

ROUTES OF ADMINISTRATION, VOLUME, AND NEEDLE GAUGES FOR DRUG ADMINISTRATIONS¹

University of South Florida provides the following as guidelines only for use by IACUC-certified faculty and staff.

Species	PO	SC ²	IM ³	IP	IV (bolus)	IV (slow) ⁴
Mouse	10 µl/g 20-22 gauge gavage needle	10 µl/g scruff, dorsum ≤23 gauge	Insufficient muscle mass; Not recommended	20 µl/g ≤23 gauge	5 µl/g lateral tail v. 27-30 gauge	20 µl/g lateral tail v. 27-30 gauge
Rat	10 µl/g 18-20 gauge gavage needle	10 µl/g scruff, dorsum ≤20 gauge	300 µl/site quadriceps m. ≤21 gauge	20 µl/g ≤21 gauge	5 µl/g lateral tail or saphenous v. ≤23 gauge	20 µl/g lateral tail or saphenous v. ≤23 gauge
Cat	10 ml/kg	1 ml/kg scruff, dorsum ≤20 gauge	0.25 ml/kg quadriceps m. ≤20 gauge	5 ml/kg ≤20 gauge	2 ml/kg cephalic or saphenous v. ≤21 gauge	10 ml/kg cephalic or saphenous v. ≤21 gauge
Rabbit	10 ml/kg	1 ml/kg scruff, dorsum ≤20 gauge	0.25 ml/kg quadriceps m. ≤20 gauge	5 ml/kg ≤20 gauge	2 ml/kg marginal ear v. ≤21 gauge	10 ml/kg marginal ear v. ≤21 gauge
Pig	10 ml/kg	1 ml/kg scruff, dorsum ≤20 gauge	0.25 ml/kg quadriceps m. ≤20 gauge	1 ml/kg ≤20 gauge	2.5 ml/kg ear v. ≤21 gauge	5 ml/kg ear v. ≤21 gauge
Bird		1-3% bdy wt pectoral, interscapular, inguinal folds ≤21 gauge	0.2 ml/100 g pectoral m. ≤25 gauge	Not applicable		
Dog	5 ml/kg	1 ml/kg scruff, dorsum ≤20 gauge	0.25 ml/kg quadriceps m. ≤20 gauge	2 ml/kg ≤20 gauge	2.5 ml/kg cephalic v. ≤20 gauge	5 ml/kg cephalic v. ≤20 gauge

¹Does not apply to polyclonal/monoclonal antibody production (refer to IACUC Principle & Procedure XVII & XVIII), or fluid replacement volumes.

²≤3 SC sites per day.

³≤2 IM sites per day.

⁴5-10 minutes duration.