

# Blood Gas Testing Updates



**Clayton Wilburn, MD**  
Medical Director  
Clinical Chemistry  
Phone: 847-9657

On 11/6/2021, the UVMHC Laboratory will be updating the analytes and adding reference ranges (including pediatric reference ranges) for the following tests: Arterial Blood Gas, Venous Blood Gas, Cord Blood Gas-Arterial, and Cord Blood Gas-Venous. This change is part of the UVMHC standardization of laboratory reporting and reference ranges as part of the Wave II/III EPIC go-live. The test builds for the Cord Blood Gas tests will be updated with new BE and BD result components. The analytes and reference ranges for each of the aforementioned tests are as follows:

| Orderable Name      |                 |       | Epic Code |        | Atlas Code |         | LOINC   |
|---------------------|-----------------|-------|-----------|--------|------------|---------|---------|
| Blood Gas, Arterial |                 |       | LAB3031   |        | ABG        |         | 24336-0 |
| Analyte:            | pH              | pCO2  | pO2       | tCO2   | BE         | BD      | O2SAT   |
| Units:              |                 | mmHg  | mmHg      | mmol/L |            |         | %       |
| Sex                 | Male and Female |       |           |        |            |         |         |
| Age                 |                 |       |           |        |            |         |         |
| 0-1 days            | 7.26-7.49       | 27-40 | 55-80     | 22-26  | -2 to 3    | -3 to 2 | 95-98   |
| 1-7 days            | 7.29-7.45       | 27-41 | 54-95     |        |            |         |         |
| >=7 days            | 7.35-7.45       | 35-45 | 80-105    |        |            |         |         |
|                     |                 |       |           |        |            |         |         |
| Orderable Name      |                 |       | Epic Code |        | Atlas Code |         | LOINC   |
| Blood Gas, Venous   |                 |       | LAB3032   |        | VBG        |         | 24339-4 |
| Analyte:            | pH              | pCO2  | pO2       | tCO2   | BE         | BD      | O2SAT   |
| Units:              |                 | mmHg  | mmHg      | mmol/L |            |         | %       |
| Age                 |                 |       |           |        |            |         |         |
| All ages            | 7.31-7.41       | 41-51 | 30-50     | 22-28  | -2 to 3    | -3 to 2 | 60-85   |
| Sex                 | Male and Female |       |           |        |            |         |         |

## PATHOLOGY & LABORATORY MEDICINE

111 Colchester Avenue | Mail Stop: 233MP1 | Burlington, Vermont 05401

## PHONE LABORATORY CUSTOMER SERVICE

(802) 847-5121 | (800) 991-2799

# Blood Gas Testing Updates

| Orderable Name                   |                 |             | Epic Code |             | Atlas Code |           | LOINC   |
|----------------------------------|-----------------|-------------|-----------|-------------|------------|-----------|---------|
| Blood Gas, Cord Arterial         |                 |             | LAB3033   |             | CBG        |           | 51974-4 |
| Analyte:                         | pH              | pCO2        | pO2       | tCO2        | BE         | BD        |         |
| Units:                           |                 | mmHg        | mmHg      | mmol/L      |            |           |         |
| Age                              |                 |             |           |             |            |           |         |
| All ages                         | 7.18-7.38       | 42-71       | <31       | 14-22       | -7 to 1.8  | -1.8 to 7 |         |
| Sex                              | Male and Female |             |           |             |            |           |         |
| Updated Reportables for CBG      |                 |             |           |             |            |           |         |
| Resultable name                  |                 | Epic code   |           | Atlas Code  |            | LOINC     |         |
| pH Cord Blood Arterial           |                 | 12301003155 |           | COPH        |            | 28646-8   |         |
| pCO2 Cord Blood Arterial         |                 | 12301003158 |           | CPCO2       |            | 28644-3   |         |
| pO2 Cord Blood Arterial          |                 | 12301003156 |           | COPO2       |            | 28648-4   |         |
| tCO2 Cord Blood Arterial         |                 | 12301003157 |           | CATCO2      |            | 39466-8   |         |
| Base Excess Cord Arterial (new)  |                 | 12301017118 |           | 12301017118 |            | 28638-5   |         |
| Base Deficit Cord Arterial (new) |                 | 12301017119 |           | 12301017119 |            | 30317-2   |         |
| Orderable Name                   |                 |             | Epic Code |             | Atlas Code |           | LOINC   |
| Blood Gas, Cord Venous           |                 |             | LAB3173   |             | VCBG       |           | 51972-8 |
| Analyte:                         | pH              | pCO2        | pO2       | tCO2        | BE         | BD        |         |
| Units:                           |                 | mmHg        | mmHg      | mmol/L      |            |           |         |
| Age                              |                 |             |           |             |            |           |         |
| All ages                         | 7.25-7.45       | 31-53       | 17-41     | 14-22       | -7 to 0.6  | -0.6 to 7 |         |
| Sex                              | Male and Female |             |           |             |            |           |         |
| Updated Reportables for VCBG     |                 |             |           |             |            |           |         |
| Resultable name                  |                 | Epic code   |           | Atlas Code  |            | LOINC     |         |
| pH Cord Blood Venous             |                 | 12301003159 |           | CVPH        |            | 28647-6   |         |
| pCO2 Cord Blood Venous           |                 | 12301003162 |           | COPCO2      |            | 28645-0   |         |
| pO2 Cord Blood Venous            |                 | 12301003160 |           | CVPO2       |            | 28649-2   |         |
| tCO2 Cord Blood Venous           |                 | 12301003161 |           | CTCO2       |            | 34520-7   |         |
| Base Excess Cord Venous (new)    |                 | 12301017615 |           | 12301017615 |            | 28639-3   |         |
| Base Deficit Cord Venous (new)   |                 | 12301017616 |           | 12301017616 |            | 28637-7   |         |

These changes will also impact the following Point of Care Tests (POCT):

| <u>Epic Code</u> | <u>Orderable Name</u>     |
|------------------|---------------------------|
| POC17            | POCT Blood Gas, EG6 iSTAT |
| POC22            | POCT Blood Gas, CG8 iSTAT |
| POC21            | POCT EC8 iSTAT, NICU Only |

If you have any questions or concerns about these changes, then please reach out to the Medical Director of Clinical Chemistry ([clayton.wilburn@uvmhealth.org](mailto:clayton.wilburn@uvmhealth.org)).

## PATHOLOGY & LABORATORY MEDICINE

111 Colchester Avenue | Mail Stop: 233MP1 | Burlington, Vermont 05401

## PHONE LABORATORY CUSTOMER SERVICE

(802) 847-5121 | (800) 991-2799

THE  
University of Vermont  
MEDICAL CENTER