

Beta-Hydroxybutyrate – Test to Replace Serum Ketones and Measuring Unit Change

Orderable: Beta-Hydroxybutyrate [LAB2336]

Effective April 7th, 2026, the Chemistry Laboratory will replace the current serum ketones test with the more sensitive serum beta-hydroxybutyrate test for evaluation of diabetic ketoacidosis. The decision was made in collaboration with the VCU Division of Endocrinology, Diabetes and Metabolism and the Department of Internal Medicine

Beta-hydroxybutyrate testing was previously sent to LabCorp with results reported in measuring units of mg/dL. The new in-house test will be available STAT and results will be reported in measuring units of mmol/L, consistent with American Diabetes Association (ADA) guidelines^{1,2}.

Summary of Changes:

1. In-house beta-hydroxybutyrate testing will be available STAT.
2. Beta-hydroxybutyrate results will be reported in measuring units of mmol/L.
3. Serum ketones orders in pre-existing EPIC order sets and preference lists will be automatically converted to beta-hydroxybutyrate orders.

Reference Interval for the new in-house beta-hydroxybutyrate test:

0.2-0.27 mmol/L

No Critical Values are reported.

References:

1. Umpierrez GE, Davis GM, ElSayed NA, et al. Hyperglycemic crises in adults with diabetes: a consensus report. *Diabetes Care*. 2024;47(8):1257-1275.
2. Rodriguez Alvarez P, San Martin VT, Morey-Vargas OL. Hyperglycemic crises in adults: A look at the 2024 consensus report. *Cleveland Clinic Journal of Medicine*. 2025;92(3):152-158.

For questions, please contact Pathology Client Services at (804) 828-7284.