

ABG REFERENCE RANGE RECOMMENDATIONS - MAR 2019

			RECOMMENDATIONS			JUSTIFICATION/COMMENT
TEST	Specimen	Units	Ages	LOW	HIGH	RO ranges were adopted where differences not clinically significant, or not currently used at other sites
pH	Arterial		0-4 d	7.27	7.47	
pH	Arterial		5 d +	7.35	7.45	
pCO2	Arterial	mm Hg	0-5 d	27	40	
pCO2	Arterial	mm Hg	6 d - 23 m	27	41	
pCO2	Arterial	mm Hg	24 m +	32	45	Encompasses RO, DB; consistent with Radiometer
pO2	Arterial	mm Hg	0-1 d	54	95	
pO2	Arterial	mm Hg	2 d +	80	100	
pO2	Arterial	mm Hg				
HCO3	Arterial	mmol/L	0-4 d	16	23	
HCO3	Arterial	mmol/L	5 d +	19	27	Updated for chemistry CO2 range change - March 2019
HCO3	Arterial	mmol/L				Also consistent with pCO2 range
TCO2	Arterial	mmol/L	0- <1 y	20	28	
TCO2	Arterial	mmol/L	1-12 y	17	28	Updated for chemistry CO2 range change - March 2019
TCO2	Arterial	mmol/L	13 y+	20	29	
BE	Arterial	mmol/L	0+	-3	-3	
BE	Arterial	mmol/L				
BE	Arterial	mmol/L				
O2Hb	Arterial	%	0+	95	98	Report O2Hb per Sherman, Bozyk
O2Sat	Arterial	%				O2Sat not reported
O2Sat	Arterial	%				O2Sat not reported
COHb	Arterial	%				Comment on all reports: Non Smoker: Less than 1.5% Heavy Smoker: Less than 9% Toxic: Greater than 20%
MetHb	Arterial	%	0+	0	2	
tHgb	Arterial	g/dL	Standardize	Standardize with hematology		
O2 content (ctO2)	Arterial	Vol%	0+	18	21	
O2 content (ctO2)	Arterial	Vol%				
pH	Venous		0+	7.32	7.42	
pCO2	Venous	mm Hg	0+	41	51	
HCO3	Venous	mmol/L	0+	19	27	Updated for chemistry CO2 range change - March 2019
TCO2	Venous	mmol/L	0- <1 y	20	28	
TCO2	Venous	mmol/L	1-12 y	17	28	Updated for chemistry CO2 range change - March 2019
TCO2	Venous	mmol/L	13 y+	20	29	
BE	Venous	mmol/L	0+	-5	5	
O2Hb	Venous	%	0+	55	85	Approved 15 Aug 2019
COHb	Venous	%				Non Smoker: Less than 1.5% Heavy Smoker: Less than 9% Toxic: Greater than 20%
MetHb	Venous	%	0+	0	2	
tHgb	Venous	g/dL	Standardize	Standardize with hematology		
pH	Mixed Venous		0+	7.32	7.42	
pCO2	Mixed Venous	mm Hg	0+	41	51	
pO2	Mixed Venous	mm Hg	0+	25	40	
HCO3	Mixed Venous	mmol/L	0+	19	27	Updated for chemistry CO2 range change - March 2019
TCO2	Mixed Venous	mmol/L	0- <1 y	20	28	
TCO2	Mixed Venous	mmol/L	1-12 y	17	28	Updated for chemistry CO2 range change - March 2019
TCO2	Mixed Venous	mmol/L	13 y+	20	29	
BE	Mixed Venous	mmol/L	0+	-5	5	
O2Hb	Mixed Venous	%	0+	60	80	
COHb	Mixed Venous	%				Non Smoker: Less than 1.5% Heavy Smoker: Less than 9% Toxic: Greater than 20%
MetHb	Mixed Venous	%	0+	0	2	
tHgb	Mixed Venous	g/dL	Standardize	Standardize with hematology		
O2 content (ctO2)	Mixed Venous	Vol%	0+	18	21	

pH	Capillary		0-4 d	7.27	7.47	
pH	Capillary		5 d +	7.35	7.45	
pCO2	Capillary	mm Hg	0-5 d	27	40	
pCO2	Capillary	mm Hg	6 d - 23 m	27	41	
pCO2	Capillary	mm Hg	24 m +	35	45	
pO2	Capillary	mm Hg	0-1 d	54	95	
pO2	Capillary	mm Hg	2 d +	80	100	
pO2	Capillary	mm Hg				
HCO3	Capillary	mmol/L	0-4 d	16	23	
HCO3	Capillary	mmol/L	5 d +	19	27	Updated for chemistry CO2 range change - March 2019
HCO3	Capillary	mmol/L				
TCO2	Capillary	mmol/L	0- <1 y	20	28	
TCO2	Capillary	mmol/L	1-12 y	17	28	Updated for chemistry CO2 range change - March 2019
TCO2	Capillary	mmol/L	13 y+	20	29	
BE	Capillary	mmol/L	0+	-2	2	
O2Hb	Capillary	%	0+	95	98	
	Capillary					
COHb	Capillary	%				
MetHb	Capillary	%	0+	0	2	
tHgb	Capillary	g/dL	Standardize	Standardize with hematology		
O2con	Capillary	Vol%	0+	18	21	
pH	Art Cord			7.18	7.38	
pCO2	Art Cord	mm Hg		32	66	
pO2	Art Cord	mm Hg		6	30	
HCO3	Art Cord	mmol/L		17	27	
BE	Art Cord	mmol/L		-10	-2	
O2Hb	Art Cord	%		none	none	
COHb	Art Cord	%		none	none	
MetHb	Art Cord	%		none	none	
tHgb	Art Cord	g/dL	Standardize	Standardize with hematology		
pH	Ven Cord			7.25	7.45	
pCO2	Ven Cord	mm Hg		27	49	
pO2	Ven Cord	mm Hg		17	41	
HCO3	Ven Cord	mmol/L		12	28	
BE	Ven Cord	mmol/L		-10	-2	
O2Hb	Ven Cord	%		none	none	
COHb	Ven Cord	%		none	none	
MetHb	Ven Cord	%		0	2	
tHgb	Ven Cord	g/dL	Standardize	Standardize with hematology		
Ionized Ca	all	mg/dL	0-1 d	4.20	5.48	
			2-3 d	4.40	5.68	
			4-5 d	4.80	5.92	
			6 d +	4.48	5.28	
Lactate	Arterial	mmol/L	Arterial	0.0	1.3	
	Venous	mmol/L	Venous	0.5	2.2	