Commencing on the 18th June, 2006, these vitamins will be assayed by direct measurement using HPLC. The previous indirect methods of assessing vitamin B status by the activation of red cell enzymes will no longer be performed. As the previous methods did not directly measure the vitamins there can be no correlation with the new methods.

Different specimen handling will be required for vitamin B samples with the new methods:

Vitamins B1 and B2 will be performed on EDTA whole blood only.
Vitamin B6 will be performed on EDTA whole blood or plasma.

Whole blood samples should be protected from light and frozen as soon as possible after collection at -20 degrees C. Plasma should be separated as soon as possible after collection, protected from light and frozen at -20 degrees C. All samples should remain frozen during transport.

Please note: Whole blood samples should not be stabilised with ACD stabiliser as with the previous method!!

If more than one vitamin is requested, samples should be collected into separate tubes to avoid repeated thawing of the samples at this laboratory as this affects stability.

Reporting of results:

Vitamin B1 will be reported as concentration of thiamine pyrophosphate (the physiologically active form of vitamin B1).
Reference range for TPP is 67 – 200 nmol/L.

Vitamin B2 will be reported as concentration of Flavin adenine dinucleotide (the main physiologically active form of vitamin B2).
Reference range for FAD is 174 – 471 nmol/L.

Vitamin B6 will be reported as concentration of pyridoxal-5-phosphate (the physiologically active form of vitamin B6).
Reference range for P5P in whole blood is 35 – 110 nmol/L and in plasma is 15 – 73 nmol/L.

Please notify all laboratories and blood collection centres associated with your organisation of these changes.

Please contact:
Jan Pamment (Senior Hospital Scientist) on (02) 9515 7675 or janice.pamment@email.cs.nsw.gov.au if there are any questions about the new method.