



## RT LACTATE VS LAB LACTIC ACID

### ORDERABLE IN CERNER:

#### Lactic Acid Level

Sample: Venous – Analyzed in Lab  
Blood: is spun down and analysis is done on plasma.  
Turn Around Time when receipt in lab: 30 min.

#### Lactate - Respiratory

Sample: Venous sample drawn by RN and run by RT using blood gas analyzer.  
Blood: Analysis is done on whole blood.  
Turn Around Time receipt by RT to result is less than one minute.

#### ABG/Lytes/Metabolites

Sample: Arterial ABG sample drawn by RT  
Blood: ABG and Lactate results using whole blood.  
Turn Around Time when receipt by RT to result is less than one minute.

#### POC Lactate

Sample: Venous  
Blood: Analysis is done on whole blood.  
Turn Around Time when receipt on iStat device. Average time from collection to result is 12 minutes.

### DIFFERENCES IN ARTERIAL VS VENOUS / RADIOMETER ABL90 OR LAB

Lactate levels must be available in your institution with rapid turnaround time (within minutes) to effectively treat severely septic patients. An arterial blood gas analyzer located in the clinical laboratories usually satisfies this requirement. However, any means of rapid turnaround time is acceptable. “While there is no consensus of settled literature on this question, an elevated lactate of any variety is typically abnormal and must be explained. Either collection is appropriate for bundle compliance.”

survivingsepsis.org site states:

“The arterial lactate and venous lactate levels were strongly correlated in the condition of sepsis or septic shock. Consequently, V-LACT may be used in substitution for A-LACT particularly in lactate levels not higher than 4 mmol/l.”

Trending should be generally applied using a single method and specimen type (e.g. whole blood vs. venous plasma), i.e. do not interchange methods of specimen types.

\* National Center of Biotechnology Information \_\_\_\_\_

***Determining one method or another for measuring initial Lactate levels is important. You cannot expect to draw a sample for RT to run and another sample to send to the lab and expect the values to be the same. Lactate values are very sensitive and change with time, method of measurement, serum vs whole blood. The important thing is to determine how you would like Lactate measured and stick with that method.***