LABORATORY SWINE

Care and Feeding

Experimental Conditions

Space dimensions vary with each experiment according to animal size and management program. Refer to NCR guidelines.*

Feeding Recommendations

Daily Feed Usage	Water Requirement	Begin Dry Food Consumption
Approx. 2-3% of body weight, but varies with phase of life cycle (see specific product for other details).	Ad libitum	12-16 days

Environmental Data

Room Temp.	Humidity	Light	Litter Material
Ambient conditions 10-25 °C	45-55%	8-14 hrs./day	As needed, straw, hay, shavings ground cobs, paper beddings. Avoid shredded newspapers.

Biological Values

Blood Chemical Composition

Values are for plasma, except where noted

Water 79.1 gm/100ml	**Calcium** 8-12 mg/100ml	**Sodium** 138-150 mEq/L	**Chloride** 100-105 mEq/L	**Phosphorus** 5-9 mEq/L	**Potassium** 5-7 mEq/L
Magnesium 1-3 mg/100ml	**Cholesterol** 130-160 mg/100ml	**Glucose** 65-120 mg/100ml	**Serum Protein** 5-8 mg/100ml	**Albumin** 3-4.5 gm/100ml	**Globulin** 1.5-3.5 gm/100ml

Vital Data

Temperature	Breathing Rate	Heart Rate	Blood Pressure	Heat Rate
39 °C	30 /minute	145-175 /minute	130-145/105-110	1.01 kcal/min

Hematological Values

Whole Blood Volume (T-1824 dye)	RBC Diameter			
67 mg/kg body weight	6.0 microns			
Blood pH 7.4	**RBC** 6-8 $10^6/mm^3$	**Hematocrit** 39-46 gm/100ml	**Platelets** 250-500 $10^3/mm^3$	**Hb** 11.5-15.5 gm/100ml

Total and Differential White Blood Cell Counts

Leucocytes	Neutros	Eosinos	Basos	Lymphos	Monos
14-18 $10^3/mm^3$	22-40 %	0-6 %	0-2 %	50-70 %	0-5 %

Life Cycle Information

	Adult Weight Male/Female	Weight at Birth	Breeding Age Male	Breeding Age Female	Estrus Cycle	Heat Period
Mini-Pig	70 kg/70kg	700 gm	6-7 months	6-7 months	21 (18-24) days	2-3 days
Crossbred	200kg/200kg	1361 gm	7-8 months	7-8 months	21 (19-24) days	2-3 days

	Gestation	Weaning Age	Offspring	Rebreed After Weaning	Breeding Life Male/Female
Mini-Pig	114 days	56 days	4-8	First or subsequent estrus cycle	Productive breeding life is about 3 years. Crossbred strains will breed longer
Crossbred	114 days	28 days	9-11		

Mating Data: 1/20 depending upon breeding management program

* Refer to the "Guide for the Care and Use of Laboratory Animals" — NIH Publication No. 85-23, Revised 1985
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** Biological Values are variable with no definitive data to declare differences among swine breeds. These values are presented as guidelines and subject to revision as information accumulates.

Reference sources: Diseases of Swine, A. D. Leman, et. al., Iowa State University Press (1986). Miniature Swine, Charles River Digest 22, #3 (1983). D. E. Reese, et al., Am.J.Vet.Res. 45, 978 (1984). Blood and other Body Fluids, FASEB, 9650 Rockville Pike, Bethesda, MD 20814.

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