



MEMORANDUM #82

TO: UNC Hospitals Attending Physicians, Housestaff, Nursing Coordinators, Department Heads, and Supervisors.

FROM: Christopher R. McCudden, Ph.D., Associate Director, Core Laboratory *CM*
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DATE: February 6, 2009

SUBJECT: **New Core Laboratory Blood Gas Instruments**

Effective February 11, 2009, the Core Laboratory will begin using new instruments (Radiometer ABL835s) for blood gas analysis. While the overall impact will be minimal, there are a few minor changes that can be expected.

There will be a software update resulting in a change in calculated bicarbonate. The new calculation will use the Henderson-Hasselbalch equation and be consistent with other blood gas instruments. The reported concentration of bicarbonate will not change significantly.

In addition, the analytical measurement ranges for pH of body fluids will change from 4.5-8.0 to 6.8-7.8. Upon request, body fluids with pH values outside this range will be measured using dipstick tests, which have a pH range of 5-9 and an accuracy of approximately ± 1 unit.

As a consequence of the change to the pH analytical measurement range, the Core Laboratory will cease offering the 'renal acidosis panel' on urine. This test required anaerobic urine collection via suprapubic aspirate or catheter collection into a syringe and has not been ordered in several years.

Please contact Dr. Christopher McCudden (966-3726) or the Core Laboratory (966-2361) for additional information.