AmpliPrep instrument where prepared specimens are placed on a K-Carrier
3. Partially filled Sample Racks are used
4. Specimens are blocked during the COBAS® AmpliPrep processing in the first sample rack (one or more specimens are unprocessed, due to insufficient reagents or disposables) resulting in the sample rack being mechanically "blocked" by the instrument (sample processing for remaining specimens is stopped) and a message occurs in case of insufficient reagent (i.e. level detection error). Other root causes for blocked samples (see print screen below) either do not permit a run to start of lead to a hardware message that stops the run (i.e. in case of insufficient consumables during a run).

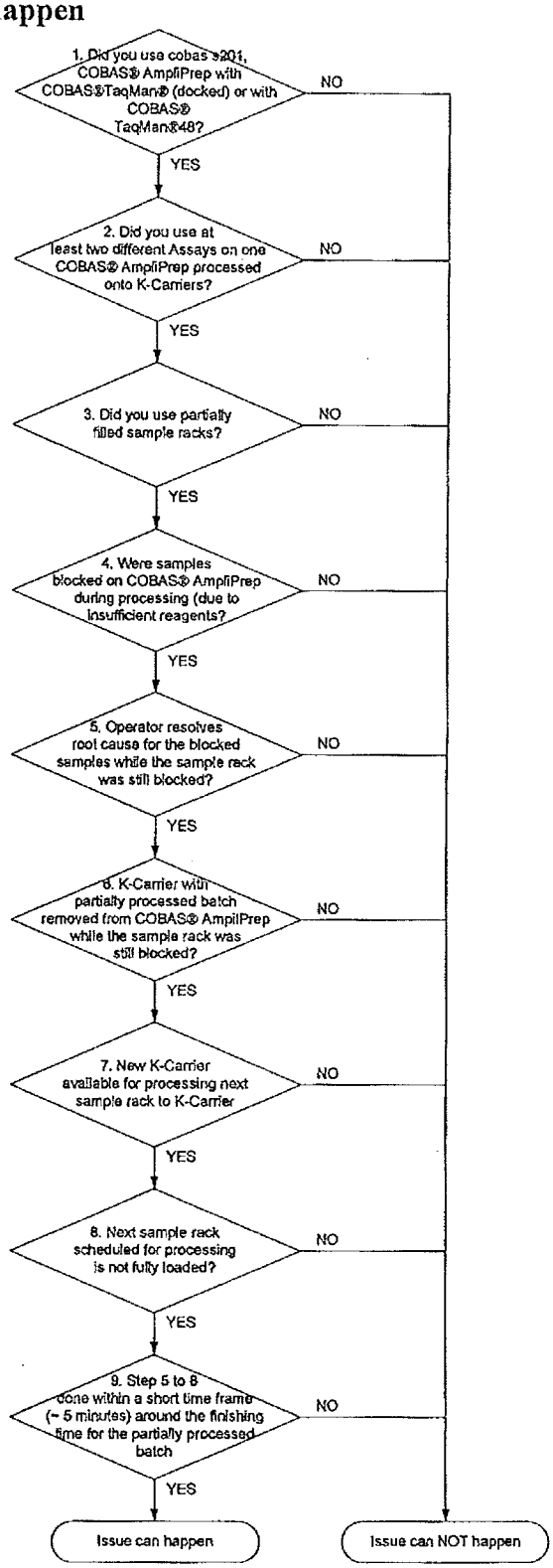
*Sample icon representation* Each sample icon is labeled with a tube number, and is color-coded to indicate its status.

| Icon | Condition | Explanation |
|---|---|---|
|  | Position empty | No sample is loaded in this rack position. The tube number appears in black without a circle around it. |
|  | Sample loaded | A sample is loaded in this rack position, but no order exists for the sample. Background color icon. |
|  | Queued or Pending | An order was created and the sample is ready to be processed. White icon. |
|  | In Process | Sample is currently being processed. Blue icon. |
|  | Sample processed | Sample was successfully processed. Green icon. |
|  | Flagged | Sample was fully processed but results have a flag in column Flags of the Results window (Sample Warning). Light green icon.<br>Flags that generate a Sample Warning, are listed in *Flag priorities and status mappings of all flags* on page D-43 |
|  | Blocked | Sample is blocked due to: an order mismatch, insufficient reagents or consumables, sample volume error; clotted sample; missing tube. Yellow icon. |
|  | Error or Aborted | Barcode error, tube handling error, or processing was stopped or cancelled. The results have a flag in column Flags in the Results window. Red icon. |

Table A-35 Sample Icons on Cassettes/Samples tab

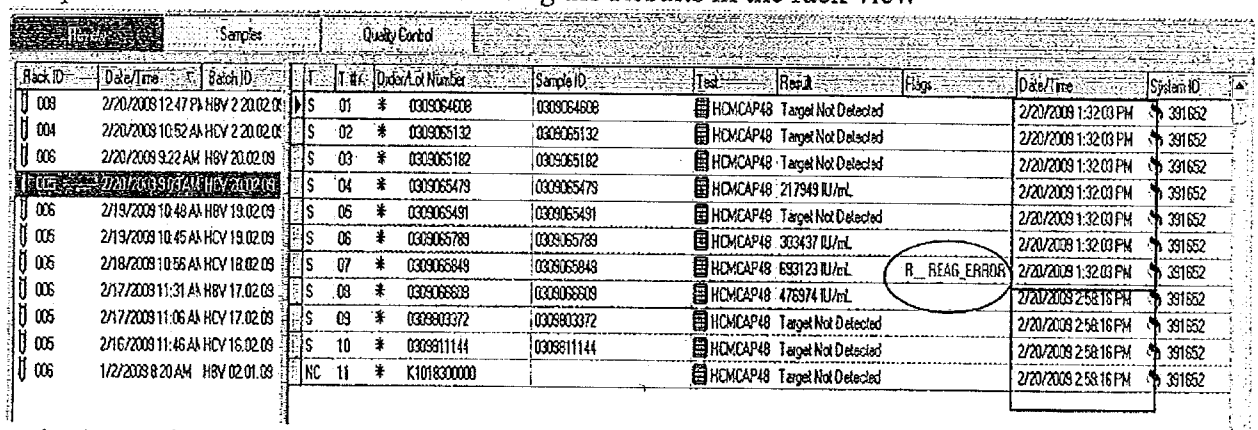
5. The user resolves the root cause for the blocked samples (reload reagents or consumables) while the first sample rack is still blocked and the K carrier status is "finished", indicating the processing of specimens initiated before the remaining samples were blocked is either almost complete or complete.
6. The first K-Carrier with the partially prepared batch needs to be removed (manually by the user via the K-Carrier Rack for the COBAS® TaqMan® 48 analyzer or automatically via the Docking Station for the COBAS® TaqMan® analyzer)
7. A new K-Carrier needs to be available (manually by the user via the K-Carrier Rack for COBAS® TaqMan® 48 analyzer or automatically via the Docking Station for the COBAS® TaqMan® analyzer)
8. A second sample rack is scheduled for processing, but is not fully loaded (short by at least the number of unprocessed samples on the first rack).
9. Steps 5 to 8 have to be done within a short time frame (~ 5 minutes) around the finishing time for the "unblocked" samples of the first sample rack (partially processed batch)

## Decision tree for issue to happen

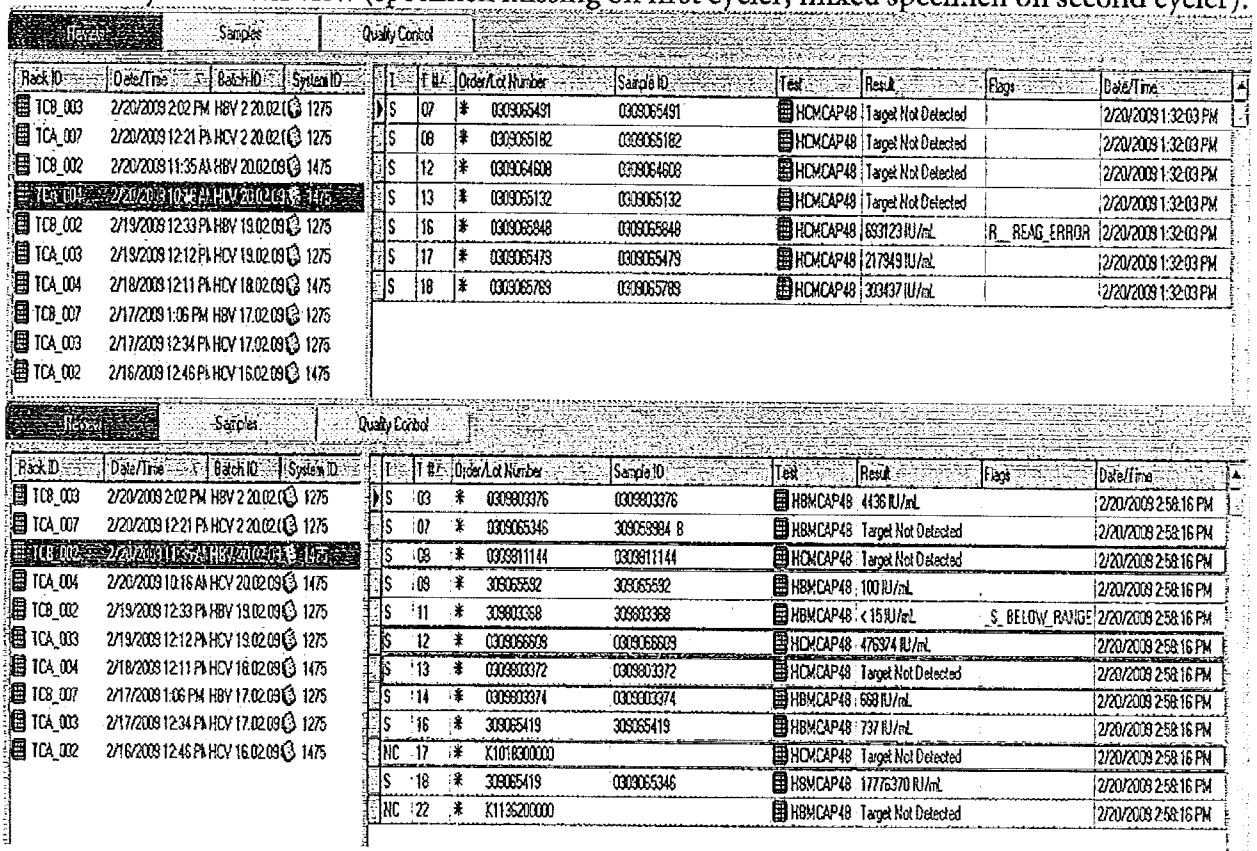


## Detectability

The likelihood of the exact sequence and timing of events necessary to create the situation as outlined above is remote. However should this occur the detectablity of the occurrence by the AMPLILINK software is not assured. At least one specimen will be flagged with the root cause (i.e. R_REAG_ERROR). Users may detect the occurrence by comparing the date time stamp for samples in the same batch when reviewing the Results in the rack view




or in the Cycler Batch view (specimen missing on first cycler, mixed specimen on second cycler).



**Prevention**

The following measures will prevent the situation from occurring:

1. Do not load or unload any racks until the COBAS® AmpliPrep instrument run is finished when sample processing is blocked as described above.
2. Unload sample racks with unprepared/ blocked samples
3. Resolve issues reported by the software (i.e., reload reagent racks, load new reagent racks for unprepared/ blocked samples)
4. Create new batch (new order, control and rack) for remaining samples.

These steps should be followed until updated software is available.

**Medical Impact**

Due to the series of events that must take place, the likelihood of occurrence is exceedingly rare (1 of 7.7 million runs). As a result of this, it is unlikely that sequential specimens from the same patient would be affected. The COBAS® AmpliPrep COBAS® TaqMan® HCV, HBV, and HIV Tests are intended to be used as monitoring assays, it is unlikely that a physician would change a patient's treatment based on a single data point.

**Corrective Actions**

1. Due the rarity of occurrence and low risk of impacting a change in a patient's treatment, the overall risk is considered to be very low. However should you desire to conduct a review of previously generated test results, follow the above provided decision tree.
2. If the above outlined error is detected, all specimens are to be retested.
3. Until revised software is provided by Roche, follow the steps outlined above to prevent the possibility of generating erroneous results due to this anomaly.

# Field Safety Notice: Affiliate Feed-Back Fax-Form

filled out by BA Safety Board

filled out by Local Safety Officer

## Product Advisory Notice:

*No*: 003/ 2009

*Date of issue*: May 8, 2009

*Affected product(s):*
AMPLILINK 3 Series Anomaly with COBAS® AmpliPrep / COBAS® TaqMan® 48, COBAS® AmpliPrep / COBAS® TaqMan® (docked) or **cobas** s201 System (docked)

*Subject:*
Possibility of specimens being amplified and detected with the wrong test parameters

## PAN from Business Area: *send the filled out fax form back to:*

- ☐ Applied Science (Fax: ++49 8856 60 3753)
- ☐ Molecular Diagnostics (Fax: ++1 925 730 8225)
- ☐ Centralized Diagnostics (Fax: ++49 621 759 6327)
- ☐ Near Patient Testing (Fax: ++43 316 27787 7490)
- ☐ Diabetes Care (Fax: ++49 621 759 3801)
- ☒ Roche Diagnostic Ltd. (Fax: ++41 41 798 5601)

| RD Affiliate | Name of Local Safety Officer |
|---|---|
| | |

## Correction/removal was completed on:

Date (dd/mm/yy):

List of Instruments and Software version

| COBAS Ampliprep | SN | Cobas Amplilink SW Version | Customer | Address | Active (Yes or No) |
|---|---|---|---|---|---|
| | | | | | |

Date/Signature Local Safety Officer

*In case of comments / feedback from authority / additional actions taken / results, please attach the corresponding information*

Attachements: ☐ yes Number of pages: ☐ no