

Blood Culture Volumes for Pediatrics and Neonatal

Spectrum Health and Spectrum Health Medical Group, please refer to Policy 10974 for more information. Last Updated: 5/25/2021

Blood Culture Volume Table:

Weight range (kg)	IDSA recommended blood volume per culture	Spectrum recommended blood volume per culture	% Of total blood volume for the lower and upper bounds of the weight range†
<2 kg	1-2 ml	1.0 ml	1.03 – 0.51%
2 to < 4 kg	2-3 ml	1.5 ml	0.77 – 0.46%
4 to < 7 kg	3 ml	3.0 ml	0.91 – 0.57%
7 to < 10 kg	3 ml	4.0 ml	0.76 – 0.51%
10 to < 16 kg	3-10 ml	6.0 ml	0.77 – 0.45%
16 to < 20 kg	10 ml	8.0 ml	0.60 – 0.48%
20 to < 26 kg	10 ml	10.0 ml	0.60 – 0.44%
26 to <40 kg	10 ml	10.0 ml	0.44 – 0.31%
40 to < 60 kg	20 ml	10.0 ml	0.31 – 0.20%
>60 kg	20 ml	10.0 ml	<0.20%

† Total blood volume by age: preterm neonate 90-105 mg/kg; term neonate 78-86 mg/kg; infant 12 years 83-90 mg/kg. (Source: Harriet Lane Handbook)

It is important to avoid contaminating the blood sample. Contaminated blood cultures lead to misdiagnosis, increased cost, length of stay and unnecessary exposure to antibiotics. Contamination occurs by the transfer of organisms from the patient's skin, immediate environment, supplies used to transfer the blood sample, or the hands of the health care worker.

When drawing from a CVC do not waste the initial blood specimen but use for the blood culture.

When drawing a blood culture use the table above to determine the volume needed for the blood culture. Refer to the recommended blood volume per culture column in the Blood Culture Volume Table.