



## Blood Gases

| Name  | Line No. | Specimen 1    |      |        |        | Specimen 2    |      |        |        | Specimen 3    |      |        |        | Specimen 4    |      |        |        | Specimen 5    |      |        |        | No. of Labs |
|---|----------|---------------|------|--------|--------|---------------|------|--------|--------|---------------|------|--------|--------|---------------|------|--------|--------|---------------|------|--------|--------|-------------|
|   |          | Range & Type  | Mean | SD     |        | Range & Type  | Mean | SD     |        | Range & Type  | Mean | SD     |        | Range & Type  | Mean | SD     |        | Range & Type  | Mean | SD     |        |             |
| <b>pH - Blood Gas</b>                               |          |               |      |        |        |               |      |        |        |               |      |        |        |               |      |        |        |               |      |        |        |             |
| <b>Initial Grouping by Method</b>                   |          |               |      |        |        |               |      |        |        |               |      |        |        |               |      |        |        |               |      |        |        |             |
| Abbott i-STAT thermal                               | 1        | 7.633 - 7.713 | C    | 7.6734 | 0.0056 | 7.129 - 7.209 | C    | 7.1693 | 0.0059 | 7.41 - 7.49   | C    | 7.4504 | 0.0084 | 7.598 - 7.678 | C    | 7.6384 | 0.0075 | 7.242 - 7.322 | C    | 7.2820 | 0.0078 | 64          |
| IL GEM Premier 3000                                 | 2        | 7.605 - 7.685 | C    | 7.6453 | 0.0070 | 7.074 - 7.154 | C    | 7.1137 | 0.0068 | 7.397 - 7.477 | C    | 7.4374 | 0.0056 | 7.568 - 7.648 | C    | 7.6084 | 0.0069 | 7.209 - 7.289 | C    | 7.2489 | 0.0057 | 19          |
| Osmetech Opti CCA                                   | 3        | 7.569 - 7.649 | C    | 7.6093 | 0.0157 | 7.105 - 7.185 | C    | 7.1454 | 0.0071 | 7.383 - 7.463 | C    | 7.4233 | 0.0105 | 7.542 - 7.622 | C    | 7.5816 | 0.0167 | 7.215 - 7.295 | C    | 7.2546 | 0.0093 | 63          |
| Radiometer ABL80                                    | 4        | 7.547 - 7.627 | C    | 7.5871 | 0.0165 | 7.103 - 7.183 | C    | 7.1433 | 0.0102 | 7.369 - 7.448 | C    | 7.4085 | 0.0081 | 7.519 - 7.599 | C    | 7.5590 | 0.0130 | 7.208 - 7.288 | C    | 7.2480 | 0.0083 | 21          |
| <b>Initial Grouping by Sensitivity or Principle</b> |          |               |      |        |        |               |      |        |        |               |      |        |        |               |      |        |        |               |      |        |        |             |
| AVL instruments                                     | 5        | 7.569 - 7.649 | C    | 7.6085 | 0.0162 | 7.106 - 7.186 | C    | 7.1461 | 0.0097 | 7.383 - 7.463 | C    | 7.4232 | 0.0110 | 7.541 - 7.621 | C    | 7.5809 | 0.0177 | 7.215 - 7.295 | C    | 7.2550 | 0.0109 | 69          |
| Diametrics instruments                              | 6        | 7.588 - 7.668 | C    | 7.6276 | 0.0694 | 7.105 - 7.185 | C    | 7.1447 | 0.0172 | 7.398 - 7.478 | C    | 7.4375 | 0.0173 | 7.554 - 7.634 | C    | 7.5945 | 0.0810 | 7.239 - 7.319 | C    | 7.2791 | 0.0832 | 21          |
| IL instruments                                      | 7        | 7.605 - 7.685 | C    | 7.6448 | 0.0078 | 7.074 - 7.154 | C    | 7.1138 | 0.0078 | 7.396 - 7.476 | C    | 7.4362 | 0.0073 | 7.567 - 7.647 | C    | 7.6066 | 0.0094 | 7.209 - 7.289 | C    | 7.2490 | 0.0062 | 29          |
| Radiometer instruments                              | 8        | 7.554 - 7.634 | C    | 7.5937 | 0.0241 | 7.101 - 7.181 | C    | 7.1412 | 0.0112 | 7.371 - 7.451 | C    | 7.4111 | 0.0116 | 7.523 - 7.603 | C    | 7.5632 | 0.0147 | 7.209 - 7.289 | C    | 7.2487 | 0.0091 | 30          |
| Siemens instruments                                 | 9        | 7.578 - 7.657 | C    | 7.6175 | 0.0146 | 7.084 - 7.164 | C    | 7.1237 | 0.0200 | 7.386 - 7.466 | C    | 7.4261 | 0.0113 | 7.549 - 7.629 | C    | 7.5887 | 0.0131 | 7.211 - 7.291 | C    | 7.2514 | 0.0135 | 16          |
| All other methods                                   | 10       | 7.627 - 7.707 | C    | 7.6667 | 0.0457 | 7.123 - 7.203 | C    | 7.1635 | 0.0252 | 7.409 - 7.489 | C    | 7.4493 | 0.0122 | 7.593 - 7.673 | C    | 7.6331 | 0.0326 | 7.245 - 7.325 | C    | 7.2850 | 0.0488 | 74          |
| <b>Total Population</b>                             |          |               |      |        |        |               |      |        |        |               |      |        |        |               |      |        |        |               |      |        |        |             |
| Whole Population                                    | 11       | 7.592 - 7.672 | C    | 7.6316 | 0.0441 | 7.106 - 7.186 | C    | 7.1456 | 0.0236 | 7.393 - 7.473 | C    | 7.4332 | 0.0177 | 7.56 - 7.64   | C    | 7.5998 | 0.0403 | 7.225 - 7.305 | C    | 7.2651 | 0.0401 | 244         |

**pCO2****Initial Grouping by Method**

|                       |   |             |   |       |      |             |   |       |      |             |   |       |      |             |   |       |      |             |   |       |      |    |
|-----------------------|---|-------------|---|-------|------|-------------|---|-------|------|-------------|---|-------|------|-------------|---|-------|------|-------------|---|-------|------|----|
| Abbott i-STAT thermal | 1 | 16.4 - 26.4 | C | 21.43 | 0.52 | 58.8 - 69.0 | P | 63.89 | 1.56 | 29.0 - 39.0 | C | 34.03 | 0.81 | 17.4 - 27.4 | C | 22.42 | 0.54 | 42.4 - 52.4 | C | 47.36 | 1.07 | 64 |
| IL GEM Premier 3000   | 2 | 17.2 - 27.2 | C | 22.21 | 0.63 | 69.3 - 81.4 | P | 75.33 | 1.64 | 32.7 - 42.7 | C | 37.74 | 0.93 | 19.7 - 29.7 | C | 24.74 | 0.65 | 50.1 - 60.1 | C | 55.05 | 1.03 | 19 |
| Osmetech Opti CCA     | 3 | 19.0 - 29.0 | C | 24.02 | 1.22 | 64.1 - 75.2 | P | 69.65 | 2.09 | 31.3 - 41.3 | C | 36.26 | 1.72 | 20.4 - 30.4 | C | 25.37 | 1.39 | 45.7 - 55.7 | C | 50.71 | 1.39 | 63 |
| Radiometer ABL80      | 4 | 17.7 - 27.7 | C | 22.67 | 1.68 | 64.5 - 75.8 | P | 70.14 | 2.24 | 33.3 - 43.3 | C | 38.33 | 1.56 | 20.0 - 30.0 | C | 24.95 | 1.20 | 47.8 - 57.8 | C | 52.80 | 1.11 | 21 |

**Initial Grouping by Sensitivity or Principle**

| Name                    | Line No. | Specimen 1    |       |      |  | Specimen 2    |       |      |  | Specimen 3    |       |      |  | Specimen 4    |       |      |  | Specimen 5    |       |      |  | No. of Labs |
|-------------------------|----------|---------------|-------|------|--|---------------|-------|------|--|---------------|-------|------|--|---------------|-------|------|--|---------------|-------|------|--|-------------|
|                         |          | Range & Type  | Mean  | SD   |  | Range & Type  | Mean  | SD   |  | Range & Type  | Mean  | SD   |  | Range & Type  | Mean  | SD   |  | Range & Type  | Mean  | SD   |  |             |
| AVL instruments         | 5        | 18.9 - 28.9 C | 23.94 | 1.24 |  | 64.0 - 75.1 P | 69.58 | 2.25 |  | 31.3 - 41.3 C | 36.29 | 1.77 |  | 20.4 - 30.4 C | 25.35 | 1.36 |  | 45.7 - 55.7 C | 50.74 | 1.49 |  | 68          |
| Diametrics              | 6        | 17.6 - 27.6 C | 22.65 | 4.11 |  | 67.0 - 78.7 P | 72.87 | 3.54 |  | 32.2 - 42.2 C | 37.22 | 1.46 |  | 20.3 - 30.3 C | 25.31 | 6.72 |  | 46.8 - 56.8 C | 51.75 | 6.66 |  | 21          |
| IL instruments          | 7        | 17.1 - 27.1 C | 22.10 | 0.62 |  | 68.9 - 80.8 P | 74.86 | 2.17 |  | 32.5 - 42.5 C | 37.52 | 1.12 |  | 19.7 - 29.7 C | 24.66 | 0.61 |  | 50.0 - 60.0 C | 54.97 | 1.32 |  | 29          |
| Radiometer instruments  | 8        | 17.7 - 27.7 C | 22.66 | 1.49 |  | 64.2 - 75.4 P | 69.82 | 2.04 |  | 33.3 - 43.3 C | 38.27 | 1.41 |  | 19.9 - 29.9 C | 24.87 | 1.14 |  | 47.6 - 57.6 C | 52.57 | 1.35 |  | 30          |
| Siemens instruments     | 9        | 18.1 - 28.1 C | 23.08 | 1.20 |  | 65.8 - 77.2 P | 71.52 | 3.35 |  | 33.4 - 43.4 C | 38.35 | 1.31 |  | 19.7 - 29.7 C | 24.74 | 0.96 |  | 47.2 - 57.2 C | 52.17 | 2.39 |  | 16          |
| All other methods       | 10       | 16.7 - 26.7 C | 21.74 | 2.99 |  | 58.8 - 69.0 P | 63.88 | 1.93 |  | 29.0 - 39.0 C | 34.03 | 1.03 |  | 17.6 - 27.6 C | 22.62 | 2.22 |  | 42.0 - 52.0 C | 46.99 | 3.32 |  | 74          |
| <b>Total Population</b> |          |               |       |      |  |               |       |      |  |               |       |      |  |               |       |      |  |               |       |      |  |             |
| Whole Population        | 11       | 17.5 - 27.5 C | 22.52 | 1.43 |  | 63.3 - 74.3 P | 68.80 | 4.45 |  | 31.2 - 41.2 C | 36.21 | 2.12 |  | 19.1 - 29.1 C | 24.12 | 1.59 |  | 45.7 - 55.7 C | 50.69 | 3.02 |  | 243         |

## pO2

### Initial Grouping by Method

|                       |   |               |   |       |     |               |   |       |      |              |   |      |     |              |   |      |     |               |   |       |     |    |
|-----------------------|---|---------------|---|-------|-----|---------------|---|-------|------|--------------|---|------|-----|--------------|---|------|-----|---------------|---|-------|-----|----|
| Abbott i-STAT thermal | 1 | 101.0 - 155.0 | S | 128.2 | 9.1 | 129.0 - 193.0 | S | 160.8 | 10.7 | 79.0 - 120.0 | S | 99.6 | 6.9 | 62.0 - 106.0 | S | 84.2 | 7.2 | 117.0 - 169.0 | S | 143.3 | 8.6 | 64 |
| IL GEM Premier 3000   | 2 | 118.0 - 147.0 | S | 132.7 | 4.8 | 154.0 - 191.0 | S | 172.2 | 6.2  | 81.0 - 100.0 | S | 90.5 | 3.1 | 66.0 - 79.0  | S | 72.6 | 2.1 | 135.0 - 162.0 | S | 148.6 | 4.5 | 19 |
| Osmetech Opti CCA     | 3 | 100.0 - 143.0 | S | 121.9 | 7.1 | 133.0 - 183.0 | S | 158.1 | 8.4  | 77.0 - 106.0 | S | 91.3 | 4.8 | 66.0 - 94.0  | S | 80.0 | 4.6 | 112.0 - 161.0 | S | 136.9 | 8.1 | 63 |
| Radiometer ABL80      | 4 | 103.0 - 140.0 | S | 121.3 | 6.1 | 142.0 - 177.0 | S | 159.5 | 5.8  | 62.0 - 106.0 | S | 84.0 | 7.3 | 49.0 - 75.0  | S | 61.8 | 4.4 | 126.0 - 150.0 | S | 137.8 | 4.0 | 21 |

### Initial Grouping by Sensitivity or Principle

|                        |    |               |   |       |     |               |   |       |      |              |   |       |      |              |   |      |       |               |   |       |      |    |
|------------------------|----|---------------|---|-------|-----|---------------|---|-------|------|--------------|---|-------|------|--------------|---|------|-------|---------------|---|-------|------|----|
| AVL instruments        | 5  | 100.0 - 145.0 | S | 122.7 | 7.6 | 133.0 - 184.0 | S | 158.6 | 8.4  | 76.0 - 108.0 | S | 92.0  | 5.5  | 65.0 - 96.0  | S | 80.6 | 5.1   | 112.0 - 163.0 | S | 137.6 | 8.5  | 68 |
| Diametrics             | 6  | 112.0 - 159.0 | S | 135.9 | 7.8 | 139.0 - 197.0 | S | 167.6 | 9.7  | 54.0 - 150.0 | S | 102.1 | 16.0 | 36.0 - 132.0 | S | 84.1 | 16.0  | 100.0 - 189.0 | S | 144.9 | 14.8 | 21 |
| IL instruments         | 7  | 117.0 - 149.0 | S | 132.9 | 5.4 | 153.0 - 189.0 | S | 170.8 | 6.1  | 82.0 - 100.0 | S | 90.9  | 2.9  | 65.0 - 81.0  | S | 73.2 | 2.7   | 135.0 - 161.0 | S | 147.9 | 4.2  | 29 |
| Radiometer instruments | 8  | 100.0 - 144.0 | S | 122.1 | 7.2 | 138.0 - 182.0 | S | 160.1 | 7.4  | 63.0 - 108.0 | S | 85.2  | 7.5  | 0.0 - 417.0  | S | 84.2 | 110.9 | 125.0 - 153.0 | S | 138.9 | 4.8  | 30 |
| Siemens instruments    | 9  | 108.0 - 147.0 | S | 127.1 | 6.5 | 135.0 - 183.0 | S | 159.2 | 8.0  | 60.0 - 118.0 | S | 89.1  | 9.8  | 43.0 - 101.0 | S | 71.9 | 9.8   | 121.0 - 155.0 | S | 137.9 | 5.6  | 16 |
| All other methods      | 10 | 101.0 - 155.0 | S | 127.7 | 9.0 | 124.0 - 195.0 | S | 159.6 | 11.8 | 75.0 - 122.0 | S | 98.4  | 7.7  | 45.0 - 124.0 | S | 84.2 | 13.2  | 116.0 - 169.0 | S | 142.3 | 8.9  | 74 |

### Total Population

|                  |    |               |   |       |     |               |   |       |      |              |   |      |     |              |   |      |     |               |   |       |     |     |
|------------------|----|---------------|---|-------|-----|---------------|---|-------|------|--------------|---|------|-----|--------------|---|------|-----|---------------|---|-------|-----|-----|
| Whole Population | 11 | 100.0 - 153.0 | S | 126.9 | 8.8 | 131.0 - 192.0 | S | 161.5 | 10.1 | 69.0 - 118.0 | S | 93.3 | 8.2 | 51.0 - 105.0 | S | 77.8 | 9.1 | 116.0 - 167.0 | S | 141.4 | 8.4 | 243 |
|------------------|----|---------------|---|-------|-----|---------------|---|-------|------|--------------|---|------|-----|--------------|---|------|-----|---------------|---|-------|-----|-----|

## Chloride - Blood Gas

|                  |   |               |   |       |     |             |   |      |     |              |   |      |     |              |   |       |     |             |   |      |     |   |
|------------------|---|---------------|---|-------|-----|-------------|---|------|-----|--------------|---|------|-----|--------------|---|-------|-----|-------------|---|------|-----|---|
| Whole Population | 1 | 108.0 - 119.0 | P | 113.6 | 3.9 | 71.0 - 78.0 | P | 74.4 | 1.1 | 91.0 - 100.0 | P | 95.6 | 3.3 | 95.0 - 105.0 | P | 100.4 | 3.3 | 78.0 - 86.0 | P | 81.8 | 2.7 | 8 |
|------------------|---|---------------|---|-------|-----|-------------|---|------|-----|--------------|---|------|-----|--------------|---|-------|-----|-------------|---|------|-----|---|

## Glucose - Blood Gas

|  |  |  |  |  |  |  |  |  |  |         |  |  |  |         |  |  |  |         |  |  |  |
|--|--|--|--|--|--|--|--|--|--|---------|--|--|--|---------|--|--|--|---------|--|--|--|
|  |  |  |  |  |  |  |  |  |  | 209.0 - |  |  |  | 305.0 - |  |  |  | 144.0 - |  |  |  |
|--|--|--|--|--|--|--|--|--|--|---------|--|--|--|---------|--|--|--|---------|--|--|--|

| Name             | Line No. | Specimen 1   |      |      |     | Specimen 2   |      |      |     | Specimen 3   |      |       |     | Specimen 4   |      |       |     | Specimen 5   |      |       |     | No. of Labs |
|------------------|----------|--------------|------|------|-----|--------------|------|------|-----|--------------|------|-------|-----|--------------|------|-------|-----|--------------|------|-------|-----|-------------|
|                  |          | Range & Type | Mean | SD   |     | Range & Type | Mean | SD   |     | Range & Type | Mean | SD    |     | Range & Type | Mean | SD    |     | Range & Type | Mean | SD    |     |             |
| Whole Population | 1        | 46.0 - 58.0  | C    | 51.9 | 0.4 | 80.0 - 98.0  | P    | 89.0 | 0.8 | 255.0        | P    | 231.7 | 1.4 | 372.0        | P    | 338.6 | 7.5 | 176.0        | P    | 160.0 | 0.6 | 8           |

### Ionized Calcium

|                  |   |           |   |      |      |           |   |      |      |           |   |      |      |           |   |      |      |           |   |      |      |    |
|------------------|---|-----------|---|------|------|-----------|---|------|------|-----------|---|------|------|-----------|---|------|------|-----------|---|------|------|----|
| Whole Population | 1 | 0.4 - 0.9 | C | 0.61 | 0.05 | 1.3 - 1.8 | C | 1.54 | 0.07 | 1.1 - 1.6 | C | 1.37 | 0.07 | 0.6 - 1.1 | C | 0.85 | 0.07 | 0.9 - 1.4 | C | 1.15 | 0.06 | 21 |
|------------------|---|-----------|---|------|------|-----------|---|------|------|-----------|---|------|------|-----------|---|------|------|-----------|---|------|------|----|

### Lactate

|                  |   |           |   |      |      |           |   |      |      |           |   |      |      |            |   |      |      |           |   |      |      |   |
|------------------|---|-----------|---|------|------|-----------|---|------|------|-----------|---|------|------|------------|---|------|------|-----------|---|------|------|---|
| Whole Population | 1 | 1.5 - 2.5 | P | 2.00 | 0.15 | 3.0 - 5.1 | P | 4.07 | 0.15 | 4.9 - 8.2 | P | 6.60 | 0.13 | 7.2 - 12.0 | P | 9.58 | 0.38 | 4.3 - 7.2 | P | 5.77 | 0.15 | 8 |
|------------------|---|-----------|---|------|------|-----------|---|------|------|-----------|---|------|------|------------|---|------|------|-----------|---|------|------|---|

### Potassium - Blood Gas

|                  |   |           |   |      |      |           |   |      |      |           |   |      |      |           |   |      |      |           |   |      |      |    |
|------------------|---|-----------|---|------|------|-----------|---|------|------|-----------|---|------|------|-----------|---|------|------|-----------|---|------|------|----|
| Whole Population | 1 | 6.2 - 7.2 | C | 6.72 | 0.17 | 7.1 - 8.1 | C | 7.55 | 0.43 | 3.8 - 4.8 | C | 4.29 | 0.08 | 4.4 - 5.4 | C | 4.89 | 0.17 | 2.0 - 3.0 | C | 2.54 | 0.06 | 21 |
|------------------|---|-----------|---|------|------|-----------|---|------|------|-----------|---|------|------|-----------|---|------|------|-----------|---|------|------|----|

### Sodium - Blood Gas

|                  |   |               |   |       |     |               |   |       |     |               |   |       |     |               |   |       |     |               |   |       |     |    |
|------------------|---|---------------|---|-------|-----|---------------|---|-------|-----|---------------|---|-------|-----|---------------|---|-------|-----|---------------|---|-------|-----|----|
| Whole Population | 1 | 150.0 - 158.0 | C | 154.5 | 1.5 | 108.0 - 116.0 | C | 111.8 | 3.2 | 132.0 - 140.0 | C | 136.5 | 2.3 | 137.0 - 145.0 | C | 141.3 | 4.8 | 119.0 - 127.0 | C | 122.8 | 2.7 | 22 |
|------------------|---|---------------|---|-------|-----|---------------|---|-------|-----|---------------|---|-------|-----|---------------|---|-------|-----|---------------|---|-------|-----|----|