Abbott Ireland Diagnostics Division
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Product Information

Date Issued October 30, 2007

Product

Product Description	Current List Number (LN)	Restandardised List Number (LN)
ARCHITECT Folate Calibrators	7K60-01	7K60-02
ARCHITECT Folate Controls	7K60-10 (2 levels)	7K60-12 (3 levels)
ARCHITECT Folate 5mTHF Low Controls	N/A	7K60-13
ARCHITECT Folate High Controls	7K60-11	Discontinued
ARCHITECT Folate Reagent kits	7K60-20, -25, -30	7K60-22, -27, -32
ARCHITECT Folate Manual Diluent	7K60-50	7K60-52
ARCHITECT Folate RBC Lysis Diluent	7K60-40	7K60-42
ARCHITECT iSystem Assay CD-ROM WW	As currently in use	06E59-24

Reason

This product information letter is being issued to inform you that the ARCHITECT Folate assay has been restandardised and outlines the corresponding changes to the assay. The restandardised assay will provide improved traceability to the WHO Serum Folate International Standard 03/178.

Abbott is implementing this change to address the downward shift in control and/or patient results when using the ARCHITECT Folate assay, as previously communicated in Device Correction Letter FA11MAR2005.

Current Status

- The following changes have been made to the restandardised ARCHITECT Folate calibrators and controls to improve and verify calibration:
  - Calibrator D concentration has been changed from 6.0 ng/mL to 5.0 ng/mL
  - Calibrator E concentration has been changed from 12.5 ng/mL to 10.0 ng/mL
  - Medium control target concentration has been changed from 7.0 ng/mL to 7.5 ng/mL
  - A high pteroylglutamic acid (PGA) control has been added at a target concentration of 15.0 ng/mL
  - The 5-methyltetrahydrofolic acid (5mTHF) control target concentration has been changed from 15.0 ng/mL to 3.0 ng/mL
- The restandardised ARCHITECT Folate assay reagents, calibrators, and controls **CANNOT** be used interchangeably with current reagents, calibrators, and controls.
- Restandardised ARCHITECT Folate reagent, calibrator and control kits will be labelled with the Gold Standardisation sticker for identification. Refer to the control accessory inserts for new control ranges.
- The current ARCHITECT Folate Manual Diluent (LN 7K60-50) and ARCHITECT Folate RBC Lysis Diluent (LN 7K60-40) **CAN** be used interchangeably with the restandardised ARCHITECT Folate Manual Diluent (LN 7K60-52) and the ARCHITECT Folate RBC Lysis Diluent (LN 7K60-42), respectively.
- The restandardised ARCHITECT Folate assay requires the use of the restandardised ARCHITECT Folate assay files (737 and 738) found on the ARCHITECT Assay CD-ROM 06E59-24.
- The restandardised materials listed above are estimated to begin shipping November 2007.

Impact

- Use of restandardised reagents, calibrators, and/or controls with current products may result in Abbott controls out of range.
- Use of restandardised reagent without loading the new assay file will result in an instrument error.
- The shifts that your laboratory may observe in non-Abbott controls, patient samples, and proficiency samples may differ, and must be evaluated according to your laboratory procedures.

Impact on Patient Results

Please refer to the following information in Method Comparison and Expected Values.

Method Comparison

Accuracy by Correlation

Two correlation studies were performed comparing the restandardised ARCHITECT Folate* assay to the current ARCHITECT Folate assay. One study was performed with serum/plasma specimens, and the other with whole blood specimens. The table below summarises the results of these correlation studies. **

Correlation of the ARCHITECT Folate* Assay

Method	Specimen Type	n	Intercept	Slope	Correlation Coefficient (r)
Passing-Bablok † Linear Regression	Serum/Plasma	179	0.73 ng/mL	1.24	0.993
Passing-Bablok † Linear Regression	Whole Blood	124	-12.06 ng/mL	1.35	0.997

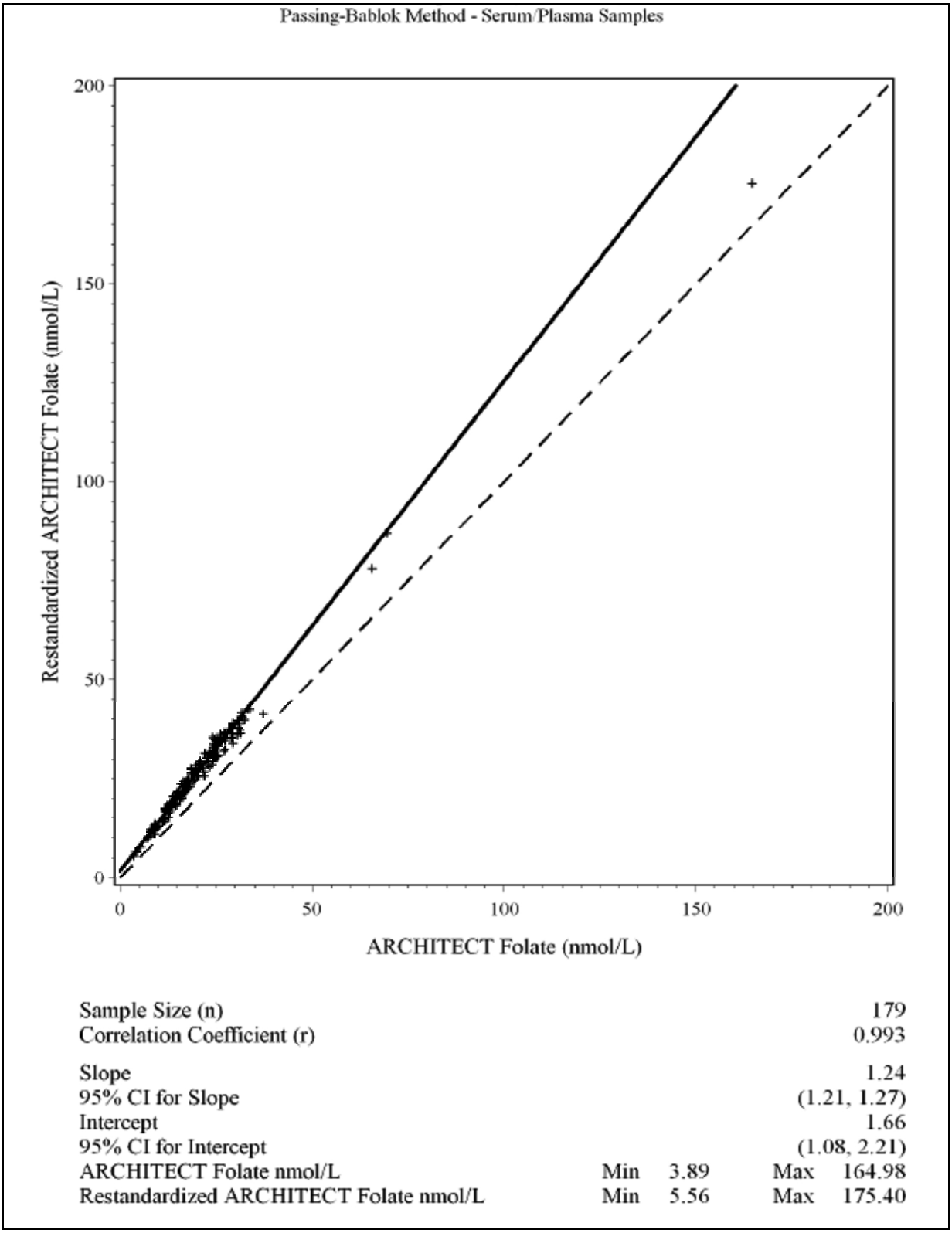
* Standardized to WHO 03/178

** Folate results in individual laboratories may vary from these.

† A linear regression method with no special assumptions regarding the distribution of the samples and measurement errors[1].

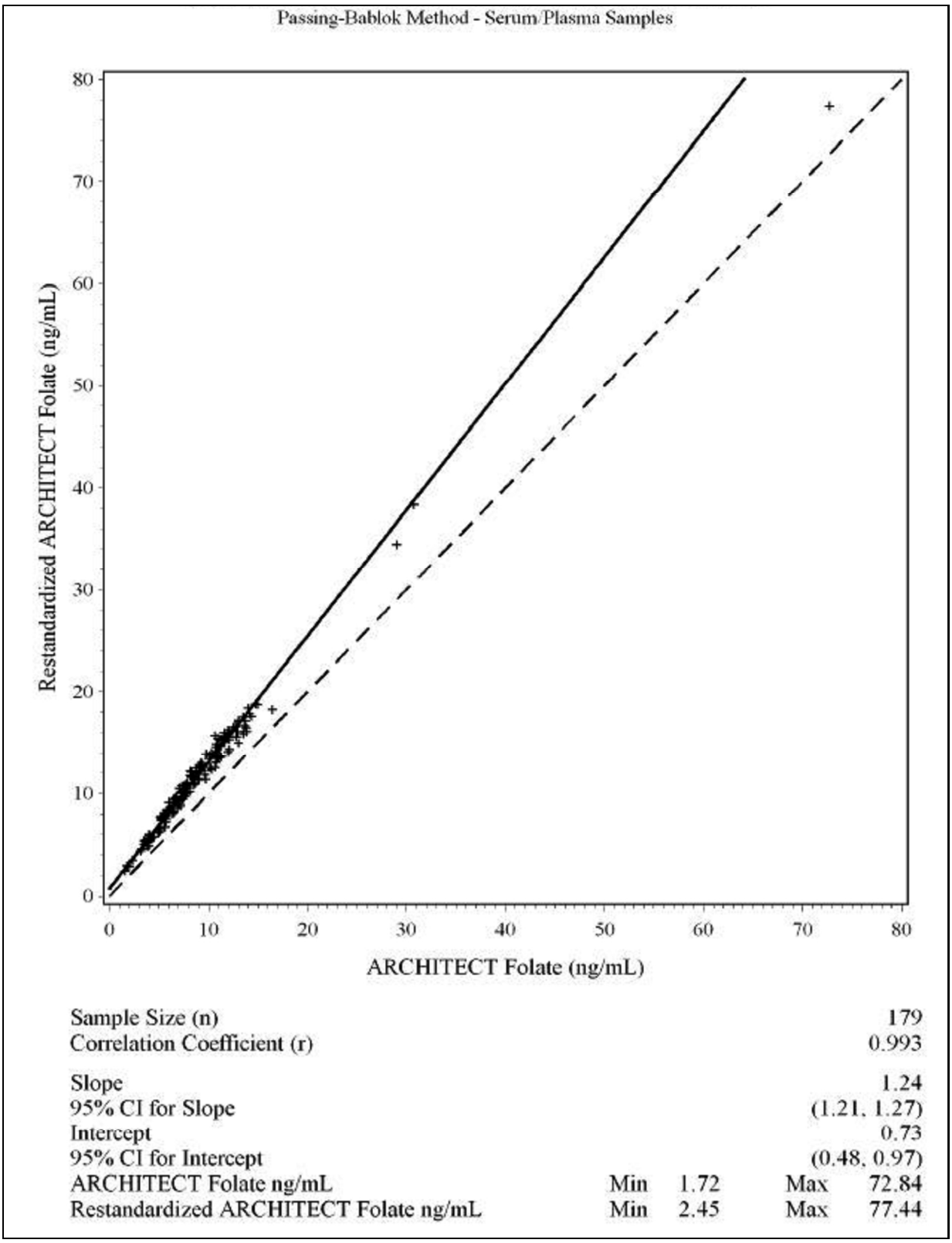
1. Passing H, Bablok W. A new biometrical procedure for testing the equality of measurements from two different analytical methods. *J Clin Chem Clin Biochem* 1983; 21:709-20.

Current ARCHITECT Folate assay versus the Restandardised ARCHITECT Folate Assay (nmol/ L)



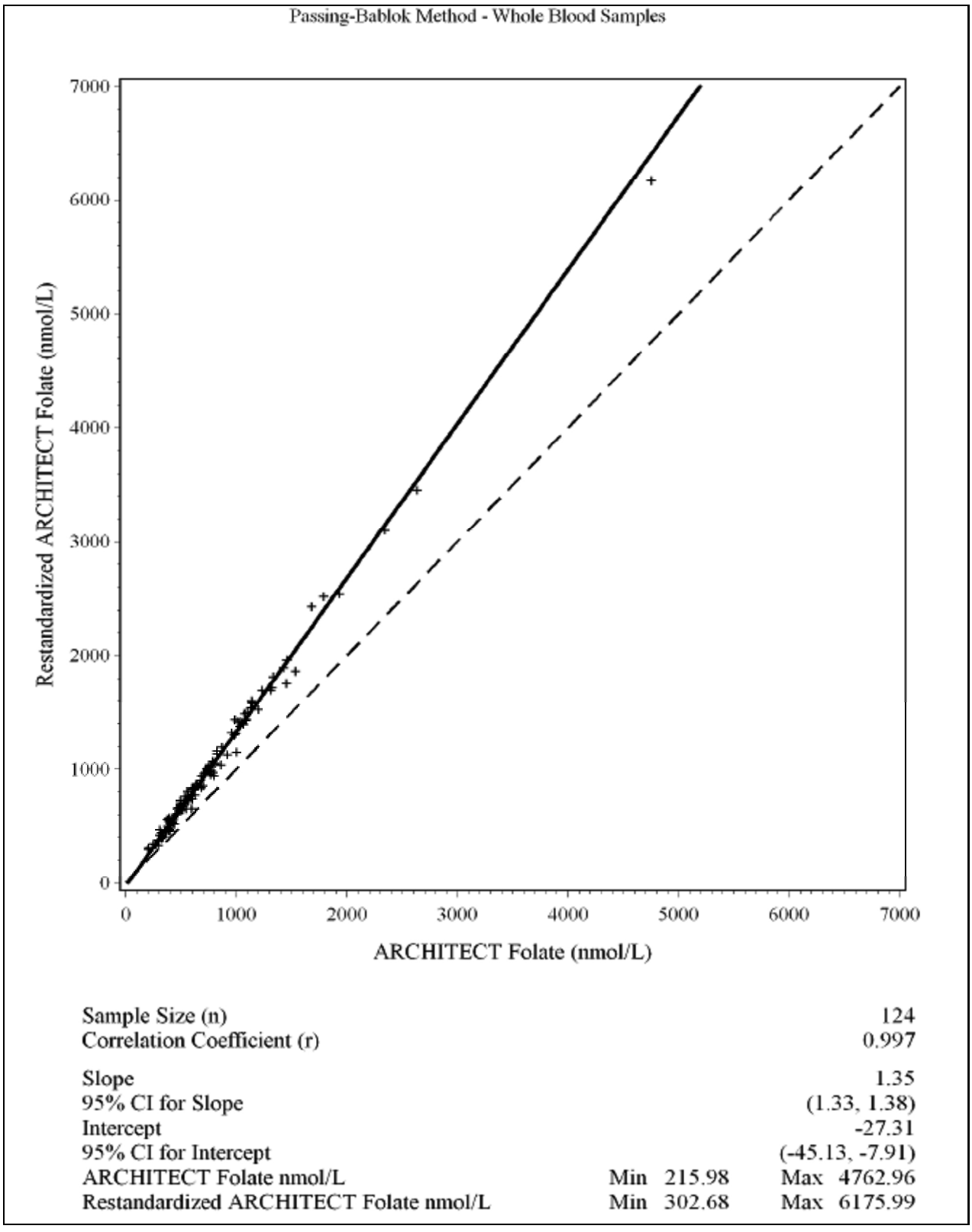
Sample Size (n)				179
Correlation Coefficient (r)				0.993
Slope				1.24
95% CI for Slope				(1.21, 1.27)
Intercept				1.66
95% CI for Intercept				(1.08, 2.21)
ARCHITECT Folate nmol/L	Min	3.89	Max	164.98
Restandardized ARCHITECT Folate nmol/L	Min	5.56	Max	175.40

Current ARCHITECT Folate assay versus the Restandardised ARCHITECT Folate Assay (ng/mL)



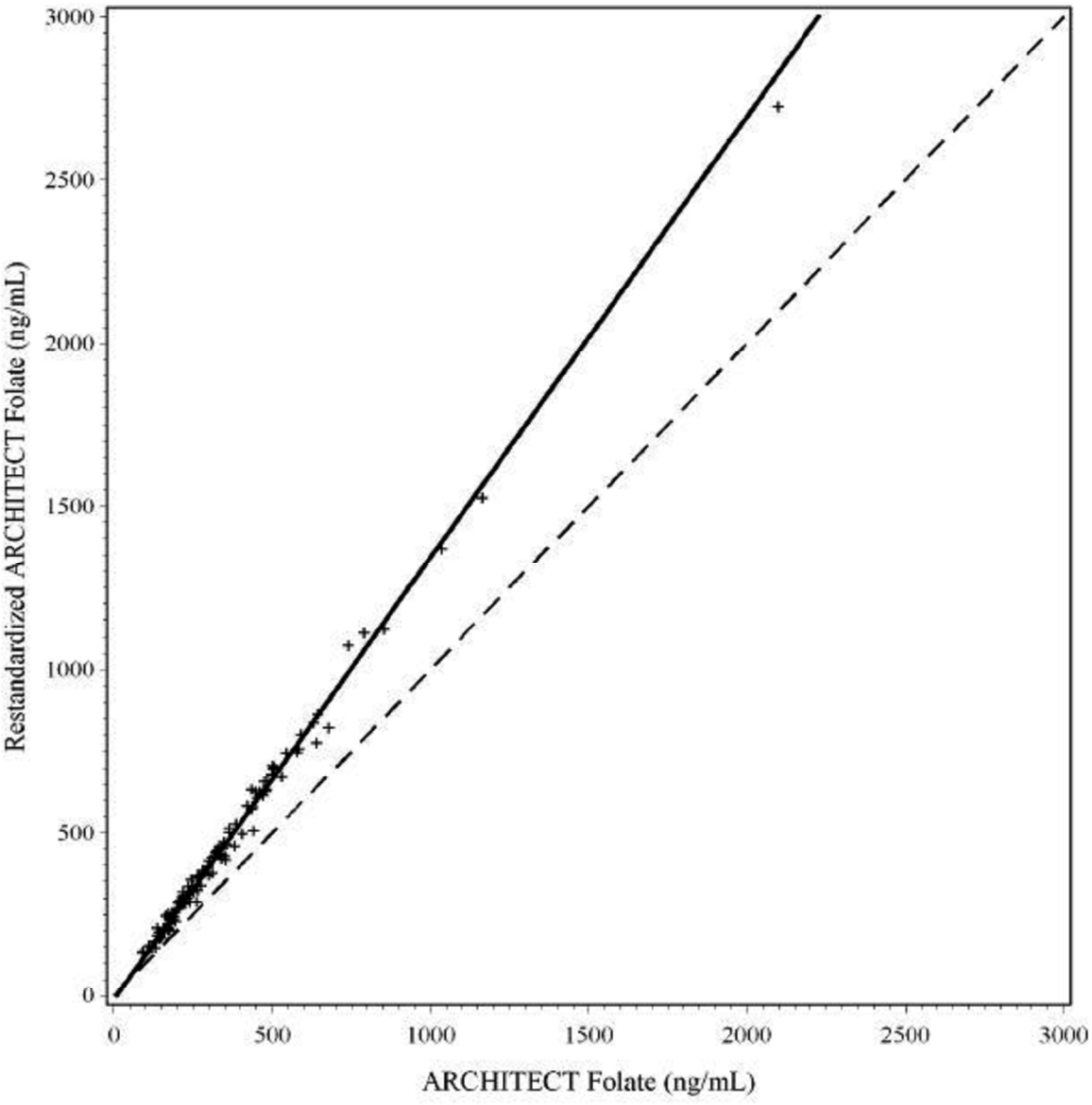
Sample Size (n)				179
Correlation Coefficient (r)				0.993
Slope				1.24
95% CI for Slope				(1.21, 1.27)
Intercept				0.73
95% CI for Intercept				(0.48, 0.97)
ARCHITECT Folate ng/mL	Min	1.72	Max	72.84
Restandardized ARCHITECT Folate ng/mL	Min	2.45	Max	77.44

Current ARCHITECT Folate assay versus the Restandardised ARCHITECT Folate Assay (nmol/L)



Sample Size (n)		124
Correlation Coefficient (r)		0.997
Slope		1.35
95% CI for Slope		(1.33, 1.38)
Intercept		-27.31
95% CI for Intercept		(-45.13, -7.91)
ARCHITECT Folate nmol/L	Min 215.98	Max 4762.96
Restandardized ARCHITECT Folate nmol/L	Min 302.68	Max 6175.99

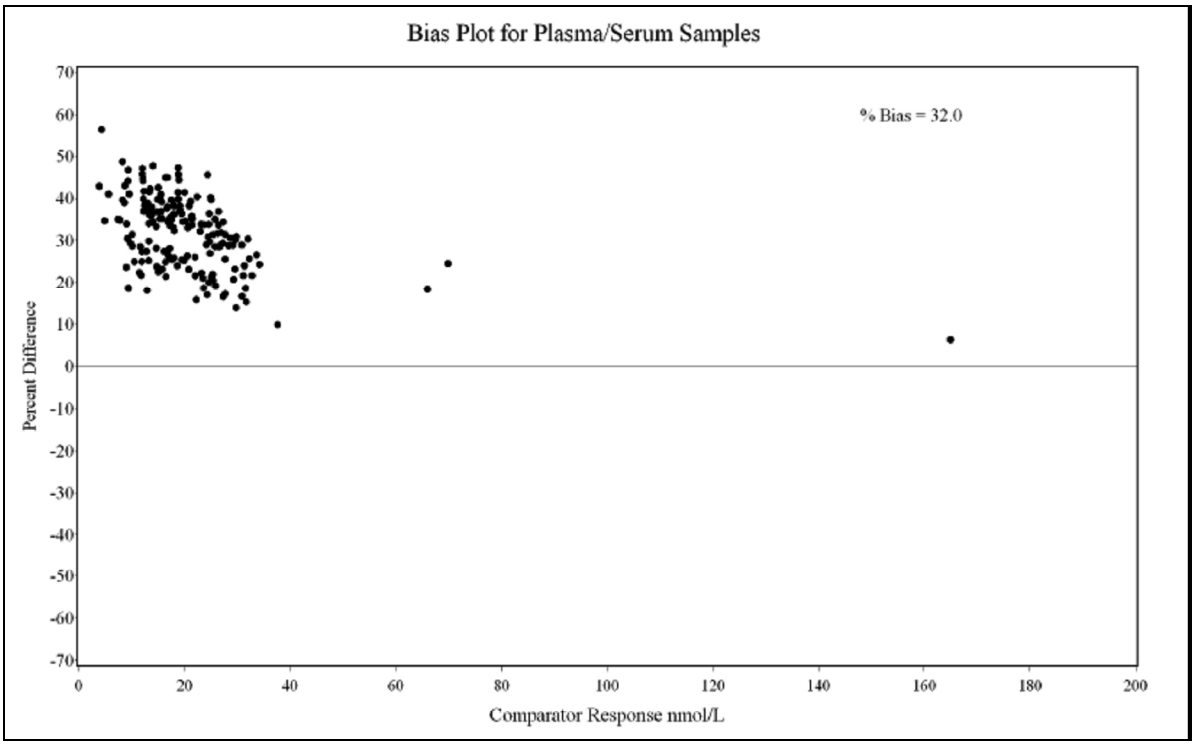
Current ARCHITECT Folate assay versus the Restandardised ARCHITECT Folate Assay (ng/mL)

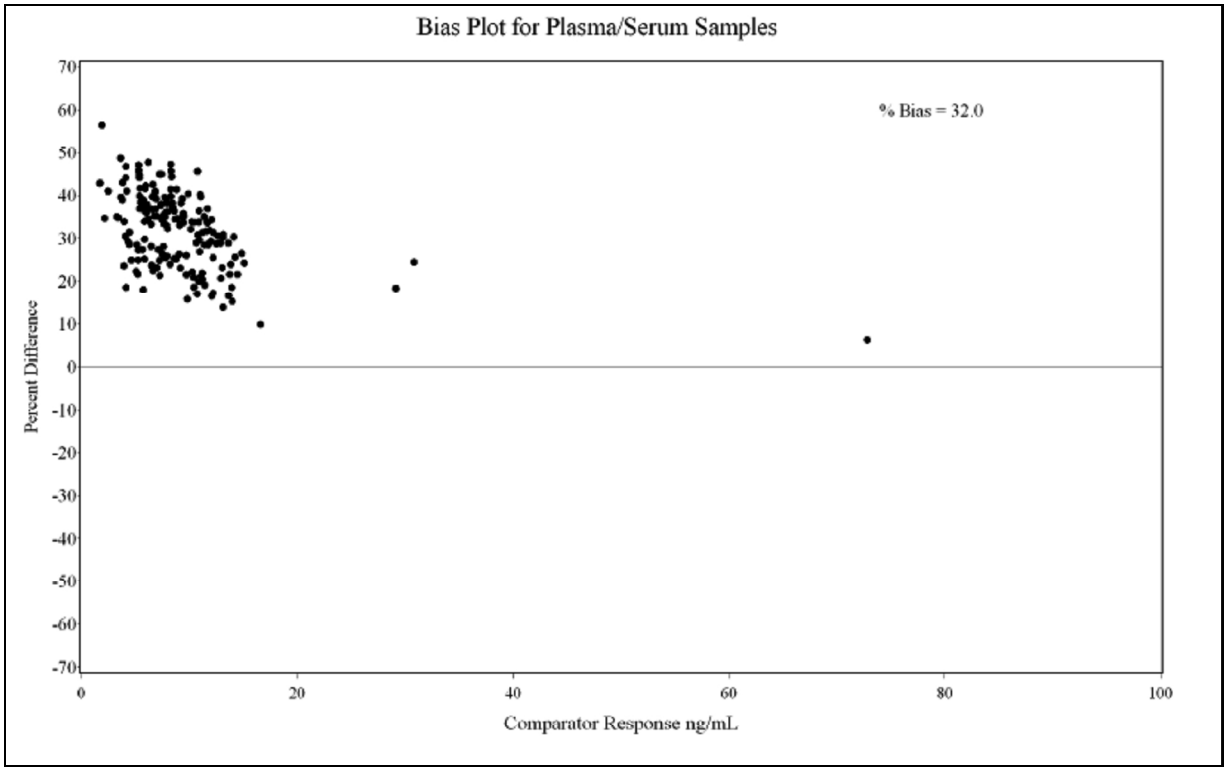


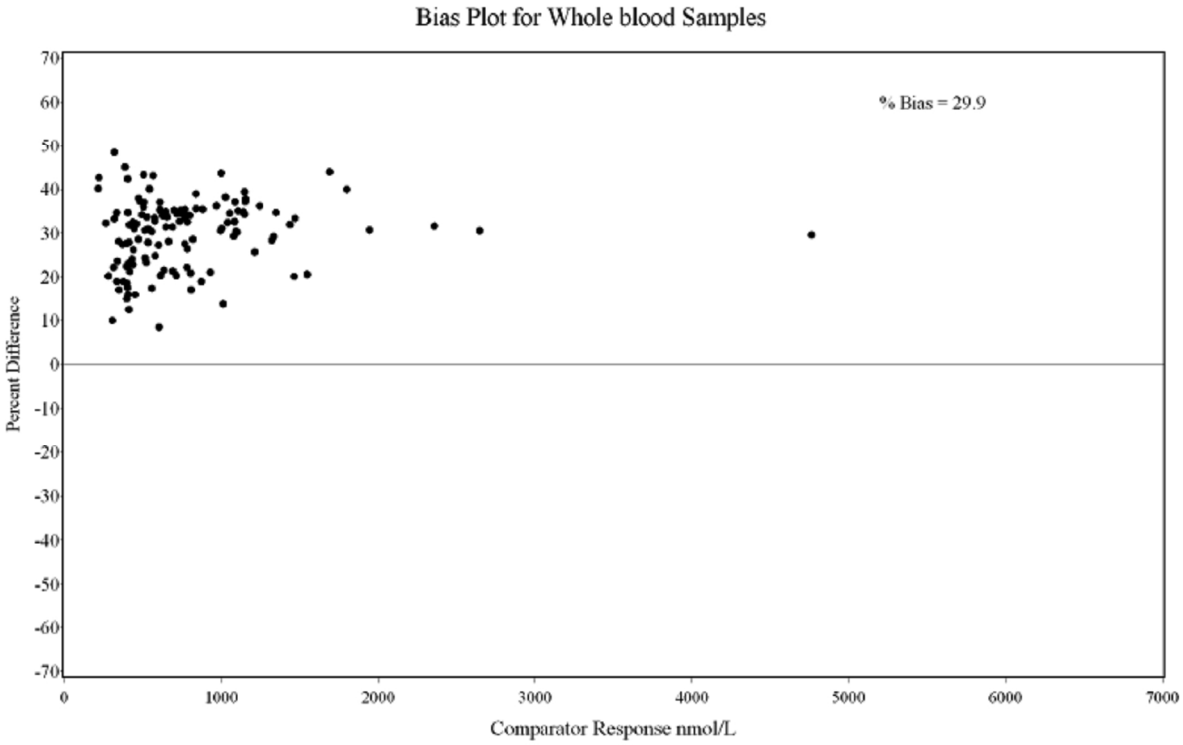
Sample Size (n)		124
Correlation Coefficient (r)		0.997
Slope		1.35
95% CI for Slope		(1.33, 1.38)
Intercept		-12.06
95% CI for Intercept		(-19.92, -3.49)
ARCHITECT Folate ng/mL	Min 95.36	Max 2102.85
Restandardized ARCHITECT Folate ng/mL	Min 133.63	Max 2726.71

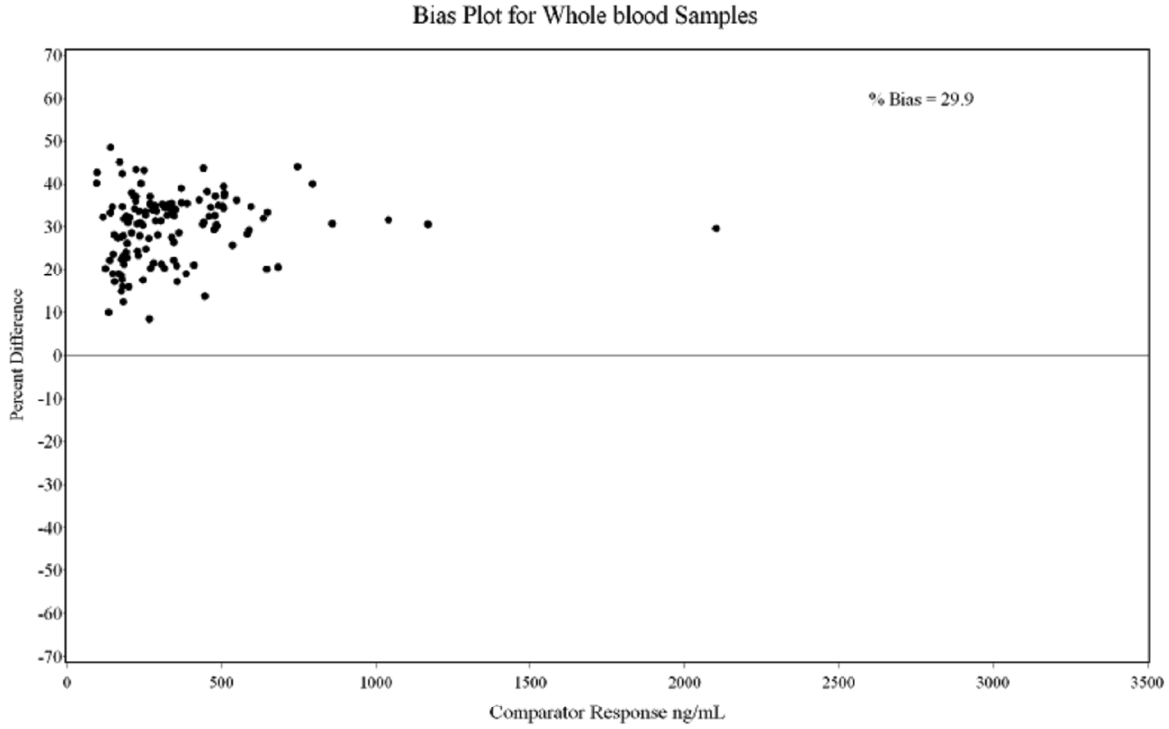
Method Comparison

The following bias plots demonstrate the recovery of the restandardised ARCHITECT Folate Assay for both serum/plasma and whole blood samples.






Bias Plot for Whole blood Samples
% Bias = 29.9
Percent Difference
70
60
50
40
30
20
10
0
-10
-20
-30
-40
-50
-60
-70
0
1000
2000
3000
4000
5000
6000
7000
Comparator Response nmol/L


Bias Plot for Whole blood Samples
% Bias = 29.9
Percent Difference
70
60
50
40
30
20
10
0
-10
-20
-30
-40
-50
-60
-70
0
500
1000
1500
2000
2500
3000
3500
Comparator Response ng/mL

Expected Values

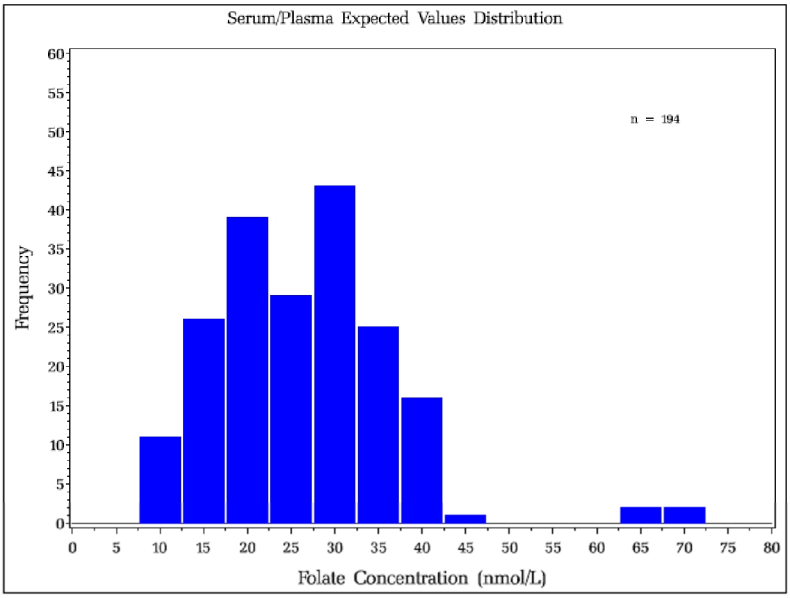
The following plots show the expected values distribution for serum/plasma samples and whole blood samples of healthy US adults with the restandardised ARCHITECT Folate assay.

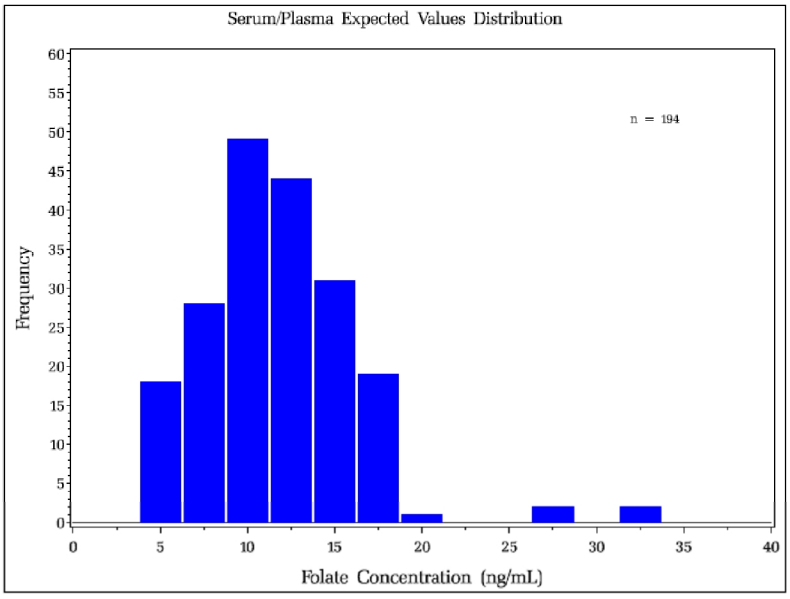
Folate Normals

	nmol/ L	ng/ mL
Serum Normal Range	10.92 to 43.01	4.82 to 18.99
RBC Normal Range	226.02 to 1354.70	99.79 to 598.10

It is recommended that each laboratory establish its own normal and deficient ranges, which may be unique to the population it serves depending upon geographical, patient, dietary, or environmental factors.

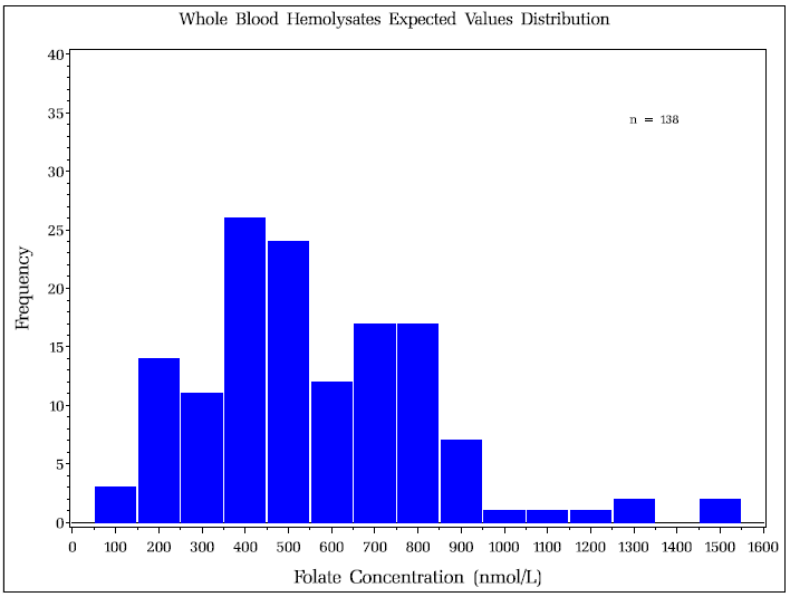
Note: A study is in progress to establish the expected values for an adult population outside the US. Upon completion of this study, the package insert will be updated.

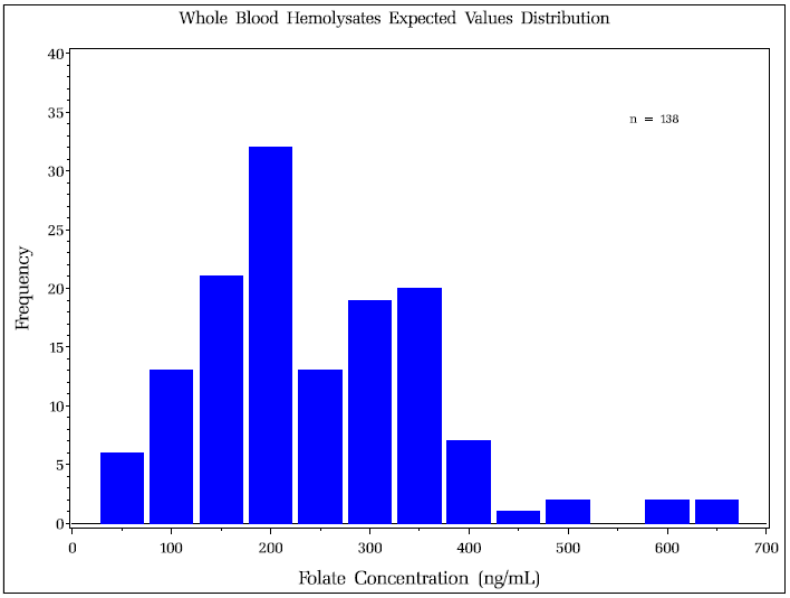




Expected Values

Continued





Recovery of WHO	The restandardised ARCHITECT Folate assay has been standardised to the WHO Serum Folate International Standard (03/178). The assay has been designed to be accurate to the WHO Serum Folate International Standard with a range of ±13.5% for all reagent lots over the life of the product.

Action

- The data shown above is representative data. Variables such as differences in sampling size and sample population may impact the correlation of the assay; therefore, results in individual laboratories may vary from these data.
- Your laboratory may choose to deplete any existing inventory of current ARCHITECT Folate Reagent, Calibrator, and Control lot numbers before converting to the restandardised lot numbers listed above.
- **DO NOT MIX** your current inventory with the newly restandardised lot numbers when utilizing the restandardised ARCHITECT Folate assay.
- The Abbott Multi-Constituent Control (List 6E20) ranges may need to be re-established in your lab due to the expected upward shift resulting from the restandardisation.
- Established non-Abbott control ranges may not reflect the expected shift with the restandardised ARCHITECT Folate Assay. Each laboratory should establish its own means and acceptable ranges for non-Abbott controls.
- It is recommended that each laboratory establish its own reference range that is appropriate for the laboratory's patient population (i.e., a normal range that reflects the type of specimen and demographic variables such as age and sex, as applicable).
- We recommend that you communicate to health care providers you serve and to your proficiency material supplier that you are utilizing the restandardised ARCHITECT Folate assay.

If necessary, retain this Customer Letter for your laboratory records.

Contacts

Abbott is committed to providing the highest quality diagnostic products and services to meet the needs of your laboratory and the providers and patients you serve. If you or any of the health care providers you serve have any questions regarding this information, please contact your local customer service. Please refer to PI30OCT2007