

Lakeland Laboratory

8/17/2021

New Test: Ionized Calcium Available for Emergency, Surgical and Inpatient Testing

Available **September 1, 2021** Spectrum Health Lakeland Laboratory will offer ionized calcium as a standalone test for critical care in the emergent and inpatient setting.

Ionized calcium (Ca⁺⁺) is the physiologically active form of calcium and comprises approximately 45% of the total calcium in plasma. Calcium is essential for the contractility of smooth vascular muscle, and it plays a vital part in cardiovascular function. It is one of the most tightly controlled analytes in the body.

In critical care situations, especially when the patient receives large amounts of blood, the patient's ionized calcium levels should be monitored closely. Transfused blood typically contains citrate as an anticoagulant that can bind ionized calcium and reduce its level in the blood. Decreased ionized calcium levels can lead to cardiac and neuromuscular malfunction.

Because hydrogen ions compete with calcium for calcium binding sites, a change in sample pH can have a direct effect on ionized calcium levels. For this reason, when blood pH is between 7.2 and 7.7 ionized calcium results will be adjusted to a normalized pH of 7.4. When pH is <7.2 or >7.7, Ionized Calcium results cannot be generated. Any exposure to ambient air can affect results and therefore, strict adherence to approved collection instructions is imperative.

Whole blood samples must be drawn and transported to the St. Joseph campus laboratory for testing within 30 minutes. If transportation exceeds 30 minutes, the specimen must be placed on ice and must be tested in <4 hours. Please see online test catalog for detailed collection and transportation guidelines.

ORDERING INFORMATION

Test Name	EPIC Code	LIS Code	Price	CPT
Calcium, Ionized	LAB3227	CAIO	\$53.33	82330

For additional information or questions please contact Lakeland Laboratory Client Services:

- Call (269) 983-8311
- 1-800-513-9193

Or go to Lakeland Internet: www.lakelandhealth.org/lab then select laboratory catalog menu