Ortho Clinical Diagnostics

IMPORTANT PRODUCT CORRECTION NOTIFICATION
Biased Results using VITROS® Chemistry Products UPRO Slides

Date Issued December 2016

Affected Product

Name (Unique Identifier No.)	Product Code	Generations (GENs)	Expiry Date range
VITROS Chemistry Products UPRO Slides (10758750000593)	6800120	**14**	01-JAN-2017 through 01-MAY-2018
		15	
		16	
		17	
		18	
GENs 12 & 13 (now expired) were also affected.			

Issue

Ortho Clinical Diagnostics (Ortho) identified the potential for biased urine protein results using VITROS UPRO Slides.

Impact to Results

The following observations were made for VITROS UPRO Slides:

	Observation	Impact to results
Scenario 1	Variability GEN to GEN for patient samples.	Magnitude of bias is dependent upon the GEN.
Scenario 2	Variability in results for random and 24-hour urine samples with low specific gravity.	Unexpected increase in the number of results above the reference intervals for random and 24-hour urine samples.
Scenario 3	Negatively biased results.	Negatively biased results versus the Ortho Pyrogallol Red comparative method.
Refer to page 3 for information regarding the bias observed in our testing.		

As a result, Ortho advises that you immediately discontinue using VITROS UPRO Slides.

Discuss any concerns you may have regarding previously reported urine protein results with your Laboratory Medical Director to determine the appropriate course of action.

Required Actions

- Immediately discontinue using and discard all VITROS UPRO Slides remaining in your inventory.
  NOTE: Ortho will credit your account for any discarded VITROS UPRO Slides, VITROS Chemistry Products Calibrator Kit 10 and/or VITROS Chemistry Products UPRO Performance Verifier I & II.
- In accordance with regulatory requirements, please complete the Confirmation of Receipt and return by **December 23, 2016.**
- Post this notification by each VITROS System that utilizes VITROS UPRO Slides or with your user documentation.

Product Availability	At this time, Ortho is not able to provide replacement VITROS UPRO Slides. We recommend that you use an alternate method until further notice. We are making every attempt to resolve this situation as soon as possible and will notify you when replacement product is available. We anticipate sending a follow up notification in January 2017 with information on future product availability.
Contact Information	We apologize for the inconvenience this will cause your laboratory. We have anticipated some questions you may have in the following Question and Answer section. If you have additional questions, please contact your local Ortho representative or our Ortho Care™ Technical Solutions Centre at 1800 5646 766.
Enclosure	Confirmation of Receipt Form

Sincerely,

[redacted]

Jon Wong, 12 Dec 2016
QA Manager

Questions and Answers

1. How can I identify the GEN for the VITROS UPRO Slides in my inventory?

Below is an *example* of how to identify the GEN number on the product packaging (e.g. **5414-XXXX-YYYY**):

SO/**GEN**	Coating ID	Lot No.
5414	XXXX	YYYY

2. How does the specific gravity of a urine protein sample affect results?

The *Limitations of the Procedure* section in the VITROS UPRO Instructions for Use (IFU) states that the specific gravity of the patient sample may impact urine protein results as follows:

- *Very dilute urine samples (specific gravity ≤1.010) may yield artificially high 24-hour protein concentrations in large volume (>2500 mL) samples.*
- *Very concentrated (specific gravity ≥1.025) urine samples may yield artificially low 24-hour protein concentrations in large volume (>2500 mL) samples.*

The IFU indicates that the impact to results only affects large volume samples (24-hour); however our investigation confirmed that random samples are also affected. Although the bias is present on all GENs, GENs 13, 14, 16, 17 and 18 exhibited a higher magnitude of bias.

3. What is the impact to my results using VITROS UPRO Slides?

Our investigation identified biased results as shown below (Scenarios 1 & 2 described on page one):

VITROS UPRO Slides versus Pyrogallol Red Comparative Method				
Urine Protein Concentration = 7 mg/dL (0.07 g/L) (*Samples with Specific Gravity < 1.010)*				
GEN	**Average Bias (mg/dL)**	**Range of Bias (mg/dL)**	**Average Bias (g/L)**	**Range of Bias (g/L)**
12	-1.0	-3.7 to +3.0	-0.010	-0.037 to + 0.030
14	3.5	-3.4 to +11.3	0.035	-0.034 to + 0.113
16	3.1	-3.1 to +12.2	0.031	-0.031 to + 0.122
18	2.6	-3.7 to +10.7	0.026	-0.037 to + 0.107
NOTE: Not all GENs were tested in our investigation: • GENs 13 & 17 are expected to show similar biases as GENs14, 16 & 18. • GEN 15 is expected to show similar biases as GEN 12.				

The table below indicates the negative bias using VITROS UPRO Slides compared to the Ortho Pyrogallol Red comparative method (Scenario 3 described on page one):

VITROS UPRO Slides versus Ortho Pyrogallol Red Comparative Method			
Conventional Units (mg/dL)		**SI Units (g/L)**	
Concentration	**Bias Observed**	**Concentration**	**Bias Observed**
5 - 15	-6	0.005 – 0.15	-0.06
15 - 40	-9	0.15 – 0.40	-0.09
40 - 60	-12	0.40 – 0.60	-0.12
60 - 100	-13	0.60 – 1.00	-0.13

110 - 130	-8	1.10 – 1.30	-0.08
130 - 200	0	1.30 – 2.00	0

Questions and Answers (continued)

4. How does this issue affect the Reference Interval?

The Reference Intervals as described in the *Expected Values* section in the IFU are:

Sample Type	Conventional Units	SI Units	Alternate Units
24-Hour	42–225 mg/day	0.04–0.23 g/day	42–225 mg/day
Random Samples	< 12 mg/dL	< 0.12 g/L	< 120 mg/L

Due to the biases confirmed during our testing, patient samples with normal levels of urine protein may be above the current reference intervals for both 24-hour and random samples.

5. Is it possible to implement a third party urine protein test using my VITROS System?

In the interim, you may consider implementing a third party urine protein test as a User Defined Assay (UDA) on VITROS 4600/5600/5,1 FS Systems that are MicroTip capable.

Ortho is aware of third party applications for urine protein from Randox, Thermo Scientific and Pointe Scientific. Ortho has not independently validated these applications, and these options should not be considered an endorsement. Additional options may exist from other manufacturers.

NOTE: Per the User Defined Assay (UDA) Guide, the operator assumes full responsibility for any local or regional regulatory requirements resulting from the use of the user defined reagents on the VITROS System. Although the third party supplier may offer recommendations on protocol, it is the operator's responsibility to define the protocol and validate the assay for use in their laboratory.

VITROS Software and UDA consumables Support: Ortho Care representatives are available to provide information and training in the use of VITROS Software and UDA consumables in accordance with VITROS UDA Documentation available in V-Docs*.
*UDA information is also available in your VITROS User Documentation CD that contains the User Defined Assay (UDA) Guide.

Ordering UDA Reagent Packs: To perform User Defined Assays on VITROS Systems, User Defined Assay (UDA) empty reagent packs (i.e., 6 packs/box) are required.

6. What is Ortho doing to help resolve this issue?

Our investigation identified a raw material as a contributor to the overall performance issue. We are working to resolve this and re-establish our inventory of VITROS UPRO products. Ortho will contact you regarding future product availability.