

## Maximum Injection Volumes and Needle Size Recommendations

The maximum recommended administration volumes are displayed in the following table:

Species	Subcutaneous (sc)	Intramuscular (im)	Intraperitoneal (ip)	Intradermal (id)	Oral (po)
Mouse	2-3 ml	0.05 ml	2-3 ml	0.05 ml	0.3 ml
Rat	5-10 ml	0.3 ml	5-10 ml	0.05 ml	1-3 ml
Monkey	3 ml/kg	0.05-0.15 ml/kg	10 ml/kg	0.1-0.3 ml	5-10 ml/kg

### Notes:

1. Frequent administrations may require reduced volumes
2. Volumes greater than the recommendations in the table will require a scientific justification

The recommended needle sizes are displayed in the following table:

Species	Subcutaneous (sc)	Intramuscular (im)	Intravenous (iv)	Intraperitoneal (ip)
Mouse	25 gauge	27 gauge	25-30 gauge	23-27 gauge
Rat	22-25 gauge	25-27 gauge	22-27 gauge	23-25 gauge
Monkey	20-25 gauge	22-27 gauge	20-25 gauge	-----

### Notes:

1. For rodents, a needle length of ½ to 1 inch is generally appropriate (size may vary based on choice of injection site, vein diameter, viscosity of the substance, and the desired speed of delivery).
2. Needle sizes different than the recommendations in the table will require a scientific justification