LEGACY HEALTH | LEGACY LABORATORY SERVICES

Pediatric Blood Gases, Critical Care Panel and ECMO
Age Related Reference Ranges and Critical Values

TEST	SEX	AGE	REFERENCE RANGE	CRITICAL VALUE	
Base Excess	M/F	All Ages	-3.0 to 3.0	None defined	
Bicarbonate	M/F	All Ages	22-26 mmol/L	None defined	
Calcium, Ionized, Respiratory Therapy	M/F	0 - 1 day 1 - 2 days ≥2 days	1.08-1.28 mmol/L 1.00-1.18 mmol/L 1.12-1.26 mmol/L	**Low** <0.76 mmol/L	**High** >1.49 mmol/L
Carboxyhemoglobin, Arterial and Venous Blood	M/F	All Ages	0.5-1.5%	**Low** None defined	**High** >20.0%
Cord Blood, Arterial	M/F				
pH			7.15-7.38	≤7.15	
pCO2			35-60 mmHg	None defined	
pO2			7-23 mmHg	None defined	
Cord Blood, Venous	M/F				
pH			7.18-7.41	None defined	
pCO2			26-52 mmHg	None defined	
pO2			15-40 mmHg	None defined	
ECMO, Arterial	M/F			**Low**	**High**
pH			7.35-7.45	<7.31	>7.54
pCO2			34-46 mmHg	<27mmHg	>59 mmHg
pO2			150-500 mmHg	<91 mmHg	None defined
ECMO, Venous	M/F			**Low**	**High**
pH			7.33-7.43	<7.31	>7.54
pCO2			39-54 mmHg	<27 mmHg	>59 mmHg
pO2			30-40 mmHg	None defined	None defined
Glucose	M/F			**Low**	**High**
		0 - 1 day	40-60 mg/dL	<40 mg/dL	>300 mg/dL
		1 day - 1 month	50-80 mg/dL	<40 mg/dL	>300 mg/dL
		1 month - 1 year	60-100 mg/dL	<40 mg/dL	>500 mg/dL
		>1 year	74-106 mg/dL	<40 mg/dL	>500 mg/dL
Hematocrit				**Low**	None
	M/F	0 - 2 weeks	42-68%	<30%	
	M/F	2 weeks - 2 months	35-50%	<18%	
	M/F	2 months - 1 year	30-40%	<18%	
	M/F	1 - 5 years	32-42%	<18%	
	M	>5 years	40-52%	<18%	
	F	>5 years	35-46%	<18%	

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TEST	SEX	AGE	REFERENCE RANGE	CRITICAL VALUE	
Hemoglobin				**Low**	None
	M/F	0 - 2 months	14.0-18.0 g/dL	<10 g/dL	
	M/F	2 months - 11 years	11.0-14.0 g/dL	<6.0 g/dL	
	M	>11 years	13.6-18.0 g/dL	<6.0 g/dL	
	F	>11 years	11.5-16.0 g/dL	<6.0 g/dL	
Oxygen Saturation, Arterial Blood	M/F			**Low**	**High**
		All Ages	94-99%	<76%	None defined
Oxygen Saturation, Venous Blood	M/F	All Ages	60-85%	None defined	None defined
pH, Arterial Blood	M/F			**Low**	**High**
		All Ages	7.35-7.45	<7.22	>7.59
pH, Venous Blood	M/F			**Low**	**High**
		All Ages	7.33-7.43	<7.22	>7.59
pH, Scalp	M/F			**Low**	**High**
			7.25-7.50	<7.21	>7.59
PCO_2, Arterial Blood	M/F			**Low**	**High**
		All Ages	34-46 mmHg	<21 mmHg	>69 mmHg
PCO_2, Venous Blood	M/F			**Low**	**High**
		All Ages	39-54 mmHg	<11 mmHg	>69 mmHg
PO_2, Arterial Blood	M/F			**Low**	**High**
		0 - 1 month	80-100 mmHg	<41 mmHg	None defined
		≥1 month	80-100 mmHg	<51 mmHg	
PO_2, Venous Blood	M/F	All Ages	25-43 mmHg	None defined	
Potassium	M/F			**Low**	**High**
		0 - 1 year	3.7-5.9 mmol/L	<2.9 mmol/L	>7.4 mmol/L
		>1 year	3.6-5.0 mmol/L	<2.9 mmol/L	>6.1 mmol/L
Sodium	M/F			**Low**	**High**
		0 - 1 year	133-146 mmol/L	<126 mmol/L	>159 mmol/L
		1 - 12 years	138-145 mmol/L	<121 mmol/L	>159 mmol/L
		>12 years	135-145 mmol/L	<121 mmol/L	>159 mmol/L

Reference ranges are subject to update. Refer to the individual test listed on the Legacy web site or the patient chart for reference ranges at time of testing.

Reviewed 5/2012