

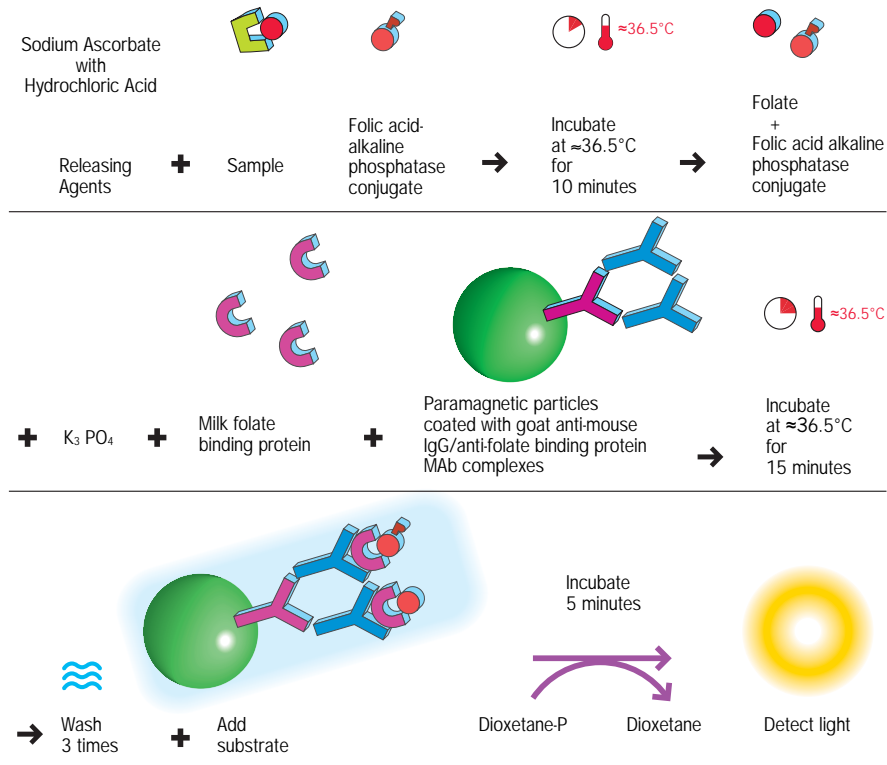
# Folate (with RBC Folate application)



General Chemistry  
**Immunodiagnosics**  
 Centrifugation  
 Disease Management  
 Molecular Diagnostics  
 Hematology  
 Hemostasis  
 Lab Automation  
 Information Systems  
 Flow Cytometry  
 Primary Care

- One kit performs folate and red blood cell folate applications
- Convenient
  - ready-to-use
  - automated pretreatment of serum or hemolysate samples
- Calibration stability: 28 days
  - one calibration curve for both serum and RBC applications
- Folate calibrators traceable to USP to ensure correlation
- RBC Folate recovers WHO 1st International Standard 1996, 95/528 target value

## 2-step competitive binding



Signal produced is inversely proportional to the folate in the sample.





# Folate

## Summary and Explanation

Folate is essential to normal cell growth and DNA synthesis. It is present in a variety of foods such as dark, leafy vegetables, citrus fruits, yeast, beans, eggs and milk. It is absorbed by the small intestine and stored in the liver. Folate deficiency can be caused by insufficient dietary intake, malabsorption or excessive folate utilization. Folate status can be assessed by measuring levels in serum and red blood cells. Serum folate is an indicator of recent folate intake; red blood cell (RBC) folate is a good indicator of long-term folate stores.

Folate and vitamin B<sub>12</sub> are linked by the reaction pathway for methionine synthesis. A deficiency in either leads to a disruption of this pathway and to similar clinical symptoms. Because they have a common metabolic pathway, a B<sub>12</sub> deficiency also can disrupt the uptake of folate into red blood cells, leading to a low RBC folate value even with adequate folate intake. It is often necessary to measure both vitamins in a clinical workup to determine the real culprit; treatment depends on which vitamin is deficient.

## Method Comparison

Comparison of paired serum and plasma (heparin) results generated with the reformulated Access Folate assay (Cat. No. A14208) gives the following statistical data:

n	Range of Observations (ng/mL)	Intercept (ng/mL)	Slope	r
21	6.71 – 18.96 (15.20 – 42.96 nmol/L)	0.472 (1.07 nmol/L)	0.955	0.981

## Characteristics

Sample Type/Size	Serum, plasma (heparin) or whole blood lysate (EDTA, heparin)/55 µL
Time to First Result	35 minutes
Analytical Sensitivity	0.5 ng/mL (1.1 nmol/L)
Calibrator Levels	0, approximately 1.0, 2.5, 5.0, 10.0 and 20.0 ng/mL (0, approx. 2.3, 5.7, 11.3, 22.7 and 45.3 nmol/L)
Expected Normal Values	> 6.59 ng/mL (14.93 nmol/L) (US Population: Folic acid fortified foods commonly available)
RBC Expected Normal Values	> 276 ng/mL (625 nmol/L) packed RBC (US Population: Folic acid fortified foods commonly available)
Open Pack Stability	14 days
Calibration Stability	28 days
Precision	Total imprecision < 15% CV across assay range

## Ordering Information

Access® Folate - 2 packs of 50 tests/pack	A14208
Access® Folate Calibrators - 6 vials of 4 mL/vial	A14207
Access® Folate Diluent (Folate SO Calibrator) - 1 vial of 4 mL	33016
Access® RBC Folate Lysing Agent - 2 vials for preparation of 100 mL/vial	A14206



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