



ZSFG - SAN FRANCISCO HEALTH NETWORK

SAN FRANCISCO GENERAL HOSPITAL AND TRAUMA CENTER

GEM4000 Point of Care Test Results and Reference Range Sheet
(Emergency Department, Operating Room and Respiratory Care Services)

NAME

DOB

MRN

PCP

Patient ID / Addressograph

(DO NOT PUT IN PATIENT CHART)

Blood Gases		
pH	Arterial	Venous
0-6 mos.	7.25-7.45	7.32-7.42
>6-12 mos.	7.30-7.45	7.32-7.42
>1 year	7.35-7.45	7.32-7.42

pCO ₂ (mmHg)		
0-12 mos.	27-40	41-51
>1 year	35-45	41-51

pO ₂ (mmHg)		
0-1 day	50-90	
0-12 mos		35-50
>1d-65 yrs.	80-100	25-40
>65 yrs.	75-85	25-40

HCO ₃ ⁻ , Actual (mmol/L)		
0-1 mo.	17-24	18-24
1 to 12 mos	19-24	18-24
>1 year	22-26	22-29

Base Excess (BE, mmol/L)		
0-1 mo.	-10 to -2	-10 to -2
1 to 12 mos	-7 to -1	-7 to -1
>1 year	-2 to +3	-2 to +3

Cooximetry		
O ₂ Hb, %	Arterial	Venous
0-4 hrs	85-90	n/a
>4 hrs	95-99	n/a
COHb, %	0.5-1.5	0.5-1.5
MetHb, %	<1.5	<1.5
O ₂ Content (O ₂ ct, vol%)	15-23	n/a

Lactate, Whole Blood (mmol/L)		
	Arterial	Venous
0-12 mos.	0.3-2.2	0.3-2.9
>1 year	0.5-1.6	0.5-2.2

Hemoglobin (Hgb)/Hematocrit (Hct)		
	Hgb	Hct (%)
Birth	13.5-19.5	42-60
1-7 days	13.5-22.5	42-67
8-14 days	12.5-21.5	39-66
15-30 days	10.0-20.5	31-66
1-2 mos.	9.0-18.0	28-55
2-3 mos.	9.0-13.5	28-42
3-6 mos.	9.5-13.5	29-41
6mo-2 yrs.	10.5-13.5	33-39
2-6 yrs.	11.5-13.5	34-40
6-12 yrs.	11.5-15.5	35.45
12-18 yrs.		
Female	12.0-16.0	36-46
Male	13.0-16.0	37-49

Adult (=>18 yrs.)		
Female	11.7-15.7	34.9-46.9
Male	13.3-17.7	39.8-52.2

Electrolytes (Whole Blood)	
Sodium (Na ⁺ , mmol/L)	
all ages	133-146

Potassium (K ⁺ , mmol/L)	
0-2 wks.	3.7-5.9
>2 wks - 1 yr	4.1-5.3
>1 - 16 yrs	3.4-4.7
>16 yrs.	3.5-5.1

Ionized Calcium (iCa ⁺⁺ , mmol/L)	
0 - 12 mos.	0.95-1.50
>1 year	1.12-1.32

Glucose (mg/dL)	
Random, Whole Blood	
0 - 1 year	50-150
>1 year, normal	70-199

Fasting, Whole Blood	
>1 year, normal	70-99
>1 year, impaired glucose tolerance	100-125
>1 year, Diabetes	≥ 126

CRITICAL VALUES, ADULTS	
Blood Gases, Arterial	
pH	<7.20 or >7.55
pCO ₂ , mmHg	<25 or >65
pO ₂ , mmHg	<40

Blood Gases, Venous	
pH	<7.20

Cooximetry	
Total Hb, g/dL	<7 or >20
CO-Hb, %	>14.9
Met-Hb, %	>14.9

Electrolytes, mmol/L	
iCA ⁺⁺	<0.8 or >1.55
Na ⁺	<125 or >155
K ⁺	<3.0 or >6.0

Metabolic	
Glucose, mg/dL	<50 or >500
Lactate, mmol/L	>3.9

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