technical bulletin

Charles River Laboratories

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Introduction

harles River's Technical Bulletin, Vol. 1 No. 1 was the first Technical Bulletin published by Charles River. This bulletin was published in 1982 and contains basic information on most Charles River

strains and stocks.

This information. which includes strain designations, strain origins, as well as husbandry and production information, has proven to be very valuable to our customers. Today, over 16 years later, we still get requests for this bulletin and the

useful information it contains.

Because so much has changed in the 16 Contributing to the Searc years since this bulletin was

first published, we have updated the information for healthie contained in it and have ives. included the stocks and strains we have added since 1982. This year, we plan to begin the project of publishing more in-depth data

sheets on our most popular stocks and strains and will continue the process as new products are added or deleted. Once completed, custo- mers can easily update this information as the data changes.

We hope you find this second edition of Technical Bulletin, Vol. 1, No. 1 helpful. If you have any further questions or need additional copies, please contact our Technical Assistance Department at 1-800-338-9680 or e-mail us at comments@criver.com.



For your information, the following abbreviations are used throughout this issue of the Technical Bulletin:

- CRL or Crl Charles River Laboratories
- SD Sprague Dawley Descended Rats
- CD[®] Caesarean Derived
- **BR** Barrier Reared
- N NIH origin

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OUTBRED RATS

CrI:CD[®](SD)IGS BR • CrI:CD[®](SD)BR • Sprague Dawley

Origin: Originated in 1925 by Robert W. Dawley from a hybrid-hooded male and a female Wistar rat. To CRL in 1950 from Sprague Dawley, Inc. Caesarean derived in 1955 from original Charles River SD[™] colonies to form the nucleus of the current CD stock. IGS refers to CD rats bred using the CRL International Genetic Standard system.

Color	Albino
Breeding Age, Males (wks)	10-12
Breeding Age, Females (wks)	8-10
Mating Ratio	1:6
Estrous Cycle (Days)	4-5
Gestation (Days)	21-24
Average Litter Size: 1st litter	11
Average Litter Size: 2nd litter	12
Birth Weight (gm)	5-7
Weaning Weight, Males (gm)	40-60
Weaning Weight, Females (gm)	35-60
Weaning Age (days)	21
Average Daily Food Consumption (gm)	5 gm/100 gm body weight
Average Daily Water Intake (ml)	8-11 ml/100 gm body weight
Retired Breeders, Males (months)	9-12
Retired Breeders, Females (months)	9-12
Room Temperature (F)	70+/-2
Relative Humidity (%)	30-70%
Light Cycle (hrs)	12/12
Weight Loss in Transit (%)	10%

OUTBRED RATS

Crl:(LE)BR • Long-Evans

Origin: Originated by Drs. Long and Evans in 1915 by cross of several Wistar Institute white females with a wild gray male. To CRL from Canadian Breeding Farm and Laboratories in 1978. Caesarean derived in 1978.

Color	White with black hood or white with brown hood
Breeding Age, Males (wks)	10-12
Breeding Age, Females (wks)	8-10
Mating Ratio	1:6
Estrous Cycle (Days)	4-5
Gestation (Days)	21-23
Average Litter Size: 1st litter	13
Average Litter Size: 2nd litter	14
Birth Weight (gm)	5-7
Weaning Weight, Males (gm)	40-60
Weaning Weight, Females (gm)	35-60
Weaning Age (days)	21
Average Daily Food Consumption (gm)	5 gm/100 gm body weight
Average Daily Water Intake (ml)	8-11 ml/100 gm body weight
Retired Breeders, Males (months)	9-12
Retired Breeders, Females (months)	9-12
Room Temperature (F)	70+/-2
Relative Humidity (%)	30-70%
Light Cycle (hrs)	12/12
Weight Loss in Transit (%)	10%

OUTBRED RATS

Crl:(WI)BR • Wistar

Origin: To Scientific Products Farm, Ltd. [predecessor of Charles River United Kingdom (CRUK)] in 1947 from Wistar Institute. To CRL in 1975 from CRUK. Caesarean derived in 1975 to form the nucleus of the current Wistar rat colonies. This particular colony was selected because of a low incidence of hydronephrosis.

Color	Albino
Breeding Age, Males (wks)	10-12
Breeding Age, Females (wks)	8-10
Mating Ratio	1:6
Estrous Cycle (Days)	4-5
Gestation (Days)	21-23
Average Litter Size: 1st litter	11
Average Litter Size: 2nd litter	12
Birth Weight (gm)	5-7
Weaning Weight, Males (gm)	40-50
Weaning Weight, Females (gm)	35-50
Weaning Age (days)	21
Average Daily Food Consumption (gm)	5 gm/100 gm body weight
Average Daily Water Intake (ml)	8-11 ml/100 gm body weight
Retired Breeders, Males (months)	9-12
Retired Breeders, Females (months)	9-12
Room Temperature (F)	70+/-2
Relative Humidity (%)	30-70%
Light Cycle (hrs)	12/12
Weight Loss in Transit (%)	10%

OUTBRED RATS

Crl:(ZUC)-faBR • Zucker

Origin: The obese or fatty condition appeared spontaneously in the 13M strain of Theodore and Lois Zucker at the Laboratory of Comparative Pathology in Stow, Massachusetts. Research colonies were established at many institutions from this nucleus colony. To Charles River in 1985 from a research colony maintained at a pharmaceutical company. Caesarean derived in 1986.

Color	a) predominantly brown; b) brown and white;c) predominantly black; d) black and white
Breeding Age, Males (wks)	10-12
Breeding Age, Females (wks)	8-10
Mating Ratio	1:1
Estrous Cycle (Days)	4-5
Gestation (Days)	21-23
Average Litter Size: 1st litter	6
Average Litter Size: 2nd litter	6
Birth Weight (gm)	10-12
Weaning Weight, Males (gm)	50-75 (fatty) 45-60 (lean)
Weaning Weight, Females (gm)	50-75 (fatty) 45-60 (lean)
Weaning Age (days)	21
Average Daily Food Consumption (gm)	5 gm/100 gm body weight
Average Daily Water Intake (ml)	8-11 ml/100 gm body weight
Retired Breeders, Males (months)	9-12
Retired Breeders, Females (months)	9-12
Room Temperature (F)	70+/-2
Relative Humidity (%)	30-70%
Light Cycle (hrs)	12/12
Weight Loss in Transit (%)	

OUTBRED RATS

Crl:WI(Glx/BRL/Han)IGS BR • IGS Wistar Han

Origin: Rederived by GlaxoWellcome from Han Wistar stock supplied by BRL. VAF/Plus[®] animals transferred to Charles River UK in 1996. Transferred to Charles River Wilmington in 1997 and rederived.

Color	Albino
Breeding Age, Males (wks)	10-12
Breeding Age, Females (wks)	8-10
Mating Ratio	1:1
Estrous Cycle (Days)	4-5
Gestation (Days)	21-23
Average Litter Size: 1st litter	9
Average Litter Size: 2nd litter	10
Birth Weight (gm)	5-7
Weaning Weight, Males (gm)	40-60
Weaning Weight, Females (gm)	40-60
Weaning Age (days)	21
Average Daily Food Consumption (gm)	5 gm/100 gm body weight
Average Daily Water Intake (ml)	8-11 ml/100 gm body weight
Retired Breeders, Males (months)	9-12
Retired Breeders, Females (months)	9-12
Room Temperature (F)	70+/-2
Relative Humidity (%)	30-70%
Light Cycle (hrs)	12/12
Weight Loss in Transit (%)	10%

OUTBRED RATS

Crl:CD[®](SD)-*hr*BR • CD Hairless

Origin: This animal model occurred as a spontaneous mutation at Charles River. CD female rats were obtained from a barrier room at Wilmington for caesarian section rederivation for shipment to stock a barrier room at Charles River Raleigh. One pair of matings from rederived animals in an isolator produced a litter of pups that failed to develop hair. Subsequent litters born to this pair had the same trait. This sub-line was then separated from the other animals and continued.

Color	Hairless, with albino background
Breeding Age, Males (wks)	10-12
Breeding Age, Females (wks)	8-10
Mating Ratio	1:4
Estrous Cycle (Days)	4-5
Gestation (Days)	21-23
Average Litter Size: 1st litter	8
Average Litter Size: 2nd litter	9
Birth Weight (gm)	5-7
Weaning Weight, Males (gm)	40-60
Weaning Weight, Females (gm)	40-60
Weaning Age (days)	21
Average Daily Food Consumption (gm)	5 gm/100 gm body weight
Average Daily Water Intake (ml)	8-11 ml/100 gm body weight
Retired Breeders, Males (months)	9-12
Retired Breeders, Females (months)	9-12
Room Temperature (F)	70+/-2
Relative Humidity (%)	30-70%
Light Cycle (hrs)	12/12
Weight Loss in Transit (%)	10%

INBRED RATS

CDF®(F-344)/CrIBR • Fischer

Origin: From mating #344 of rats purchased from local breeder (Fischer). Colony originated by M.R. Curtis, Columbia University Institute for Cancer Research, 1920. Dunning at Columbia inbred to form strain starting in 1920. Dunning to CRL 1960 at F68. Caesarean derived in 1960.

Albino
10
8
1:5
4-5
19-21
6
6
6-8
25-35
25-35
21
5 gm/100 gm body weight
8-11 ml/100 gm body weight
8-12
8-12
70+/-2
30-70%
12/12
10%

INBRED RATS

NBL/CrCrIBR • Noble

Origin: Bogden in the mid-1970's from Noble (Nb) strain rats (brother x sister mated but not descended from a single pair, and therefore not necessarily isogenic). To National Cancer Institute Animal Production Program (Cr) in 1978. To Charles River Laboratories in 1998.

Color	Black face with black stripe down the length of a white body
Breeding Age, Males (wks)	8
Breeding Age, Females (wks)	7
Mating Ratio	1:1
Estrous Cycle (Days)	4-5
Gestation (Days)	21-24
Average Litter Size: 1st litter	7
Average Litter Size: 2nd litter	8
Birth Weight (gm)	6-9
Weaning Weight, Males (gm)	40-60
Weaning Weight, Females (gm)	35-55
Weaning Age (days)	21
Average Daily Food Consumption (gm)	5 gm/100 gm body weight
Average Daily Water Intake (ml)	8-11 ml/100 gm body weight
Retired Breeders, Males (months)	8-12
Retired Breeders, Females (months)	8-12
Room Temperature (F)	70+/-2
Relative Humidity (%)	30-70%
Light Cycle (hrs)	12/12
Weight Loss in Transit (%)	

INBRED RATS

LEW/CrIBR • Lewis

Origin: Developed by Dr. Lewis from Wistar stock in the early 1950's. To CRL from Tulane 1970 at F34. Caesarean derived in 1975.

Color	Albino
Breeding Age, Males (wks)	10
Breeding Age, Females (wks)	8
Mating Ratio	1:5
Estrous Cycle (Days)	4-5
Gestation (Days)	21-23
Average Litter Size: 1st litter	8
Average Litter Size: 2nd litter	9
Birth Weight (gm)	6-8
Weaning Weight, Males (gm)	40-60
Weaning Weight, Females (gm)	35-60
Weaning Age (days)	21
Average Daily Food Consumption (gm)	5 gm/100 gm body weight
Average Daily Water Intake (ml)	8-11 ml/100 gm body weight
Retired Breeders, Males (months)	8-12
Retired Breeders, Females (months)	8-12
Room Temperature (F)	70+/-2
Relative Humidity (%)	30-70%
Light Cycle (hrs)	12/12
Weight Loss in Transit (%)	10%

INBRED RATS

BN/CrIBR • Brown Norway

Origin: Silvers and Billingham began brother x sister matings with selection for histocompatibility in 1958 from a brown mutation in a stock of wild rats maintained by King and Aptekman in a pen-bred colony of rats trapped from the wild in 1930 by King at the Wistar Institute. To CRL from Radiobiology Institute, Netherlands 1976. Caesarean derived 1977.

Color	Non-agouti brown
Breeding Age, Males (wks)	10
Breeding Age, Females (wks)	8
Mating Ratio	1:1
Estrous Cycle (Days)	4-5
Gestation (Days)	21-23
Average Litter Size: 1st litter	5
Average Litter Size: 2nd litter	7
Birth Weight (gm)	6-8
Weaning Weight, Males (gm)	40-50
Weaning Weight, Females (gm)	35-45
Weaning Age (days)	21
Average Daily Food Consumption (gm)	5 gm/100 gm body weight
Average Daily Water Intake (ml)	8-11 ml/100 gm body weight
Retired Breeders, Males (months)	8-12
Retired Breeders, Females (months)	8-12
Room Temperature (F)	70+/-2
Relative Humidity (%)	30-70%
Light Cycle (hrs)	12/12
Weight Loss in Transit (%)	10%

INBRED RATS

SHR/NCrIBR • SHR

Origin: Okamoto, Kyoto School of Medicine, 1963, from outbred Wistar Kyoto male with marked elevation of blood pressure mated to female with slightly elevated blood pressure. Brother x sister mating with continued selection for spontaneous hypertension was then started. To National Institutes of Health (NIH) in 1966 from Okamoto at F13. To CRL from NIH in 1973 at F32. Caesarean derived in 1973.

Color	Albino
Breeding Age, Males (wks)	10
Breeding Age, Females (wks)	8
Mating Ratio	1:5
Estrous Cycle (Days)	4-5
Gestation (Days)	21-23
Average Litter Size: 1st litter	4
Average Litter Size: 2nd litter	8
Birth Weight (gm)	6-8
Weaning Weight, Males (gm)	35-45
Weaning Weight, Females (gm)	30-40
Weaning Age (days)	21
Average Daily Food Consumption (gm)	5 gm/100 gm body weight
Average Daily Water Intake (ml)	8-11 ml/100 gm body weight
Retired Breeders, Males (months)	8-12
Retired Breeders, Females (months)	8-12
Room Temperature (F)	70+/-2
Relative Humidity (%)	30-70%
Light Cycle (hrs)	12/12
Weight Loss in Transit (%)	10%

INBRED RATS

WKY/NCrIBR • WKY

Origin: Outbred Wistar stock from Kyoto School of Medicine to NIH 1971. This is the same stock from which the SHR/N was developed. To CRL 1974 from NIH, at F11. Caesarean derived in 1974.

Color	Albino
Breeding Age, Males (wks)	10
Breeding Age, Females (wks)	8
Mating Ratio	1:1
Estrous Cycle (Days)	4-5
Gestation (Days)	19-21
Average Litter Size: 1st litter	6
Average Litter Size: 2nd litter	10
Birth Weight (gm)	6-8
Weaning Weight, Males (gm)	40-60
Weaning Weight, Females (gm)	35-55
Weaning Age (days)	21
Average Daily Food Consumption (gm)	5 gm/100 gm body weight
Average Daily Water Intake (ml)	8-11 ml/100 gm body weight
Retired Breeders, Males (months)	8-12
Retired Breeders, Females (months)	8-12
Room Temperature (F)	70+/-2
Relative Humidity (%)	30-70%
Light Cycle (hrs)	12/12
Weight Loss in Transit (%)	10%

OUTBRED MICE

CrI:CD-1®(ICR)BR • Swiss

Origin: The original group of Swiss mice that served as progenitors of this stock consisted of two male and seven female albino mice derived from a non-inbred stock in the laboratory of Dr. de Coulon, Centre Anticancereux Romand, Lausanne, Switzerland. These animals were imported into the United States by Dr. Clara Lynch of the Rockefeller Institute in 1926. The Hauschka Ha/ICR was initiated in 1948 at the Institute for Cancer Research in Philadelphia from "Swiss" mice of Rockefeller origin. To Dr. Edward Mirand of Roswell Park Memorial Institute where they were designated as HaM/ICR. To CRL in 1959 and caesarean derived that same year.

Color	Albino
Breeding Age, Males (wks)	10-12
Breeding Age, Females (wks)	8-10
Mating Ratio	1:5/1:10
Estrous Cycle (Days)	4-5
Gestation (Days)	19-21
Average Litter Size: 1st litter	10
Average Litter Size: 2nd litter	11
Birth Weight (gm)	1-2
Weaning Weight, Males (gm)	10-12
Weaning Weight, Females (gm)	8-10
Weaning Age (days)	21
Average Daily Food Consumption (gm)	5 gm/8 wks age
Average Daily Water Intake (ml)	6-7 ml/8 wks age
Retired Breeders, Males (months)	8-12
Retired Breeders, Females (months)	8-12
Room Temperature (F)	70+/-2
Relative Humidity (%)	30-70%
Light Cycle (hrs)	12/12
Weight Loss in Transit (%)	10%

OUTBRED MICE

CrI:CF-1[®]BR • Non-Swiss

Origin: Obtained by Carworth from a Missouri laboratory. Not descended from "Swiss" mice from Rockefeller Institute (probably of wild albino origin). Intensively inbred by Carworth for over 20 generations. This line was then reduced to a single pair and outbred from that point forward. Caesarean derived in 1974 from a representative cross section of the Carworth CF-1 colony.

Color	Albino - carries brown behind its albino gene
Breeding Age, Males (wks)	10-12
Breeding Age, Females (wks)	8-10
Mating Ratio	1:5
Estrous Cycle (Days)	4-5
Gestation (Days)	19-21
Average Litter Size: 1st litter	8
Average Litter Size: 2nd litter	9
Birth Weight (gm)	1-2
Weaning Weight, Males (gm)	10-12
Weaning Weight, Females (gm)	8-10
Weaning Age (days)	21
Average Daily Food Consumption (gm)	5 gm/8 wks age
Average Daily Water Intake (ml)	6-7 ml/8 wks age
Retired Breeders, Males (months)	3-6
Retired Breeders, Females (months)	3-6
Room Temperature (F)	70+/-2
Relative Humidity (%)	30-70%
Light Cycle (hrs)	12/12
Weight Loss in Transit (%)	10%

OUTBRED MICE

Crl:CFW[®](SW)BR • Swiss Webster

Origin: This stock resulted from the selective inbreeding by Dr. Leslie Webster using foundation animals from a large colony of Swiss mice maintained at Rockefeller Institute following importation from Switzerland in 1926. To Carworth from Rockefeller Institute. Highly inbred at the time they were acquired by Carworth. The line selected was a single pair from which all CFW mice are descended. Caesarean derived by CRL in 1974 from a representative cross section of the Carworth CFW colony.

Color	Albino, carries black agouti behind its albino gene.
Breeding Age, Males (wks)	10-12
Breeding Age, Females (wks)	8-10
Mating Ratio	1:5
Estrous Cycle (Days)	4-5
Gestation (Days)	19-21
Average Litter Size: 1st litter	8
Average Litter Size: 2nd litter	9
Birth Weight (gm)	1-2
Weaning Weight, Males (gm)	10-12
Weaning Weight, Females (gm)	8-10
Weaning Age (days)	21
Average Daily Food Consumption (gm)	5 gm/8 wks age
Average Daily Water Intake (ml)	6-7 ml/8 wks age
Retired Breeders, Males (months)	8-12
Retired Breeders, Females (months)	8-12
Room Temperature (F)	70+/-2
Relative Humidity (%)	30-70%
Light Cycle (hrs)	12/12
Weight Loss in Transit (%)	10%

OUTBRED MICE

Crl:SKH1-hrBR • SKH1 (Hairless)

Origin: An uncharacterized/non-pedigreed hairless strain of mice was acquired by Temple University from a small commercial supplier in New York City. To CRL from the Skin and Cancer Hospital, Temple University in 1986. Cesarean derived in 1986.

Color	Hairless, albino background. This mouse is euthymic and immunocompetent.
Breeding Age, Males (wks)	7-8
Breeding Age, Females (wks)	7-8
Mating Ratio	1:2
Estrous Cycle (Days)	4-5
Gestation (Days)	19-21
Average Litter Size: 1st litter	8
Average Litter Size: 2nd litter	10
Birth Weight (gm)	1-2
Weaning Weight, Males (gm)	9-11
Weaning Weight, Females (gm)	7-9
Weaning Age (days)	21
Average Daily Food Consumption (gm)	5 gm/8 wks age
Average Daily Water Intake (ml)	6-7 ml/8 wks age
Retired Breeders, Males (months)	8-12
Retired Breeders, Females (months)	8-12
Room Temperature (F)	70+/-2
Relative Humidity (%)	30-70%
Light Cycle (hrs)	12/12
Weight Loss in Transit (%)	

IMMUNODEFICIENT MICE

Crl:CD-1[®]-*nu*BR • Nude • Outbred, Isolator Maintained

Origin: Developed from the transfer of the nude gene to a CD-1 mouse through a series of crosses and back-crosses. The animal does not have a thymus and is therefore immunodeficient and unable to produce T-cells.

Color	Hairless, albino background
Breeding Age, Males (wks)	6-8
Breeding Age, Females (wks)	6-8
Mating Ratio	1:2
Estrous Cycle (Days)	4-5
Gestation (Days)	17-21
Average Litter Size: 1st litter	13
Average Litter Size: 2nd litter	15
Birth Weight (gm)	1-2
Weaning Weight, Males (gm)	9-11
Weaning Weight, Females (gm)	7-9
Weaning Age (days)	21
Average Daily Food Consumption (gm)	5 gm/8 wks age
Average Daily Water Intake (ml)	6-7 ml/8 wks age
Retired Breeders, Males (months)	5-6
Retired Breeders, Females (months)	5-6
Room Temperature (F)	70+/-2
Relative Humidity (%)	30-70%
Light Cycle (hrs)	12/12
Weight Loss in Transit (%)	10%

IMMUNODEFICIENT MICE

Crl:NU/NU-nuBR • Nude • Outbred, Isolator Maintained

Origin: This immunodeficient nude mouse originated from NIH and was originally thought to be a BALB/c congenic. It was later determined that it was not inbred and is, therefore, maintained as an outbred and is not associated with any stock or strain. In most cases the Nu/Nu and Nu/Nu CD-1 perform similarly.

Color	Hairless, albino background
Breeding Age, Males (wks)	6-8
Breeding Age, Females (wks)	6-8
Mating Ratio	1:3
Estrous Cycle (Days)	4-5
Gestation (Days)	17-21
Average Litter Size: 1st litter	13
Average Litter Size: 2nd litter	15
Birth Weight (gm)	1-2
Weaning Weight, Males (gm)	9-11
Weaning Weight, Females (gm)	7-9
Weaning Age (days)	21
Average Daily Food Consumption (gm)	5 gm/8 wks age
Average Daily Water Intake (ml)	6-7 ml/8 wks age
Retired Breeders, Males (months)	5-6
Retired Breeders, Females (months)	5-6
Room Temperature (F)	70+/-2
Relative Humidity (%)	30-70%
Light Cycle (hrs)	12/12
Weight Loss in Transit (%)	10%

IMMUNODEFICIENT MICE

N:NIH-bg-nu-xidBR • Nude • Outbred, Isolator Maintained

Origin: Most commonly called the NIH-III, it was developed at NIH. In addition to the nude gene, which results in the absence of thymus and T-cell function, this mouse has two other mutations important in regulating the function of the immune system. These are designated as x-linked immune defect (xid) and beige (bg). The xid mutation affects the maturation of T-independent B-lymphocytes. It has been demonstrated that bg homozygotes are devoid of natural killer (NK) cells that are cytotoxic *in vitro* to tumor cells. However, the extent of the T-independent B-lymphocyte and NK cell deficiencies in the NIH-III have not been established.

Color	Hairless, light to dark gray pigmented skin
Breeding Age, Males (wks)	6-8
Breeding Age, Females (wks)	6-8
Mating Ratio	1:2
Estrous Cycle (Days)	4-5
Gestation (Days)	17-21
Average Litter Size: 1st litter	9
Average Litter Size: 2nd litter	10
Birth Weight (gm)	1-2
Weaning Weight, Males (gm)	9-11
Weaning Weight, Females (gm)	7-9
Weaning Age (days)	21
Average Daily Food Consumption (gm)	5 gm/8 wks age
Average Daily Water Intake (ml)	6-7 ml/8 wks age
Retired Breeders, Males (months)	5-6
Retired Breeders, Females (months)	5-6
Room Temperature (F)	70+/-2
Relative Humidity (%)	30-70%
Light Cycle (hrs)	12/12
Weight Loss in Transit (%)	10%

IMMUNODEFICIENT MICE

BALB/cAnNCrI-nuBR • Nude • Inbred, Isolator Maintained

Origin: Developed through crosses and back-crosses between BALB/cABon-nu and the BALB/cAnNCrjnu at Charles River Japan (CRJ). Pedigreed pregnant females of BALB/cAnNCrj-nu were received from CRJ in 1985 and subsequently rederived in the same year. This mouse is inbred, and genetic monitoring results confirm it to be a BALB/c nude. It also lacks a thymus and is therefore T-cell deficient.

Color	Hairless, albino background
Breeding Age, Males (wks)	6-8
Breeding Age, Females (wks)	6-8
Mating Ratio	1:3
Estrous Cycle (Days)	4-5
Gestation (Days)	17-21
Average Litter Size: 1st litter	6
Average Litter Size: 2nd litter	7
Birth Weight (gm)	1-2
Weaning Weight, Males (gm)	7-9
Weaning Weight, Females (gm)	6-8
Weaning Age (days)	21
Average Daily Food Consumption (gm)	5 gm/8 wks age
Average Daily Water Intake (ml)	6-7 ml/8 wks age
Retired Breeders, Males (months)	5-6
Retired Breeders, Females (months)	5-6
Room Temperature (F)	70+/-2
Relative Humidity (%)	30-70%
Light Cycle (hrs)	12/12
Weight Loss in Transit (%)	10%

IMMUNODEFICIENT MICE

C.B-17/IcrCrI-scidBR • Fox Chase SCID® • Inbred, Isolator Maintained

Origin: SCID mice possess a genetic autosomal recessive mutation (scid). Developed in 1980 by Bosma in C.B-17/Icr mice at Fox Chase Cancer Center. SCID mice show a severe combined immunodeficiency affecting both B and T lymphocytes. They have normal NK cells, macrophages, and granulocytes. Caesarean derived in 1991 from an IFFA CREDO foundation colony.

Color	Albino
Breeding Age, Males (wks)	6-8
Breeding Age, Females (wks)	6-8
Mating Ratio	1:3
Estrous Cycle (Days)	4-5
Gestation (Days)	17-21
Average Litter Size: 1st litter	7
Average Litter Size: 2nd litter	8
Birth Weight (gm)	1-2
Weaning Weight, Males (gm)	9-12
Weaning Weight, Females (gm)	9-12
Weaning Age (days)	21
Average Daily Food Consumption (gm)	5 gm/8 wks age
Average Daily Water Intake (ml)	6-7 ml/8 wks age
Retired Breeders, Males (months)	5-6
Retired Breeders, Females (months)	5-6
Room Temperature (F)	70+/-2
Relative Humidity (%)	30-70%
Light Cycle (hrs)	12/12
Weight Loss in Transit (%)	10%

IMMUNODEFICIENT MICE

C.B-17/IcrCrI-scid-bgBR • SCID Beige • Isolator Maintained

Origin: A congenic mouse that possesses both genetic autosomal recessive mutations scid and beige. This mouse was developed by Croy, *et al* at the University of Guelph by an intercross of C.B-17 scid/scid to C57BL/6 bg/bg mice.

Color	Albino
Breeding Age, Males (wks)	6-8
Breeding Age, Females (wks)	6-8
Mating Ratio	1:3
Estrous Cycle (Days)	4-5
Gestation (Days)	17-21
Average Litter Size: 1st litter	7
Average Litter Size: 2nd litter	8
Birth Weight (gm)	1-2
Weaning Weight, Males (gm)	9-12
Weaning Weight, Females (gm)	9-12
Weaning Age (days)	21
Average Daily Food Consumption (gm)	5 gm/8 wks age
Average Daily Water Intake (ml)	6-7 ml/8 wks age
Retired Breeders, Males (months)	5-6
Retired Breeders, Females (months)	5-6
Room Temperature (F)	70+/-2
Relative Humidity (%)	30-70%
Light Cycle (hrs)	12/12
Weight Loss in Transit (%)	10%

BALB/cAnNCrIBR • BALB/c Andervont

Origin: H.J. Bagg developed the "Bagg albino" in 1913 from stock from an Ohio pet dealer. Inbred in 1923 by McDowell. To Snell in 1932 at F26, to Andervont in 1935. To NIH in 1951 from Andervont at F72. To CRL in 1974 from NIH. Caesarean derived in 1975.

Color	Albino
Breeding Age, Males (wks)	8-10
Breeding Age, Females (wks)	8-10
Mating Ratio	1:2
Estrous Cycle (Days)	4-5
Gestation (Days)	19-21
Average Litter Size: 1st litter	5
Average Litter Size: 2nd litter	6
Birth Weight (gm)	1-2
Weaning Weight, Males (gm)	8-12
Weaning Weight, Females (gm)	7-11
Weaning Age (days)	21
Average Daily Food Consumption (gm)	5 gm/8 wks age
Average Daily Water Intake (ml)	6-7 ml/8 wks age
Retired Breeders, Males (months)	8-12
Retired Breeders, Females (months)	8-12
Room Temperature (F)	70+/-2
Relative Humidity (%)	30-70%
Light Cycle (hrs)	12/12
Weight Loss in Transit (%)	10%

INBRED MICE

C3H/HeNCrIBR • C3H Heston

Origin: From a cross of a Bagg albino female and a DBA male by Strong in 1920. A litter of 4 females and 2 males sent to Andervont in 1930; then to Heston at F35. To NIH in 1951 from Heston at F57. To CRL in 1974 from NIH. Caesarean derived in 1975.

Color	Agouti (wild type)
Breeding Age, Males (wks)	8-10
Breeding Age, Females (wks)	8-10
Mating Ratio	1:2
Estrous Cycle (Days)	4-5
Gestation (Days)	19-21
Average Litter Size: 1st litter	5
Average Litter Size: 2nd litter	6
Birth Weight (gm)	1-2
Weaning Weight, Males (gm)	9-13
Weaning Weight, Females (gm)	9-13
Weaning Age (days)	21
Average Daily Food Consumption (gm)	5 gm/8 wks age
Average Daily Water Intake (ml)	6-7 ml/8 wks age
Retired Breeders, Males (months)	7-9
Retired Breeders, Females (months)	7-9
Room Temperature (F)	70+/-2
Relative Humidity (%)	30-70%
Light Cycle (hrs)	12/12
Weight Loss in Transit (%)	10%

C57BL/6NCrIBR • C57 Black subline 6

Origin: Developed by C.C. Little in 1921 from a mating of Miss Abby Lathrop's stock that also gave rise to strains C57BR and C57L. Strains 6 and 10 separated about 1937. To Jackson Labs in 1948 from Hall. To NIH in 1951 from Jackson Labs at F32. To CRL in 1974 from NIH. Caesarean derived in 1975.

Color	Black
Breeding Age, Males (wks)	8-10
Breeding Age, Females (wks)	8-10
Mating Ratio	1:2
Estrous Cycle (Days)	4-5
Gestation (Days)	19-21
Average Litter Size: 1st litter	6
Average Litter Size: 2nd litter	7
Birth Weight (gm)	1-2
Weaning Weight, Males (gm)	9-13
Weaning Weight, Females (gm)	9-13
Weaning Age (days)	21
Average Daily Food Consumption (gm)	5 gm/8 wks age
Average Daily Water Intake (ml)	6-7 ml/8 wks age
Retired Breeders, Males (months)	7-9
Retired Breeders, Females (months)	7-9
Room Temperature (F)	70+/-2
Relative Humidity (%)	30-70%
Light Cycle (hrs)	12/12
Weight Loss in Transit (%)	10%

INBRED MICE

DBA/2NCrIBR • Dilute Brown

Origin: Developed by C.C. Little in 1909 from stock segregating for coat color. Oldest of all the inbred strains of mice. In 1929-1930 crosses were made between sublines and several new sublines were established, including the widely used sublines 1 (previously called 12) and 2 (previously called 212). To Milder in 1938. To NIH in 1951 from Mider at F34. To CRL in 1974 from NIH. Caesarean derived in 1975.

Color	Non-agouti, dilute brown
Breeding Age, Males (wks)	8-10
Breeding Age, Females (wks)	8-10
Mating Ratio	1:2
Estrous Cycle (Days)	4-5
Gestation (Days)	19-21
Average Litter Size: 1st litter	3
Average Litter Size: 2nd litter	4
Birth Weight (gm)	1-2
Weaning Weight, Males (gm)	8-12
Weaning Weight, Females (gm)	8-12
Weaning Age (days)	21
Average Daily Food Consumption (gm)	5 gm/8 wks age
Average Daily Water Intake (ml)	6-7 ml/8 wks age
Retired Breeders, Males (months)	7-9
Retired Breeders, Females (months)	7-9
Room Temperature (F)	70+/-2
Relative Humidity (%)	30-70%
Light Cycle (hrs)	12/12
Weight Loss in Transit (%)	10%

FVB/NCrIBR

Origin: Derived in 1935 from an outbred Swiss colony [N:GP(S)] at NIH. During the early 1970's, established as an inbred strain called Fvl^b (sensitive to the B strain of Friend leukemia) at NIH. To CRL from NIH in 1994. Caesarean derived in 1995.

Color	Albino
Breeding Age, Males (wks)	8-10
Breeding Age, Females (wks)	8-10
Mating Ratio	1:2
Estrous Cycle (Days)	4-5
Gestation (Days)	19-21
Average Litter Size: 1st litter	9
Average Litter Size: 2nd litter	9
Birth Weight (gm)	1-2
Weaning Weight, Males (gm)	9-13
Weaning Weight, Females (gm)	9-13
Weaning Age (days)	21
Average Daily Food Consumption (gm)	5 gm/8 wks age
Average Daily Water Intake (ml)	6-7 ml/8 wks age
Retired Breeders, Males (months)	7-9
Retired Breeders, Females (months)	7-9
Room Temperature (F)	70+/-2
Relative Humidity (%)	30-70%
Light Cycle (hrs)	12/12
Weight Loss in Transit (%)	10%

INBRED MICE

C.B-17/IcrCrIBR • Fox Chase CB17[®] • Isolator Maintained

Origin: A congenic where the inbred BALB/c strain carries the immunoglobulin heavy chain allele (Igh-1^b) of the C57BL/Ka strain. Received from Fox Chase in 1992 and rederived in November 1992.

Color	Albino
Breeding Age, Males (wks)	6-8
Breeding Age, Females (wks)	6-8
Mating Ratio	1:3
Estrous Cycle (Days)	4-5
Gestation (Days)	17-21
Average Litter Size: 1st litter	7
Average Litter Size: 2nd litter	8
Birth Weight (gm)	1-2
Weaning Weight, Males (gm)	9-12
Weaning Weight, Females (gm)	9-12
Weaning Age (days)	21
Average Daily Food Consumption (gm)	5 gm/8 wks age
Average Daily Water Intake (ml)	6-7 ml/8 wks age
Retired Breeders, Males (months)	5-6
Retired Breeders, Females (months)	5-6
Room Temperature (F)	70+/-2
Relative Humidity (%)	30-70%
Light Cycle (hrs)	12/12
Weight Loss in Transit (%)	10%

AKR • AKR/NCrl/BR

Origin: Developed by Furth in 1928 - 1936 from a high lymphomatosis stock with selection for leukemia (Furth *et al.*, 1933). Descendants sent to Oak Ridge National Laboratories by Lynch, where they were maintained by random breeding and brother x sister mating. To CRL from NIH in 1982, when they were rederived.

Color	White
Breeding Age, Males (wks)	6-8
Breeding Age, Females (wks)	6-8
Mating Ratio	1:1
Estrous Cycle (Days)	4-5
Gestation (Days)	19-21
Average Litter Size: 1st litter	7
Average Litter Size: 2nd litter	8
Birth Weight (gm)	1-2
Weaning Weight, Males (gm)	9-12
Weaning Weight, Females (gm)	9-12
Weaning Age (days)	21
Average Daily Food Consumption (gm)	5 gm/8 wks age
Average Daily Water Intake (ml)	6-7 ml/8 wks age
Retired Breeders, Males (months)	5-6
Retired Breeders, Females (months)	5-6
Room Temperature (F)	70+/-2
Relative Humidity (%)	30-70%
Light Cycle (hrs)	12/12
Weight Loss in Transit (%)	10%

INBRED MICE

SJL • SJL/JOrlicoCriBR

Origin: Selected by James Lambert in 1995 from 3 different strains of Swiss-Webster brought to The Jackson Laboratory between 1938 and 1943. This strain was introduced to CNRS-CSEAL, Orleans France in 1978 and acquired by IFFA CREDO in 1990 at the 114th generation. To Charles River Laboratories from IFFA CREDO in 1997.

Color	Albino
Breeding Age, Males (wks)	8-10
Breeding Age, Females (wks)	8-10
Mating Ratio	1:1
Estrous Cycle (Days)	4-5
Gestation (Days)	19-21
Average Litter Size: 1st litter	5
Average Litter Size: 2nd litter	6
Birth Weight (gm)	1-2
Weaning Weight, Males (gm)	9-13
Weaning Weight, Females (gm)	9-13
Weaning Age (days)	21
Average Daily Food Consumption (gm)	5 gm/8 wks age
Average Daily Water Intake (ml)	6-7 ml/8 wks age
Retired Breeders, Males (months)	7-9
Retired Breeders, Females (months)	7-9
Room Temperature (F)	70+/-2
Relative Humidity (%)	30-70%
Light Cycle (hrs)	12/12
Weight Loss in Transit (%)	10%

HYBRID MICE

B6C3F1/CrIBR

Origin: A cross between female C57BL/6NCrIBR x male C3H/HeNCrIBR.

Color	Agouti (wild type)
Breeding Age, Males (wks)	7
Breeding Age, Females (wks)	7
Mating Ratio	1:2
Estrous Cycle (Days)	4-5
Gestation (Days)	19-21
Average Litter Size: 1st litter	7
Average Litter Size: 2nd litter	8
Birth Weight (gm)	1-2
Weaning Weight, Males (gm)	10-14
Weaning Weight, Females (gm)	10-14
Weaning Age (days)	21
Average Daily Food Consumption (gm)	5 gm/8 wks age
Average Daily Water Intake (ml)	6-7 ml/8 wks age
Retired Breeders, Males (months)	6-9
Retired Breeders, Females (months)	6-9
Room Temperature (F)	70+/-2
Relative Humidity (%)	30-70%
Light Cycle (hrs)	12/12
Weight Loss in Transit (%)	10%

HYBRID MICE

B6D2F1/CrIBR • BDF1

Origin: A cross between female C57BL/6NCrIBR x male DBA/2NCrIBR.

Color	Black
Breeding Age, Males (wks)	7
Breeding Age, Females (wks)	7
Mating Ratio	1:2
Estrous Cycle (Days)	4-5
Gestation (Days)	19-21
Average Litter Size: 1st litter	8
Average Litter Size: 2nd litter	9
Birth Weight (gm)	1-2
Weaning Weight, Males (gm)	10-14
Weaning Weight, Females (gm)	10-14
Weaning Age (days)	21
Average Daily Food Consumption (gm)	5 gm/8 wks age
Average Daily Water Intake (ml)	6-7 ml/8 wks age
Retired Breeders, Males (months)	6-9
Retired Breeders, Females (months)	6-9
Room Temperature (F)	70+/-2
Relative Humidity (%)	30-70%
Light Cycle (hrs)	12/12
Weight Loss in Transit (%)	10%

HYBRID MICE

CD2F1/CrIBR • CDF1

Origin: A cross between female BALB/cAnNCrIBR x male DBA/2NCrIBR.

Color	Brown
Breeding Age, Males (wks)	8
Breeding Age, Females (wks)	7
Mating Ratio	1:2
Estrous Cycle (Days)	4-5
Gestation (Days)	19-21
Average Litter Size: 1st litter	6
Average Litter Size: 2nd litter	8
Birth Weight (gm)	1-2
Weaning Weight, Males (gm)	10-14
Weaning Weight, Females (gm)	10-14
Weaning Age (days)	21
Average Daily Food Consumption (gm)	5 gm/8 wks age
Average Daily Water Intake (ml)	6-7 ml/8 wks age
Retired Breeders, Males (months)	6-9
Retired Breeders, Females (months)	6-9
Room Temperature (F)	70+/-2
Relative Humidity (%)	30-70%
Light Cycle (hrs)	12/12
Weight Loss in Transit (%)	10%

HYBRID MICE

CB6F1/CrIBR

Origin: A cross between female BALB/cAnNCrIBR x male C57BL/6NCrIBR.

Color	Agouti
Breeding Age, Males (wks)	7
Breeding Age, Females (wks)	7
Mating Batio	1.2
Estrous Cycle (Days)	4-5
Costation (Days)	10.21
Average Litter Size: 1et litter	19-21
Average Liller Size: Tst liller	4
Average Litter Size: 2nd litter	5
Birth Weight (gm)	1-2
Weaning Weight, Males (gm)	10-13
Weaning Weight, Females (gm)	10-13
Weaning Age (days)	21
Average Daily Food Consumption (gm)	5 gm/8 wks age
Average Daily Water Intake (ml)	6-7 ml/8 wks age
Retired Breeders, Males (months)	6-9
Retired Breeders, Females (months)	6-9
Room Temperature (F)	70+/-2
Relative Humidity (%)	30-70%
Light Cycle (hrs)	12/12
Weight Loss in Transit (%)	10%

OUTBRED HAMSTERS

Lak:LVG(SYR)BR • LVG (Golden Syrian)

Origin: Three members of a litter captured in Syria in 1930 were retained in captivity. It is the progeny of these animals that were first imported to the United States in 1938. Descended from two original colonies acquired by Lakeview in 1949 and 1951. Closed outbred colony since 1951.

Color	Medium tan
Breeding Age, Males (wks)	7
Breeding Age, Females (wks)	7
Mating Ratio	1:1
Estrous Cycle (Days)	4-5
Gestation (Days)	15.5
Average Litter Size: 1st litter	11
Average Litter Size: 2nd litter	12
Birth Weight (gm)	3-4
Weaning Weight, Males (gm)	40-50
Weaning Weight, Females (gm)	40-50
Weaning Age (days)	21
Average Daily Food Consumption (gm)	10-12 gm/100 gm body wt
Average Daily Water Intake (ml)	8-10 ml/100 gm body wt
Retired Breeders, Males (months)	6-7
Retired Breeders, Females (months)	5-6
Room Temperature (F)	70+/-2
Relative Humidity (%)	30-70%
Light Cycle (hrs)	14/10
Weight Loss in Transit (%)	10%

OUTBRED GUINEA PIGS

Crl:(HA)BR • Hartley

Origin: To CRL in 1968 from Medical Research Council, Millhill, England. Caesarean derived in 1969.

Color	Albino
Breeding Age, Males (wks)	8-10
Breeding Age, Females (wks)	5-6
Mating Ratio	1:6
Estrous Cycle (Days)	16-18
Gestation (Days)	60-65
Average Litter Size: 1st litter	3
Average Litter Size: 2nd litter	4
Birth Weight (gm)	50-100
Weaning Weight, Males (gm)	100-150
Weaning Weight, Females (gm)	175-125
Weaning Age (days)	7
Average Daily Food Consumption (gm)	6 gm/100 gm body weight
Average Daily Water Intake (ml)	10 ml/100 gm body weight
Retired Breeders, Males (months)	12-18
Retired Breeders, Females (months)	12-18
Room Temperature (F)	70+/-2
Relative Humidity (%)	30-70%
Light Cycle (hrs)	12/12
Weight Loss in Transit (%)	20%

OUTBRED GUINEA PIGS

Crl:IAF(HA)-hrBR • IAF (Hairless)

Origin: Mutation first identified in 1978, among the offspring of three females caged with one male in a colony of albino Hartley guinea pigs at Montreal's Institut Armand Frappier (IAF). To Charles River in 1982. Caesarean derived in 1984. This guinea pig is euthymic and immunocompetent.

Color	Hairless, albino
Breeding Age, Males (wks)	10-12
Breeding Age, Females (wks)	5-6
Mating Ratio	1:6
Estrous Cycle (Days)	16-18
Gestation (Days)	60-65
Average Litter Size: 1st litter	3
Average Litter Size: 2nd litter	3
Birth Weight (gm)	50-100
Weaning Weight, Males (gm)	100-150
Weaning Weight, Females (gm)	75-125
Weaning Age (days)	7
Average Daily Food Consumption (gm)	6 gm/100 gm body weight
Average Daily Water Intake (ml)	10 ml/100 gm body weight
Retired Breeders, Males (months)	18-24
Retired Breeders, Females (months)	12-18
Room Temperature (F)	70+/-2
Relative Humidity (%)	30-70%
Light Cycle (hrs)	12/12
Weight Loss in Transit (%)	20%

OUTBRED GERBILS

Crl:(MON)BR • Mongolian

Origin: The stock was obtained from Tumblebrook Farms in 1995, rederived in 1996.

Color	Predominantly agouti with some black
Breeding Age, Males (wks)	8-10
Breeding Age, Females (wks)	8-10
Mating Ratio	1:1
Estrous Cycle (Days)	4-6
Gestation (Days)	25-28
Average Litter Size: 1st litter	7
Average Litter Size: 2nd litter	8
Birth Weight (gm)	2-3
Weaning Weight, Males (gm)	25-27
Weaning Weight, Females (gm)	24-26
Weaning Age (days)	28
Average Daily Food Consumption (gm)	5-8 gm/100 gm body weight
Average Daily Water Intake (ml)	4-7 ml/100 gm body weight
Retired Breeders, Males (months)	9-12
Retired Breeders, Females (months)	9-12
Room Temperature (F)	70+/-2
Relative Humidity (%)	30-70%
Light Cycle (hrs)	12/12
Weight Loss in Transit (%)	10%

RABBITS

CrI:KBL(NZW)BR • Outbred • New Zealand White

Origin: The NZW rabbit was obtained in 1991 by Charles River Canada (CRC) from Kitayama Labs K.K. of Nagano Prefecture, Japan. The colony had been rederived by Kitayama Labs in 1985 using standard techniques.

Color	Albino
Breeding Age, Males (months)	5-6
Breeding Age, Females (months)	5-6
Mating Ratio	1-7
Estrous Cycle (Days)	13-14
Gestation (Days)	31-32
Average Litter Size: 1st litter	8-10
Average Litter Size: 2nd litter	8-10
Birth Weight (gm)	50
Weaning Weight, Males (kg)	.5-1
Weaning Weight, Females (kg)	.5-1
Weaning Age (days)	35
Average Daily Food Consumption (gm)	100-200 gm
Average Daily Water Intake (ml)	200-500 ml
Retired Breeders, Males (months)	24-36
Retired Breeders, Females (months)	24-36
Room Temperature (F)	70+/-2
Relative Humidity (%)	55%
Light Cycle (hrs)	14/10
Weight Loss in Transit (%)	12%

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