

Chemistry Testing Update

EFFECTIVE MAY 27, 2021

LAB TEST RESULTS FOR PATIENTS WITH CYANOKIT (HYDROXOCOBALAMIN) ORDERS

Effective May 27, 2021, Wisconsin Diagnostic Laboratories (WDL) will implement a new process for the handling of laboratory specimens collected from patients administered the Cyanokit (Hydroxocobalamin) medication. This will predominantly affect chemistry tests, but may also impact hematology, coagulation and urinalysis tests.

Situation:

Samples collected from patients administered the Cyanokit medication have been misidentified as hemolyzed by laboratory instruments. This has resulted in multiple, unnecessary patient sample recollections.

Background:

The Cyanokit medication is highly pigmented and imparts a red discoloration to patient samples that may mimic hemolysis. Although the sample is not hemolyzed, the medication can interfere with lab test results through spectral interference or interference with the assay reagents. This interference may cause significant falsely increased or decreased results for 24 hours after each dose, or longer if multiple doses are administered.

New Process:

For 24 hours after each dose of the Cyanokit:

For Clinicians:

- An EPIC Best Practice Advisory will fire when affected tests are ordered so the necessity of the request can be considered.
- Results for significantly affected laboratory tests will not be reported (See Table 1 below for affected chemistry tests).

For Staff collecting blood samples:

- An Attention notice will be attached to each Cyanokit indicating the impact of the medications on laboratory tests, as well as providing information to contact WDL.
- **Bright orange** slips of paper will be provided with each Cyanokit to include in the biohazard bag pouch when samples are sent to the lab. Four slips will be provided with each kit that can be kept with the patient for the subsequent 24 hours. More can be obtained by contacting WDL.

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Recommendation:

Our recommendation is to limit laboratory testing as much as possible, without jeopardizing patient care, during the 24 hours after each dose of Cyanokit is given.

Table 1. Chemistry test reporting for 24 hours after each dose of Cyanokit medication administered to a patient.

Will be reported		Will be reported, with comment regarding interference	Will not be reported due to significant interference		
Albumin	HDL cholesterol	The following are falsely decreased: AST ALT Bilirubin, Total	<u>Falsely decreased</u>	<u>Falsely increased</u>	<u>Variably affected</u>
ALP	Glucose		Acetaminophen	Cholesterol	Actual base excess
Bicarbonate/TCO2	Magnesium		Ammonia	IgM	Hemoglobin and hematocrit (measured using a blood gas sample)
BUN	Oxygen saturation		Amylase	Iron	
Ca, Total	Oxyhemoglobin		Bilirubin, Direct	Lactate	
Ca, Ionized	pH		Creatine kinase	LDH	
Chloride	Potassium		Carboxyhemoglobin	Magnesium	
C-reactive protein	Sodium		Salicylate	Methemoglobin	
Creatinine	Total Protein		Triglyceride	Phosphate	
	TSH		Vitamin B12	Uric acid	

For Technical Questions or Additional Information, Please Contact:

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