

## Injection Routes, Maximum Needle Sizes & Volumes

Species	Intradermal Injection	Intramuscular Injection	Intraperitoneal Injection	Intravenous Injection	Subcutaneous Injection
<b>Mouse</b>	Skin Volume: <0.05ml Needle: <25 Gauge	Rear Leg/Thigh Volume: <0.05ml Needle: <23 Gauge	Abdomen - Lower Quadrant Volume: <2-3ml Needle: <21 Gauge	Lateral Tail Vein Volume: <0.2ml Needle: <25 Gauge	Back Scruff Volume: <2-3ml Needle: <20 Gauge
<b>Rat</b>	Skin Volume: <0.05ml Needle: <25 Gauge	Rear Leg/Thigh Volume: <0.3ml Needle: <21 Gauge	Abdomen - Lower Quadrant Volume: <5-10ml Needle: <21 Gauge	Lateral Tail Vein Volume: <0.5ml Needle: <23 Gauge	Back Scruff Volume: <5-10ml Needle: <20 Gauge
<b>Hamster</b>	Skin Volume: <0.05ml Needle: <25 Gauge	Rear Leg/Thigh Volume: <0.1ml Needle: <21 Gauge	Abdomen - Lower Quadrant Volume: 3-4ml Needle: <21 Gauge	Jugular or Femoral Vein Volume: <0.3ml Needle: <25 Gauge	Back Scruff Volume: <3-4ml Needle: <20 Gauge
<b>Guinea Pig</b>	Skin Volume: <0.05ml Needle: <25 Gauge	Rear Leg/Thigh Volume: <0.3ml Needle: <21 Gauge	Abdomen - Lower Quadrant Volume: <10-15ml Needle: <21 Gauge	Saphenous Vein Volume: <0.5ml Needle: <23 Gauge	Back Scruff Volume: <5-10ml Needle: <20 Gauge
<b>Rabbit</b>	Skin Volume: <0.05ml Needle: <25 Gauge	Rear Leg/Thigh; Lumbar Volume: <0.5ml Needle: <20 Gauge	Abdomen - Lower Quadrant Volume: <50-100ml Needle: <21 Gauge	Marginal Ear Vein Volume: <1 - 5ml Needle: <21 Gauge	Back Scruff Volume: <30-50ml Needle: <20 Gauge