



## NEBRASKA MEDICINE—CHEMISTRY

Listed below are the established critical limits for the Nebraska Medicine Chemistry areas, University Health Center-UNL Lab and Internal Medicine Associates-Grand Island. Results exceeding these limits are flagged as critical in the LIS and must be called to the patient's caregiver or physician. Certain life-threatening critical levels will be called each time the result is obtained (**analytes in bold print with asterisk**). Critical results for the other analytes will be called the first time obtained on a patient during one inpatient admission AND whenever it returns to critical status again. Outpatient criticals are called every time. Internal Medicine Associates-Grand Island exception: critical CO<sub>2</sub> are not called on patients with diagnosed COPD.

At the discretion of the section and with medical director approval, arrangements may be made to call non-critical values which are of concern.

### \*ANALYTE IN BOLD=CALL EVERY TIME!

<b>*Acetaminophen</b>	<b>&gt; 150.0 mcg/mL</b>	<b>*Fetal fibronectin</b>	<b>all positives</b>
Alcohol level	> 300 mg/dL	Lactic Acid	> 3.3 mmol/L
<b>*Amikacin</b>	<b>&gt; 30.0 µg/mL (random)</b> <b>&gt; 30.0 µg/mL (peak)</b> <b>&gt; 8.0 µg/mL (trough)</b>	Call first time critical and call if critical and no lactates have been performed for 48 hours.	
Amylase	> 225 U/L	<b>*Lithium</b>	<b>&gt; 2.0 mmol/L</b>
<b>*Base excess (cord blood-arterial)</b>	<b>≥ 12 mmol/L</b>	<b>*Magnesium</b>	<b>&lt; 1.0 mg/dL</b> <b>&gt; 5.0 mg/dL (non-OB)</b> <b>&gt; 8.0 mg/dL (OB)</b>
Bilirubin, Total	>12.0 mg/dL (0-6 days) >15.0 mg/dL (≥7 days-1 year)	Methemoglobin	> 10%
<b>*Calcium</b>	<b>&lt; 6.5 mg/dL</b> <b>&gt; 13.0 mg/dL</b>	Osmolality, serum	< 260 mOsm/kg > 330 mOsm/kg
<b>*Calcium, Ionized</b>	<b>&lt; 0.90 mmol/L</b> <b>&gt; 1.60 mmol/L</b>	<b>*pO<sub>2</sub> (ecmo)</b>	<b>&lt;100 mmHg</b>
<b>*Carbamazepine</b>	<b>&gt; 20.0 mcg/mL</b>	<b>*pCO<sub>2</sub> (blood gases)</b>	<b>&lt; 21 mmHg</b> <b>&gt; 69 mmHg</b>
<b>*Carbon Monoxide</b>	<b>&gt; 20.0%</b>	<b>*pH (blood gases)</b>	<b>&lt; 7.21</b> <b>&gt; 7.59</b>
Chloride	< 75 mmol/L > 125 mmol/L	<b>*pH (cord blood-arterial)</b>	<b>≤ 7.00</b>
CO <sub>2</sub>	< 10.0 mmol/L > 40.0 mmol/L	<b>*Phenobarbital</b>	<b>&gt; 60 mcg/mL</b>
Creatinine	> 7.50 mg/dL	<b>*Phenytoin</b>	<b>&gt; 30 mcg/mL</b>
CSF Glucose	< 40 mg/dL > 400 mg/dL	Phosphorus	< 1.2 mg/dL
CSF Protein For infant < 1 day old	< 11 mg/dL & > 99 mg/dL < 11 mg/dL & > 121 mg/dL	<b>*pO<sub>2</sub> (arterial)</b>	<b>&lt; 40 mmHg</b>
<b>*Digoxin</b>	<b>&lt;10 year: ≥3.0 ng/mL</b> <b>≥10 year: ≥2.5 ng/mL</b>	<b>*Potassium</b>	<b>&lt; 2.9 mmol/L</b> <b>&gt; 6.0 mmol/L</b>
<b>*Gentamicin</b>	<b>&gt; 2.0 mcg/mL (trough)</b> <b>&gt; 12.0 mcg/mL (peak)</b>	<b>*Salicylate</b>	<b>&gt; 30.0 mg/dL</b>
<b>*Glucose</b>	<b>Neonates (≤28 days) &lt; 45</b> <b>Children (≥ 29 days up to 18 years) &lt; 60</b> <b>Adults (18 years+) &lt;54</b> <b>All ages &gt;450</b>	Sodium	< 120 mmol/L > 160 mmol/L
		<b>*Theophylline</b>	<b>&gt; 20.0 mcg/mL</b>
		<b>*Tobramycin</b>	<b>&gt; 2.0 mcg/mL (trough)</b> <b>&gt; 12.0 mcg/mL (peak)</b>
		Troponin I	≥ 0.4 ng/mL (main lab) > 0.35 ng/mL (iStat)
		<b>*Valproic Acid</b>	<b>&gt; 200 mcg/mL</b>
		<b>*Vancomycin</b>	<b>&gt; 25.0 mcg/mL (trough)</b> <b>&gt; 80.0 mcg/mL (peak)</b>