

Laboratory Medicine Bulletin

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Availability of plasma Beta-hydroxybutyrate (BOHB) at the SPH laboratory:

The plasma (or serum) beta-hydroxybutyrate (BOHB) test is now available on site in the SPH chemistry laboratory. This test has previously been available via the Vancouver General Hospital laboratory. With the on site location of the test, the turnaround time will be substantially shorter given the absence of a sample transportation delay.

For the time being, plasma (or serum) total ketones or BOHB may be both ordered individually. The two tests provide similar information with some differences as outlined in the following table.

Test	Molecules detected	Result reporting	Clinical Relevance
Plasma (total) ketones	Acetoacetate: <ul style="list-style-type: none"> - minimal cross reactivity with acetone - no cross reactivity with BOHB 	Semi-quantitative reporting corresponding to approximate values as follows: <ul style="list-style-type: none"> Negative = <0.5 mmol/L Trace = 0.5 – 1 mmol/L Small = 1 – 4 mmol/L Moderate = 4 – 8 mmol/L Large = >8 mmol/L 	Acetoacetate forms the minor component of the ketone bodies produced during the initial presentation of an acute ketotic state such as diabetic ketoacidosis. Proportionately more acetoacetate is produced during the recovery period.
Plasma BOHB	BOHB only	Quantitative results reported between 0.05 and 20 mmol/L Normal values are <0.31 mmol/L	BOHB is the major ketone body produced during the acute ketotic state of diabetic ketoacidosis. Quantitative BOHB levels are of similar magnitude to the anion gap.

The urine total ketone test will remain available as part of the routine urinalysis dipstick test.

Please do not hesitate to contact us at 604 682 2344 if you have any questions:



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