



TOSOH

# Tosoh Ink

News and Information from Tosoh Bioscience, Inc.

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## RBC Folate

B12 and folate are typically ordered to help diagnose the cause of macrocytic anemia. It is usually ordered as a follow-up when there is a large number of RBCs and decreased hemoglobin during a routine CBC. A folate test may also help evaluate the general health and nutritional status of a patient with signs of significant malnutrition or malabsorption.



Folate deficiency may be produced by several factors including, inadequate dietary intake, intestinal malabsorption, pregnancy, alcoholism and a variety of drugs, including oral contraceptives and anticonvulsants. Deficiencies of either folate or vitamin B12 may result in megaloblastic anemia and neuropathy. When being treated for a B12 or folate deficiency, a patient may occasionally be monitored to evaluate the effectiveness of the treatment. In a person with a nutritional deficiency, this may be done as a follow-up to treatment. In a person with a condition causing a chronic deficiency, this may be part of a long-term treatment plan. Either a serum or RBC folate test may be used to help detect a deficiency, but some doctors feel that the RBC folate test is more clinically relevant than serum folate.

Decreased folate during pregnancy is also a strong risk factor for neurological birth defects. Historically, little or no clinical information was ascribed to normal or increased folate values since it was mainly used to diagnose anemia. However, the recent goals of maintaining high folate concentrations during pregnancy suggest that examination of serum and RBC folate concentrations with an interest in higher values may become common.

RBC folate levels are a more accurate reflection of body stores of folate. Although serum folate offers a reliable test, it fluctuates based on dietary changes. RBC folate concentration correlates well with other indexes of folate deficiency such as bone-marrow cell morphology and hematological changes.

Tosoh's AIA-PACK RBC Folate offers an assay range of 0.62 to 24 ng/mL. The assay will be available in the 40 minute incubation format on all AIA platforms (with the exception of AIA-360). To order: call 1-866-527-3587, using Catalog #: 020214.

### References:

[http://www.labtestsonline.org/understanding/analytes/vitamin\\_b12/test.html](http://www.labtestsonline.org/understanding/analytes/vitamin_b12/test.html)

AIA-PACK RBC Folate- AIA Analyte Application Manual. Tosoh Bioscience, Inc., South San Francisco, CA. (September 2009)

## Utility of the Beta-thalassemia mode on the G7

The Beta-thalassemia analysis mode on the G7 analyzer is used to confirm the identity of a hemoglobin variant for an HbA1c result and to screen for Beta-thalassemia and other hemoglobinopathies. For example, people with thalassemia can develop diabetes and a hemoglobin variant may interfere with their HbA1c result. Also, transfusion patients need to see a decrease in a specific hemoglobin variant. Furthermore, Hereditary Persistent Fetal Hemoglobin (HPFH) patients have high HbF above 20%.

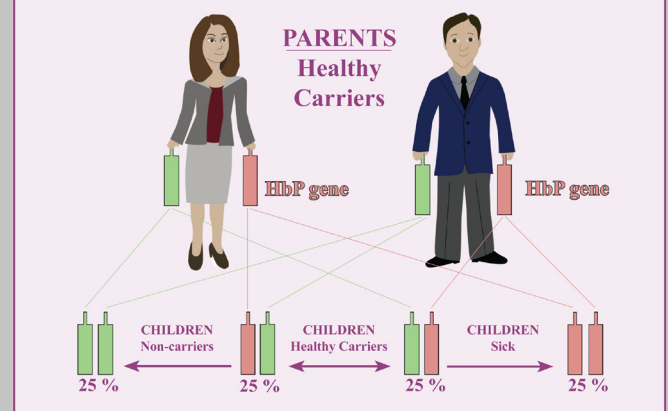
Alternate methodologies (i.e. electrophoresis) usually require a combination of at least two techniques, one qualitative and one quantitative. As a result, these methodologies are time, labor and cost intensive. Tosoh would like you to know that the Beta-thalassemia mode on the G7 analyzer is a faster, easier and less expensive way for presumptive identification of hemoglobinopathies.

### Testimonial:

The University of Virginia Medical Center runs 600 samples/year, and uses the G7 Beta-thalassemia mode because it is faster than electrophoresis: "The Beta-thalassemia program on the G7 has reduced my turnaround time from 7 days to 24 hours" - Walter Oliveira.

Hemoglobinopathies may interfere with an HbA1c result which merits further investigation. Please contact your local System Sales Specialist to learn how you can help provide better patient care.

## Hereditary Luggage: The Hemoglobinopathy Gene



# TOSOH BIOSCIENCE

## Upcoming Tosoh Events:

*American Society for Reproductive  
Medicine Annual Meeting*  
Georgia World Congress  
Atlanta, GA  
10/19-10/21

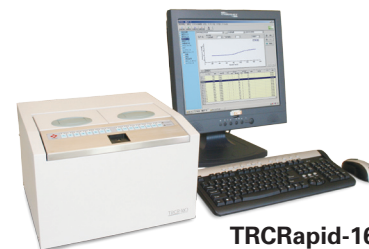
*Northwest Medical  
Laboratory Symposium*  
Doubletree Hotel  
Seattle, WA  
10/21-10/23

*Northeast Laboratory Conference*  
Holiday Inn by the Bay  
Portland, ME  
10/21-10/23

*AACC/CLMA Annual Meeting*  
Turning Stone Casino &  
Convention Center  
Verona, NY  
10/29-10/30

## The Importance of CMV Monitoring of Transplant Patients

In many hospitals across the country, coordinating transplant donors and recipients can be a difficult task. Another critical component of dealing with transplant patients is monitoring these patients post-transplant to optimize anti-viral therapy. Cytomegalovirus (CMV) is a virus that is usually asymptomatic in most healthy individuals, occurring in a latent state. In transplant patients, however, CMV can be re-activated and could lead to fever, leucopenia, hepatitis, colitis, organ damage, psychomotor problems, deafness, as well as vision and neurological problems.



**TRCRapid-160**  
For Research Use Only

A standard method of monitoring CMV has been the antigenemia assay (antibody-based), but this method is less than ideal, due to its poor sensitivity and laborious protocol. More recently, using real-time PCR assays has become a more popular and sensitive method for monitoring active CMV infection. Early and accurate monitoring of infection is critically important in transplant patients for effective anti-CMV therapy. Anti-viral drugs like Gancyclovir administered to transplant patients are expensive and can cause adverse side effects. By monitoring CMV infections using these real-time assays, clinicians can increase the efficiency of this treatment, decrease costs of unnecessary treatment and improve patient care. Tosoh is investigating the clinical utility of a real-time, nucleic acid-based assay for CMV monitoring, called the TRC-CMV assay. If you would like more information, please call 1-800-695-6550, ext. 8117.

## TBI Tech Talk

*On the AIA series of instruments, for what is the calibration verification material (CVM) used?*

Tosoh manufactures CVM for all of our two point sandwich assays. The material has approximately twice the analyte concentration of the positive calibrator, and, as the name suggests, verifies the reportable range of an assay. For six point assays, analyte calibrators may be used to verify the range.



Dr. John Murphy  
Senior TBI Manager  
Technical Support

Each lab should establish protocols for calibration verification and verify at intervals as outlined in the CLIA regulations: Appendix C: Survey Procedures and Interpretive Guidelines for Laboratories and Laboratory Services, Subpart K, Part 1, D.

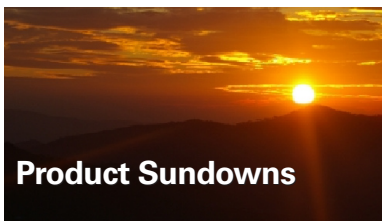
*How frequently should I calibrate the HPLC column?*

Details on the calibration preparation and the procedure are available in the Application Guide found in the Operator's Manual of your HPLC Analyzer. Calibration frequency should be based upon a shift in QC results and chromatogram quality. Each lab must monitor the QC results according to Good Lab Practices (GLP) to determine when to recalibrate.

Calibration should be performed post-service and/or after column change.

*Are Material Safety Data Sheets (MSDS) available on the web?*

Yes, please visit us at [www.tosohbioscience.us](http://www.tosohbioscience.us) and click on the Products tab at the top of the page then select MSDS from the drop-down menu.



## Product Sundowns

### Instruments

#### 2.2 Plus Analyzer

Service availability through June 2010

#### AIA-NexIA Analyzer

Service availability through December 2010

### Assays

#### 40 minute AIA-Pack E2

#### 40 minute AIA-Pack PSA

Available until December 2009  
or while supplies last



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