Lab Dept: Chemistry

Test Name: HCO3

**General Information** 

Lab Order Codes: HCO3

**Synonyms:** Bicarbonate, blood; Bicarb

**CPT Codes:** 82374 – Carbon dioxide, bicarbonate

**Test Includes:** HCO3 concentration as a calculated value reported in mEq/L.

Logistics

Test Indications: Useful for evaluation of acid-base balance and the body's ability to control

pH. Bicarbonate ion is the principle transport form for CO2.

**Lab Testing Sections:** Chemistry

**Phone Numbers:** MIN Lab: 612-813-6280

STP Lab: 651-220-6550

**Test Availability:** Daily, 24 hours

Turnaround Time: 30 minutes

**Special Instructions:** Arterial punctures, arterial line and indwelling arterial catheter samples must

be obtained by physicians or qualified staff from radial, brachial, femoral

arteries or catheter sites.

Specimen

Specimen Type: Whole blood

**Container:** Preferred: Sims Portex® syringe (PB151) or Smooth-E syringe (956-463)

**Draw Volume:** 0.4 mL (Minimum: 0.2 mL) blood

**Processed Volume:** 0.2 mL blood

**Collection:** Arterial punctures must be performed by qualified personnel. Once the

puncture has been performed or the arterial line specimen drawn,

immediately remove all air from the syringe. Remove the needle, cap tightly and gently mix. Forward the specimen promptly at ambient temperature.

Note on arterial line draws: The IV solution must be removed from the

system prior to collection to prevent contamination.

**Special Processing:** Lab Staff: Deliver the specimen to the blood gas testing station. Testing

must be completed within one hour of collection or the sample should be

immersed in an ice bath as soon as possible.

Patient Preparation: Based on collection type

Sample Rejection: Mislabeled or unlabeled specimens, samples containing air, non-

heparinized samples, collection times exceeding one hour and clotted

samples

Interpretive

**Reference Range:** 22 - 27 mEq/L

Critical Values: <10 and >40 mEq/L

Limitations: N/A

**Methodology:** HCO3 by calculation

References: Tietz, Norbert (1995) Clinical Guide to Laboratory Tests, 3rd edition, WB

Saunders Co, pp 1081-1084

NCCLS (1999) Procedures for the Collection of Arterial Blood Specimens,

Third Edition, NCCLS document, HII-A3

ABL 800 Flex Operator's Manual, Publication 201410, Edition E, Code

Number 994-909

ABL90 FLEX Operator's Manual, Publication 201403, Edition H, Code

Number 996-656

**Updates:** 3/29/2016: Change TAT, previously listed as 1 hour

6/11/2018: Updated references