



## *Technical Memorandum*

**TO:** Physicians, Staff  
**From:** Wesley Kim, MD, Medical Director  
**Date:** July 13, 2016  
**Subject:** Beta-hydroxybutyrate (BHB)

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Beta-hydroxybutyrate (BHB) is 1 of 3 sources of ketone bodies. Its relative proportion in the blood (78%) is greater than the other 2 ketone bodies, acetoacetate (20%) and acetone (2%). During carbohydrate deprivation (starvation, digestive disturbances, frequent vomiting), decreased carbohydrate utilization (diabetes mellitus), glycogen storage diseases, and alkalosis, acetoacetate production increases. The increase may exceed the metabolic capacity of the peripheral tissues. As acetoacetate accumulates in the blood, a small amount is converted to acetone by spontaneous decarboxylation. The remaining and greater portion of acetoacetate is converted to BHB.

In the past, DLS performed qualitative testing for ketones (acetone and acetoacetate) using the ACETEST. Due to a discontinuation nationwide of this test by the manufacturer, the ACETEST will no longer be offered. The discontinuation of this test request by DLS will occur on August 1, 2016, for DLS laboratories on Oahu. Neighbor island discontinuation of this test will be effective in the next few months.

In response to this change, DLS is offering quantitative testing specifically for Beta-Hydroxybutyrate (BHB).

In addition, all requests for testing for Ketones, on urine or serum, will be automatically converted to Beta-Hydroxybutyrate.

***Test Information:***

<b>TEST</b>	<b>ORDER CODE</b>	<b>UNITS</b>
Beta –hydroxybutyrate (BHB)	5517	mmol/L
Acetone, Semi-Quantitative	798 will be discontinued	

If you have any questions, you may contact DLS Client Services at 589-5101, or Dr. Wesley J. Kim at 589-5131.