



HYLASCO

BIOTECHNOLOGY (INDIA) PVT. LTD.



PROUDLY, AN AAALAC ACCREDITED PROGRAM

RESEARCH MODELS AND SERVICES

Technology Licensee of



charles river




charles river

MORE THAN A MOUSE

What began as a thousand cages in a warehouse in Boston is now a global network of comprehensive research facilities that are strategically positioned to support your drug development in all major therapeutic areas.

Through vital husbandry and study support, as well as supplementary staffing, consulting, training and equipment, we fill the gaps so you can focus on your research. Our portfolio includes:

- Research animal models
- Surgical services
- Aging and feeding studies
- 360 Diagnostics™
- Genetically engineered models and services
- Genetic testing services

Further downstream, we help you maintain momentum on the way to market by shepherding your drug through discovery, safety assessment, clinical development and manufacturing. Visit www.criver.com to explore how we can help streamline your operations throughout the course of research.



HYLASCO
BIOTECHNOLOGY (INDIA) PVT. LTD.



About Hylasco

Exclusive Production & Distribution Licensee Holder of Charles River Laboratories

Hylasco Bio-Technology (India) Pvt. Ltd. in Hyderabad, Telangana, was setup to cater to the fast growing pharma and biotech industry and be part of the Government's "Make In India" strategy.

We believe in the TOTAL QUALITY MANAGEMENT approach and serve our customers with a deep understanding of the science and business of using animal models in pre-clinical research.

The last year's pandemic showed the importance and significance of a robust pre clinical industry in india.

What we do

- 1) Supply wide variety of internationally standardized genetic quality animals.
- 2) Represent International laboratory animal products and equipment suppliers.
- 3) Consulting services for Animal Facilities.
- 4) Training and Support services.
- 5) A One-Stop-Shop Solution to become one-stop-shop.

Board Members :

Dr. Balaji Bhyravbhatla

Managing Director

Dr. Richard Charn Sun Lee

Technical Director and Chairman

Dr. Jae Jin Chang

Director and Co-Chairman

Dr. Cheng Chung Chen

Director

Company Purpose Statement

Hylasco provides basic yet essential products and services necessary to enable high quality drug discovery & development.

We strive,

- * to maintain the highest international quality.
- * to service pharmaceutical and biotechnology companies, academic and national institutes focused on original discovery research.
- * to enable of therapeutics of world class.

Our experienced and dedicated staff assists clients with information & resources they need, to improve and accelerate their "discovery to market" efforts.

External goals:

- * Focus on establishing market share by offering high quality products and services in an innovative and flexible manner that meet each client's specific needs.
- * Engage our clients and forge strong relationships as a partner, trusted for science, efficiency and cost effectiveness.

Focus on key initiatives:

- * Drive operations to meet international standards
- * Train for bio security
- * Unyielding compromise to Sanitization.
- * Customer Service at par or above MNC's

Contact Us:

Hylasco Bio - Technology (India) Pvt. Ltd.

4B, 1st Floor, MNP, Turkapally Village,
Shameerpet Mandal, R.R. Dist. - 500 078

Ph : E-Mail : sales@hylascobio.com



About Charles River

Charles River Laboratories was started in the near 1947 by a young Veterinarian Dr. Henry Foster, as a one-man laboratory in Boston, USA, to fulfill the regional need for laboratory animal models by local researchers. Today, Charles River looks like a very different company and remains committed to collaboration, responsibility and leadership within the global research community.

Commitment to Humane Care & Well-Being of Research Animal Models

Animals have contributed to nearly every medical breakthrough in recent history, including treatments for cancer, diabetes, and AIDS, and they continue to play an essential role in the development of life-saving drugs for people and other animals. The welfare of the animals contributing to research is of utmost importance and a prerequisite for the accuracy, reliability, and translatability of our research.

Animals are essential to our understanding of disease progression and biological mechanisms as well as drug safety and efficacy. Before any drug or therapy is brought to market, there are regulations requiring testing on animal models to identify any health or safety risks as well as effectiveness. When animal models are required, the research is highly regulated to ensure responsible, ethical, and humane treatment. You can learn more about our commitment to the humane care and well-being of all animals that we work by reading our Animal Welfare and Humane Treatment of Animals Policy.

Facts about Animals in Research

- Human and animal anatomy is comparable, with our organ systems performing in very similar ways.
- Humans share approximately 99% of our DNA with mice, making them particularly effective models.
- Approximately 95% of all animals involved in research are mice, rats, and fish.
- Veterinary research also benefits from animals in research, providing medicines for companion and farm animals.

Capabilities

Charles River is Comprised to three business segments: Research Models & Services (RMS), Discovery & Safety Assessment (DSA) and Manufacturing Support (MFG).

Our RMS segment contains three business: Research Models, Research Model Services and Research Products. We have been supplying research models to the drug development industry since 1947, and are the global leaders in the breeding and distribution of research models, with the largest selection of the most widely used strains in the world.

We comply with standards of practice and accepted guidance for the care and use of laboratory animals. Moreover, we participate in voluntary oversight programs, such as AAALAC, to assess our compliance through in-depth evaluations of our facilities and practices.

85%
of the drugs
approved by the FDA
in 2019 were
supported by
Charles River
Animals

Contact Us:

Charles River - UK

Research Models and Services, U.K. Manston Road, Margate, Kent CT9 4LT

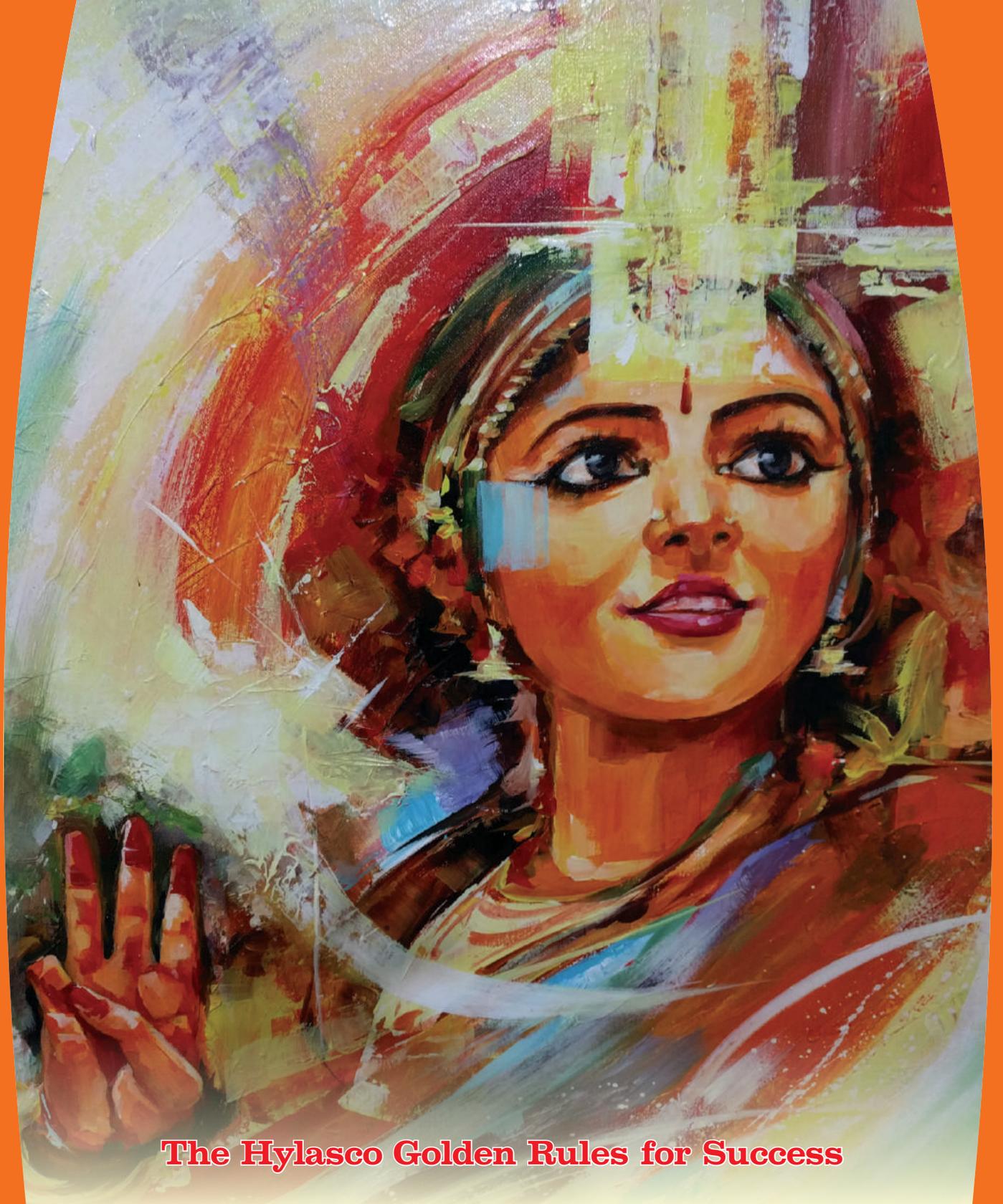
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E-Mail: crukcsd@crl.com

www.hylascobio.com / www.criver.com







The Hylasco Golden Rules for Success

**Prevention is the safest way
Discipline must be everyday
Sanitation & sanitation is the only way
Quality products will bring us health & wealth
Teamwork will make us strong
Happy customers will never go wrong**

**By Dr. Richard C.S. Lee, DVM,
Co-Founder & Technical Director**

HYLASCO BIOTECHNOLOGY (INDIA) PVT, LTD.,

Our Core Values

+ 3R's -

- | | |
|-----------|------------|
| ✓ Reduce | X Race |
| ✓ Recycle | X Religion |
| ✓ Replace | X Romance |

+ 3P's -

- | | |
|--------------|-------------|
| ✓ Preventive | X Politics |
| ✓ Practice | X Prejudice |
| ✓ Program | X Personal |

Contents



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		Inbred Mice
		Hybrid Mice
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		Immunodeficient Models:
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3	Consumable Products	NEPCO-Aspen Shaving Mices / Beta Chips Rats
		PMI-18% & 14% diet
		PRL-Clidox-S&B
		ReCathCo
		LabSand
		Dyets – Specialized diets
		Plasma, Blood, Organs
4	Equipment	MSRS II IVC & MSRS II mini-IVC
		Blue Swan pipette controller,
		Gradient Turbo Cycler 2 with 96-well Sample Block(220V)
		Pipette Controller
		RWD
		ExScope 101
6	Other Services	CRL Diagnostics 360 Diagnostics™
		Health Monitoring
		Training
		Facility Services
		Facility Designs

Mouse Models - Health Profiles

Charles River is committed to providing you with high-quality genetically standardised models such as SPF (Specific Pathogen Free) and SOPF (Specific and Opportunistic Pathogen Free) .

Immunocompetent Strains Available from Charles River with an SOPF Health Status:

From Europe

Crl:CD1(ICR) BALB/cByJ
Crl:NMRI(Han) C57BL/6J
129S2/SvPasCrl C57BL/6NCrl

From North America*

BALB/cAnNCrl
SJL/JOrllcoCrl
Crl:SKH1-Hrtm

	SPF – Immunocompetent mice	SOPF - Immunocompetent mice
Viruses		
Minute Virus of Mice (MVM)	•	•
Mouse Parvovirus (MPV)	•	•
Mouse Hepatitis Virus (MHV)	•	•
Mouse Norovirus (MNV)	•	•
Theiler's Murine Encephalomyelitis Virus (TMEV -GDVII)	•	•
Mouse Rotavirus (EDIM)	•	•
Sendai virus (SEND)	•	•
Reovirus 3 (REO3)	•	•
Pneumonia virus of Virus (PVM)	•	•
Mouse Thymic Virus (MTV)	•	•
Mouse Cytomegalovirus (MCMV)	•	•
Hantaan Virus (HANT)	•	•
Lymphocytic Choriomeningitis Virus (LCMV)	•	•
Mouse Adenovirus (MAV 1 & 2)	•	•
K Virus (K)	•	•
Ectromelia virus (ECTRO)	•	•
Polyoma Virus (POLY)	•	•
Lactate Dehydrogenase Virus (LDV)	•	•
Bacterias		
Tyzzers Disease (CPIL)	•	•
Bordetella bronchiseptica	b	•
Citrobacter rodentium	•	•
Corynebacterium kutscheri	•	•
Mycoplasma pulmonis	•	•
Pasteurella pneumotropica	b	•
Pasteurella multocida	•	•
Salmonella spp	•	•
Streptobacillus moniliformis	•	•
Streptococcus pneumoniae	b	•
Helicobacter hepaticus	•	•
Helicobacter bilis	•	•
Helicobacter typhlonius	•	•
Helicobacter spp. other species	•	•
Cilia-Associated-Respiratory Bacillus	•	•
Opportunistic Organisms		
Staphylococcus aureus	c	•
Pseudomonas aeruginosa	c	•
Klebsiella pneumoniae	c	•
Klebsiella oxytoca	c	•
Pneumocystis spp	c	•
Proteus mirabilis	c	•
Beta haemolytic Streptococcus – Grp A	c	•
Beta haemolytic Streptococcus - Grp B	c	•
Beta haemolytic Streptococcus - Grp C	c	•
Beta haemolytic Streptococcus - Grp G	c	•
Corynebacterium bovis	c	•
Parasites		
Ectoparasites	•	•
Helminths	•	•
Enteric Pathogenic Protozoa	•	•
Other protozoa	c	•
E. cuniculi	•	•

SPF = VAF Plus® and SOPF = VAF Elite®; they are based on the same monitoring programmes in terms of agents screened, number and age of animals screened, frequency of testing, and recycling policies.

• = excluded agents - b = planned recycle - c = no action

* List of agents for North America may differ from table listed above

Rat Models - Health Profiles

Charles River is committed to providing you with high-quality genetically standardised models such as SPF (Specific Pathogen Free) and SOPF (Specific and Opportunistic Pathogen Free)*.

The CD® IGS Rat is available from Charles River Europe with an SOPF health status.

	SPF – Immunocompetent rats	SOPF - Immunocompetent rats
Viruses		
Rat Parvovirus Type 1 (RPV)	•	•
Rat Parvovirus Type 2 (RMV)	•	•
Toolan H1 Virus	•	•
Kilham Rat Virus (KRV)	•	•
Rat coronavirus/sialodacryoadentitis RCV/SDAV	•	•
Rat Theiler Virus (RTV, GDVII)	•	•
Reovirus 3 (REO3)	•	•
Sendai virus (SEND)	•	•
Pneumonia Virus of mice (PVM)	•	•
Mouse Adenovirus (MAV)	•	•
Lymphocytic Choriomeningitis (LCMV)	•	•
Hantaan Virus	•	•
Bacterias		
Tyzzers Disease (C.PIL)	•	•
Bordetella bronchiseptica	b	•
Corynebacterium kutscheri	•	•
Mycoplasma pulmonis	•	•
Pasteurella pneumotropica	b	•
Pasteurella multocida	•	•
Salmonella spp	•	•
Streptobacillus moniliformis	•	•
Streptococcus pneumoniae	b	•
Helicobacter hepaticus	•	•
Helicobacter bilis	b	•
Helicobacter spp	b	•
Cilia-Associated-Respiratory bacillus	•	•
Pneumocystis spp	•	•
Opportunistic organisms		
Beta Haemolytic Strepto A	c	•
Beta Haemolytic Strepto B	c	•
Beta Haemolytic Strepto C	c	•
Beta Haemolytic Strepto G	c	•
Staphylococcus aureus	c	•
Pseudomonas aeruginosa	c	•
Klebsiella pneumoniae	c	•
Klebsiella oxytoca	c	•
Proteus mirabilis	c	•
Parasites		
E. cuniculi	•	•
Ectoparasite	•	•
Helminth	•	•
Enteric Pathogenic Protozoa	•	•
Other protozoa	c	•

• = excluded agents - b = planned recycle - c = no action

List of agents for North America may differ from table listed above



Produced in India

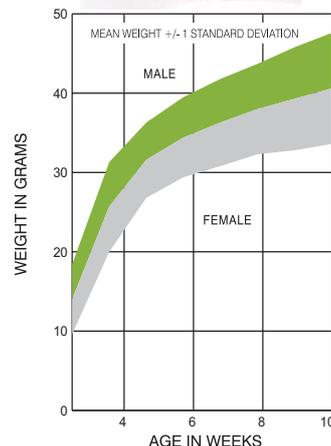
Mice



Standard Practice for commercial breeding using CRL SOP's is to maintain (record) stock in weeks rather than DOB.

Crl:CD-1(ICR):

Age	STRAIN CODE: 022	
	MALE Price ₹	FEMALE Price ₹
3-4 weeks	*	*
4-5 weeks	*	*
5-6 weeks	*	*
6-7 weeks	*	*
7 weeks plus	*	*
Retired breeding pairs	*	*
Non-Littermates 21 days old	**	**
Lactating Mice with litter		**
Timed pregnant		**
Untimed pregnant		



Growth chart data should be used as a guideline only. For further information, please refer to page 12 and/or contact us.

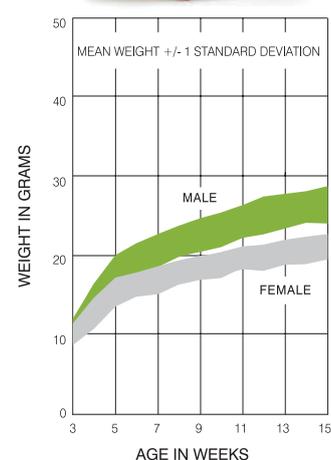


Nomenclature : Crl:CD1 (ICR) Origin: The original group of Swiss mice that served as progenitors of this stock consisted of two male and seven female albino mice derived a non-inbred stock in the laboratory of Dr. De Coulon, Centre Anticancéreux Romand, Lausanne, Switzerland. These animals were imported into the United States by Dr. Clara Lynch of the Rockefeller Institute in 1926. The Hauschka Ha/ICR stock was initiated in 1948 at the institute for Cancer Research (ICR) 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 Charles River in 1959. **Coat Color :** White (Albino). **Research Application:** General multipurpose model, safety and efficacy testing, aging, surgical model, pseudopregnancy

* : Please refer to the price list ; **: Prices are on case to case basis

BALB/c AnNCrl:

Age	STRAIN CODE: 028	
	MALE Price ₹	FEMALE Price ₹
3-4 weeks	*	*
4-5 weeks	*	*
5-6 weeks	*	*
6-7 weeks	*	*
7 weeks plus	*	*
Retired breeding pairs	*	**
Littermates 21 days old	**	**
Lactating Mice with litter		**
Timed pregnant		**
Untimed pregnant		



Growth Chart data should be used as a guide only. For further information, please refer to page 12 and/or contact us.



Nomenclature : BALB/cAnNCrl 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, then to Andervont in 1935. To NIH in 1951 from Andervont at F72. To Charles River in 1974 from NIH. **Coat Color:** White (Albino). **Research Application:** General multipurpose model, hybridoma development, monoclonal antibody production, infectious disease MHC haplotype H2d

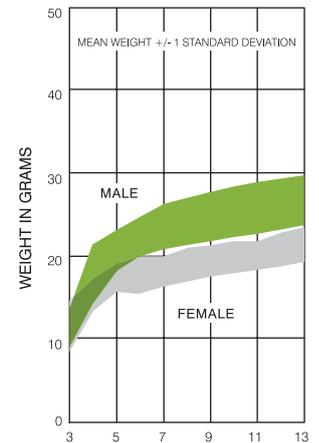
* : Please refer to the price list ; **: Prices are on case to case basis



C57BL/6NCrl:

STRAIN CODE: 027

Age	MALE	FEMALE
	Price ₹	Price ₹
3-4 weeks	*	*
4-5 weeks	*	*
5-6 weeks	*	*
6-7 weeks	*	*
7 weeks plus	*	*
Retired breeding pairs	**	**
Littermates 21 days old	**	**
Lactating Mice with litter		**
Timed pregnant		**
*Untimed pregnant		



Growth chart data should be used as a guideline only. For further information, please refer to page 12 and/or contact us.



Nomenclature: C57BL/6NCrl Origin: Developed by C.C. Little in 1921, from a mating of Miss Abbie Lathrop's stock that also gave rise to strains C57BR and C57L. Strains 6 and 10 separated around 1937. To The Jackson Laboratory from Hall in 1948. To NIH in 1951 from The Jackson Laboratory at F32. To Charles River in 1974 from NIH.

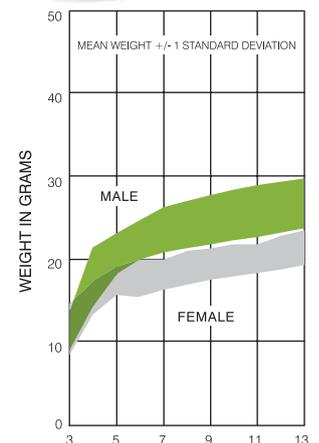
Coat Color: Black. **Research Application:** General multipurpose model, diet-induced obesity, transgenic/knockout model development, safety and efficacy testing, immunology MHC Haplotype H2b

* : Please refer to the price list ; ** : Prices are on case to case basis

Athymic Nude Mice Crl:NU-Foxn1^{nu}

STRAIN CODE: 490 (Homozygous)

Age	MALE	FEMALE
	Price ₹	Price ₹
3-4 weeks	*	*
4-5 weeks	*	*
5-6 weeks	*	*
6-7 weeks	*	*
7 weeks plus	*	*
Retired breeding pairs	**	**
Littermates 21 days old		**
Lactating rat with litter		**
Timed pregnant		**
Untimed pregnant		**



Growth chart data should be used as a guideline only. For further information, please refer to page 12 and/or contact us.



Nomenclature: Crl:NU-Foxn1nu Origin: This immune deficient 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. The animal lacks a thymus, is unable to produce T cells and is therefore immunodeficient. **Coat Color:** Hairless, albino background. **Research Application:** Tumor biology and xenograft research.

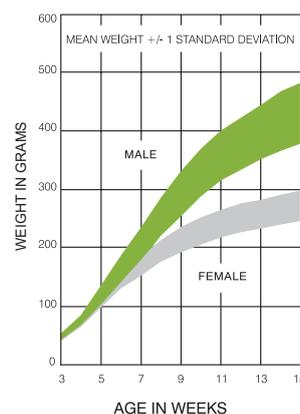
* : Please refer to the price list ; ** : Prices are on case to case basis

Rats



CD® SD IGS Rats:

Age	STRAIN CODE: 001	
	MALE Price ₹	FEMALE Price ₹
3-4 weeks	*	*
4-5 weeks	*	*
5-6 weeks	*	*
6-7 weeks	*	*
7 weeks plus	*	*
Retired breeding pairs	**	**
Non-Littermates 21 days old	**	**
Lactating rat with litter		**
Timed pregnant		**
Untimed pregnant		**



Growth chart data should be used as a guideline only. For further information, please refer to page 12 and/or contact us.

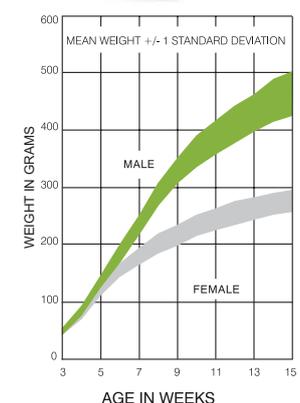


Nomenclature : Crl:CD(SD) Origin: Originated in 1925 by Robert W. Dawley from a hybrid hooded male and a female Wistar rat. To Charles River in 1950 from Sprague Dawley, Inc. In 1991, eight colonies were selected to form the IGS foundation colony. Rederived into an isolator foundation colony in 1997. IGS refers to animals bred using the Charles River International Genetic Standard system. **Coat Color:** White (Albino). **Research Application:** general multipurpose model, safety and efficacy testing, aging, nutrition, diet-induced obesity, oncology

* : Please refer to the price list ; ** : Prices are on case to case basis

Wistar Rats Crl:WI

Age	STRAIN CODE: 003	
	MALE Price ₹	FEMALE Price ₹
3-4 weeks	*	*
4-5 weeks	*	*
5-6 weeks	*	*
6-7 weeks	*	*
7 weeks plus	*	*
Retired breeding pairs	**	**
Non-Littermates 21 days old	**	**
Lactating rat with litter		**
Timed pregnant		**
Untimed pregnant		**



Growth chart data should be used as a guideline only. For further information, please refer to page 12 and/or contact us.



Nomenclature: Crl:WI Origin: To Scientific Products Farm, Ltd. [predecessor of Charles River United Kingdom] in 1947 from Wistar Institute. To Charles River in 1975 from Charles River UK. This particular colony was selected because of a low incidence of hydronephrosis. **Coat Color:** White (Albino). **Research Application:** General multipurpose model, infectious disease research, safety and efficacy testing, aging

* : Please refer to the price list ; ** : Prices are on case to case basis

Shipping Information:



Crates Charges

1. Crates Charges = Rs.1500/- per crate for (Packed upto 30 mice and 6-8 rats in each crate)
2. Logistics as per shipment (Based on distance a standard freight chart is attached ready for reference)
3. Animals reserved by customers above 7-8 weeks age will be charged weekly additional INR: 75/- per mice and INR: 100/- per Rat.
4. Payment Terms:

Payment should be received by Hylasco within due date as mentioned in our Invoice.

Customer billing / quotation submissions will be stopped if the outstanding payment is not cleared within 15 days beyond the due date.

It is our responsibility to maintain the strictest health and welfare standards when shipping our animals, not only because it is the right thing to do but because our animals are vital to your research. To help make the comfort and care of our animals a priority, we provide several crates that are tailored to establish shipping density guidelines for a variety of species. Our shipping crates have viewing windows that allow you to inspect the animals and assess their interior conditions during and after shipping. Prior to packing the animals, the interior of our filtered crate is sterilized, and our individual Gnoto-Safe plastic containers are disinfected.

Crates	Model	Dimension(in mm)	Price(₹)	Remark
NOVAPACK	SPF	650 L x 355 W x 130 H	1500	Rats/Mice
SAFEBOX with Gnoto-safe Shipping (GSS) Container (SBS)	SPF	420 L x 320 W x 170 H	3000	For NOD /Nude /SCIDModel

NOVOPACK:

With observation window, it is easy to observe animals during transportation. To reduce plastic waste our crates are made of virgin cardboard and metal mesh.



Gnoto-safe Shipping (GSS) Container:

The container is available for purchase as a set that includes two mice cages, secure filter-top lids and a shipping crate. The container has been enhanced to improve crate integrity, biosecurity and animal welfare during the shipment. You can use this as a cage internally for transport / transfer





Logistic Expense:

Location	Price (₹)
Hyderabad (Inland Freight)	1,500
Hyd - Bengaluru (Inland Freight)	15,000
Hyd - Pune (Inland Freight)	20,000
Hyd - Mumbai (Inland Freight)	25,000
Hyd - Gujarat (Inland Freight)	46,000
Hyd - Kolkata (Inland Freight)	50,000
Air Freight PAN India as Applicable	Actual AWB + Charges at Origin & Destination Places

Our vehicles are fitted with AC and Auto temperature-controlled instrument (Range from 19 to 24 degrees) and with GPS tracking. When required by Client, each trip's temperature report is downloaded and sent to them.

Our vehicles are sterilized / fumigated before starting the trip and are extensively cleaned upon returning for next shipping.

Our logistics team is fully experienced in animals and material shipment process. They have been given extensive training on how to handle animals and other bio-security procedures.

They carry all the required PPE with them during the shipment process. We ensure all of the shipment processes are in line with our biosecurity principles.

Air cargo is also handled by specific / experience CHA agents.

Sample Temperature Report during animal transportation:

TS 08UD 4940 : ISUZU								
Trip	Start-Point	End-Point	Start-Time	End-Time	AvgSpeed	Duration	Idling	Distance
1	17,5306,78,3565	17,5306,78,3565	PARKED	PARKED	0 km/h	0 mins	13 mins	0.0 m
						0 mins	13 mins	0.0 m
Temperature report								
No.	Time Range	Min(°)	Max(°)	Avg(°)				
1	00:00-01:00	25.1	25.6	25.3				
2	01:00-02:00	24.8	25.1	24.9				
3	02:00-03:00	24.4	24.7	24.6				
4	03:00-04:00	24.2	24.4	24.3				
5	04:00-05:00	23.9	24.2	24				
6	05:00-06:00	23.6	23.9	23.8				





Import Animals

Import Models From CRL

www.criver.com/products-services/research-models-services

Hylasco has an import license for use or we can use clients import permit. Unfortunately we cannot use our import license and get DSIR or IT discounts for our clients.

Ordering Information

Our Customer Services Department has direct telephone lines to provide immediate response when you wish to place an order. Telephone calls to Customer Services Department are recorded for your protection. Your Customer Services Coordinator will ask you for the order information below. This information will enable us to process your order efficiently and accurately.

- Your contact information;
- Delivery point code - telephone our Customer Service Dept. to verify this;
- Your order number;
- Your order specifications including quantity, gender, strain and age in days or weight;
- Date for time mating or surgery if applicable. The users Project Licence number is required for surgical procedures;
- Any special requirements - eg for KO's, transgenics or animals bred with a harmful mutation, we will need the users Project Licence number;
- Delivery date;
- Type of shipping crate required – filtered, unfiltered or safebox.

Finally, your order will be read back to you for your confirmation. If you agree that we have taken down your order correctly, you will then be given a unique reference number. It is essential that you retain this reference number in the event of future query. If you subsequently amend or cancel your order an additional reference number will be given as confirmation of this. Orders for biospecimens and blood products are subject to a minimum order charge of £60.00.

Please see our cancellation terms on page 10.

Please direct your orders to:

Customer Services Department,
Charles River U.K. Limited,
Manston Road,
Margate, Kent CT9 4LT
Telephone: 0143237 - Facsimile: 01432211
Orders may be sent to us by email at crucsd@crl.com

Standing Orders

Standing orders are encouraged whenever possible. These ensure the future availability of the animals you require.

Please see our cancellation terms on page 10.

Special Requirements

If you have a requirement for specialised animals or services, please contact our Customer Services Department for referral to the appropriate member of staff who will be pleased to discuss your needs.

Waiver of Liability

Charles River has a proven system of packaging and transportation that ensures that the welfare of our animals is always protected whilst they are under our direct control. But there is an element of risk that things can go wrong when we hand over our animals for transport by third parties. We need our customers to understand that Charles River has no control over the environments encountered by the laboratory animals we ship once we have delivered them to an airport. Therefore, we can not accept the liability for any losses or delays that occur when the animals are in the care of any third parties that are involved in the transportation process (such as national security agencies, airline handling agents, airlines, customs authorities and so on). As a consequence, before we accept any orders which involve air shipments, we will now ask you to confirm that you will not hold Charles River liable for any direct or consequential losses unless they result from our negligence. However, we will offer you International Transport Protection Cover which will cover the cost of a replacement shipment (in part or in full) if necessary.

International Transport Protection Cover

Charles River offers an international transport protection cover. As many of our customers have realised, there is always an element of risk when we hand over our animals for transport by third parties. This is because despite the most exhaustive journey planning and our best efforts, the few remaining international transport systems that are open to the biomedical research community can sometimes be disrupted by events that are beyond our control such as inclement weather and high temperatures. In such circumstances, it is normally impossible to obtain any recompense for any extra costs incurred by delayed transport; or even, if the worst should happen, the cost of a replacement delivery. Charles River UK offers customers seeking to import Charles River animals from outside the UK (and also mice from The Jackson Laboratory), the opportunity to safeguard themselves against such unexpected and unwelcome costs. If you choose to contribute to the fund (the contribution will be 5% of the full shipment costs), you will not be charged for such unexpected costs or for a full replacement shipment if that proves to be required. **However, if you choose not to take this protection, we will require you to confirm that you will not hold Charles River responsible for any losses or extra charges that occur when the animals are not under our direct control.**

Export Preparation Charges

Additional charges have to be made to cover the provision of the appropriate export documentation and veterinary certificates.

Requirements (and thus charges) vary according to the country of destination. Contact our Customer Services Department for details. Please give us at least 14 days notice of your order.

SPF, SOPF, VAF/ Plus® and VAF/Elite® Health Status

Charles River is committed to providing you with high-quality genetically standardised models such as SPF (Specific Pathogen Free) and SOPF (Specific and Opportunistic Pathogen Free) animals which are free of select infectious agents and parasites. The terms SPF and SOPF are more commonly used in continental Europe while, VAF Plus and VAF Elite are more recognisable in the UK and North America.

SPF = VAF Plus® and SOPF = VAF Elite®; they are based on the same monitoring programmes in terms of agents screened, number and age of animals screened, frequency of testing, and recycling policies.

For further information regarding profiles, microbiological flora or the list of agents included in Charles River Health Surveillance Programme, please visit our website at www.criver.com/info/rm

Cancellation Policy

Due to both ethical and commercial reasons, Charles River reserves the right to charge for late cancellations or changes to confirmed orders and/or delivery arrangements as follows:

Rodents:

- Standard outbred/inbred strains and standard age/weight ranges (catalogue strains <8 weeks old):
 - Up to 7 days before shipping date: no charge.
 - 7 days before shipping date: 100% charge.
- Standing orders: 6 weeks notice for cancellation/modification.
- Specific strains and special age/weight ranges and large quantities (dependent on colony size): no cancellation allowed, "Take or pay".
- Mated/pregnant females (standard strains CD®, WISTAR, WISTAR HAN, and CD1®): no cancellation fee if the order is cancelled before mating. After mating, we will invoice at the list price.

Guinea-pigs:

Cancellation accepted before the guinea-pigs are weaned (2 weeks).

Rabbits:

- Time-mated females:
 - 4 weeks before mating date, we will invoice the price of a 14-week-old animal.
 - 2 weeks before mating date, we will invoice the price of a 16-week-old animal.
 - 1 week before mating date, we will invoice the price of a 18-week-old animal.
 - 1 day before mating date, we will invoice the price of a time-mated female.
- Other rabbits:

Cancellations accepted before rabbits are 10 weeks old, otherwise "Take or pay".

Surgically Altered Models and Biospecimens:

No cancellation allowed, "Take or pay".

Shipping of Male Mice

Group-housed male mice may show aggressive behaviour, which might negatively impact the well-being of the animals and cause variations in experimental results. At Charles River, adult male mice are housed in stable groups to minimise the risk of aggressive behaviour. When preparing the animals for shipping, every effort is made not to mix these groups.

Nevertheless mice can show aggressive behaviour after arrival at your facility due to differences in husbandry, new hierarchic structures that need to be established and hierarchy or influences caused by the experiment.

The housing of adult male mice that arrive at your facility from different crates should be avoided.

Time Mated and Pregnant Rodents

Successful time mating of rodents is confirmed by the detection of positive signs of mating (e.g. the presence of a copulation plug). However, confirmation of mating is not a guarantee of pregnancy. Implantation of the embryos generally occurs around gestation day (GD) 4 or 5.

In both mice and rats, a phenomenon called embryonic diapause is possible. In this condition, the female halts the development of the embryos as hatched blastocysts. They can be held in the uterus for up to 13 days. Although this phenomenon is normally associated with the physiological stress of lactation, it is possible that failure or delay of implantation may occur under other stressful conditions. Accordingly, please see the table below to understand the guarantees that apply if you purchase time mated rats and mice.

On untimed pregnant orders a variation of 3 to 4 days gestation can be expected. Therefore Charles River cannot be held responsible for actual gestation and/or exact day of littering.

Charles River is in strict conformance with the Council Regulation (EC)1/2005 on the protection of animals during transport and related operations.

Stock or strain	Pregnancy Guarantee (Percentage)		
	Time mated and shipped before GD 13	Time-mated and palpated. Shipped at GD 13 and over	Untimed pregnant. Selected by visual observation and palpation. GD 13-17
Outbred rats	90%	100%	100%
Outbred mice	75%	100%	100%
Inbred rats, Inbred mice, specialty mice	Plug guarantee only	75%	75%



Age/Weight Correlation Information

Age/weight correlation information is presented throughout this product catalogue for each sex of most stocks and strains. The information is specific to the conditions maintained in Charles River's barrier production rooms. Weight information related to the JAX™ Mice strains are specific to the conditions maintained in Charles River's barrier production rooms as well. The shaded areas on each chart are the mean weight plus or minus one standard deviation at a given age averaged across all production facilities. This represents approximately 67% of the population, with the remaining 33% falling outside of this weight range. Overlaps in the full range of weights occur between age groups and will be more pronounced in outbred animals.

Weaning

The age of the animals is determined in weeks after weaning. Each strain has its own weaning procedure indicating when this step should take place. By convention, the age of weaning is reported as 3 weeks (corresponding to the designation "21-27 days" on SAP documents). An age of 3 weeks means that the mouse is in its weaning week and does not prejudice its exact age.

Thus, all mice weaned in week N are classified in the age group of 3 weeks (21-27 days) regardless of their actual age. They will then move into the 4 weeks age group (28-34 days) on the Monday of the week N + 1, then in the age group of 5 weeks (35-41 days) on Monday of the week N + 2, and so on.

Weight Changes During Transport

Orders of animals with a weight specification will be referred to as the packing weight, as Charles River will have no control over potential weight changes during transport. We ask that you take this into account when planning your experiments and orders. Based on experience, we have noted that the way transport affects animal weight (both weight losses, and gains) depends on the strain, sex, age and developmental status of the animals.

However, it is commonly found that animals should return to their normal weight after an acclimatisation period of 24 to 48 hours after arriving at your facility. This information is presented as guidance only, as weight recovery can also be influenced by the social position of the individual animals within their new hierarchies.

Accreditation

Charles River UK is a member of the Laboratory Animal Breeders Association of Great Britain and a certified member of the LABA Health Monitoring Scheme (LABAHMS).

Designation

Pursuant to the Animals (Scientific Procedures) Act 1986, Charles River UK Limited are designated as both a Breeding and Supplying Establishment, Home Office No, and project Licence Numbers are available upon request.

Humane Care Initiative

Charles River is committed to the humane care of the research animals produced and used in all of its activities. Our Humane Care Initiative supports this core value and is directed by our Animal Welfare and Training group. All Charles River's employees are engaged to this humane care policy: continued education, signature of an ethical commitment, internal audits, and ethical information feedbacks.

Quality Assurance System

Charles River UK hold the prestigious ISO 9001 quality assurance certificate for their quality management system. It is company policy that all of its business operations including animal breeding, marketing, sales, customer services, facilities operations, process control, packing, delivery, document generation, training and quality assurance shall be conducted in accordance with BS EN ISO 9001:2008.

AAALAC

The Charles River facility in Margate received full accreditation from the Association for Assessment and Accreditation of Laboratory Animal Care (AAALAC) International in July 2010. Charles River Margate is the first and only commercial small animal breeder in the UK to receive AAALAC accreditation.

Charles River is proud of the fact that all of our research model breeding and services facilities in Europe (UK, France, Germany and Italy) have received accreditation of their animal care and use programmes from the Association for the Assessment and Accreditation of Laboratory Animal Care (AAALAC) International. Only a handful of commercial breeders in Europe have received this prestigious accreditation.

AAALAC is an internationally recognised, non profit organisation that promotes the humane treatment of animals in science through voluntary accreditation and assessment programmes. AAALAC International accreditation is issued to organisations that demonstrate commitment to responsible animal care and use.



Imported Models List

Details Available on website or ask for catalog

Model	Nomenclature	United States	Germany	France	Italy	UK	Canada	Japan	SPF (VAF/Plus®)	SOPF
Rat models										
Health Profiles										
Outbred Rats										
CD® IGS	CrI:CD(SD)	•	•	•	•	•	•	•	•	•
Lister Hooded	CrI:LIS		•			•			•	
Long Evans	CrI:LE	•			•		•	•	•	
OFA	CrI:OFA(SD)			•					•	
Wistar Han IGS	CrI:WI(Han)	•	•	•		•			•	
Wistar WI IGS	CrI:WI	•	•		•	•	•	•	•	
Wistar WU	CrI:WI(WU)		•						•	
Sprague Dawley®	CrI:SD	•							•	
Inbred Rats										
Brown Norway	BN/CrI	•	•					•	•	
Fischer 344	F344/IcoCrI				•				•	
Fischer 344	F344/DuCrI	•	•					•	•	
Lewis	LEW/CrI	•	•			•			•	
WAG	WAG/RijCrI				•				•	
BDIX	BDIX/CrCrI	•								
Copenhagen	COP/CrCrI	•								
Metabolic, Renal and Cardiovascular Models										
SHR	SHR/NCrI	•	•						•	
Wistar Kyoto WKY	WKY/NCrI	•	•						•	
ZDF	ZDF- <i>Lepr^{fa}</i> /CrI	•		•					•	
Zucker	CrI:ZUC(Orl)- <i>Lepr^{fa}</i>				•			•	•	
Zucker	CrI:ZUC- <i>Lepr^{fa}</i>	•							•	
SHHF	SHHF/MccGmiCrI- <i>Lepr^{cp}</i> /CrI	•							•	
Stroke Prone	SHRSP/A3NCrI	•							•	
ZSF1	ZSF1- <i>Lepr^{fa}</i> <i>Lepr^{cp}</i> /CrI	•							•	
PCK	PCK/CrIjCrI- <i>Prkhd1^{pck}</i> /CrI	•							•	
Dahl/Salt Sensitive Rat	SS/JrHsdMcwiCrI	•							•	
SS-13BN Rat	SS-Chr 13BN/McwiCrI	•							•	
Obese Prone CD® Rat	CrI:OP(CD)	•							•	
Obese Resistant CD® Rat	CrI:OR(CD)	•							•	
SHROB	SHROB/KoIGmiCrI- <i>Leprcp</i> /CrI	•							•	
Oncology Models										
Wistar Furth	WF/CrCrI	•								
Noble	NBL/CrCrI	•								

* not listed in the catalogue, C = Cryopreserved

Sprague Dawley® is a registered trademark of EnvigoHolding, I, INC.



Model	Nomenclature	United States	Germany	France	Italy	UK	Canada	Japan	SPF (VAF/Plus®)	SOPF
Mouse models										
Health Profiles										
Outbred Mice										
CD-1® IGS	CrI:CD1 (ICR)	•	•	•	•	•	•	•	•	•
NMRI	CrI:NMRI(Han)		•	•					•	•
OF1	CrI:OF1			•					•	
SKH1	CrI:SKH1- <i>Hr^{hr}</i>	•	•						•	•
SKH3	CrI:SKH3(SKH2)- <i>Hr^{hr}</i>	•								
Black Swiss	CrI:NIHBL(S)	•								
CF-1™	CrI:CF1	•								
CFW® - Swiss Webster	CrI:CFW(SW)	•								
Inbred Mice										
129	129S2/SvPasCrI	•	•	•					•	•
BALB/cByJ	BALB/cByJ			•					•	•
BALB/cN	BALB/cAnNCrI	•	•		•	•	•		•	
C3H/J	C3H/HeOuj		•						•	
C3H/N	C3H/HeNCrI	•			•	•			•	•
C57BL/6J	C57BL/6J		•	•		•		•	•	•
C57BL/6N	C57BL/6NCrI	•	•	•	•		•	•	•	•
CBA	CBA/CaCrI					•			•	
CBA/J	CBA/J			•				•	•	
DBA/2J	DBA/2J			•					•	
DBA/2N	DBA/2NCrI	•	•		•			•	•	
FVB	FVB/NCrI					•			•	
B6 Albino	C57BL/6N- <i>Tyr^{c-Brd}</i> /BrdCrCrI	•			•			•	•	
SJL Elite	SJL/JOrllCoCrI	•								•
Fox Chase CB17	C.Bka- <i>Igh^b</i> /lcrCrI	•								•
NC	NC/NgaTndCrIj							•		
Hybrid Mice										
B6CBAF1/CrI	B6CBAF1/CrI					•			•	
B6CBAF1/J	B6CBAF1/J			•					•	
B6C3F1/CrI	B6C3F1/CrI	•			•				•	
B6D2F1/CrI	B6D2F1/CrI	•	•					•	•	
B6D2F1/J	B6D2F1/J			•					•	
CD2F1	CD2F1/CrI	•			•				•	
NRMCF1	NRMCF1/CrI			•					•	
CB6F1	CB6F1/CrI	•	•						•	

* not listed in the catalogue, C = Cryopreserved

Fox Chase CB17® is a registered trademark of the Fox Chase Cancer Center

Model	Nomenclature	United States	Germany	France	Italy	UK	Canada	Japan	SPF (VAF/Plus®)	SOPF
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Metabolic, Renal, and Cardiovascular Models

ob/ob	B6.Cg- <i>Lep^{ob}</i> /J				•			•	•	•
db/db	BKS.Cg- <i>Dock7^m +/+ Lep^{db}</i> /J				•			•	•	•
ApoE	B6.129P2- <i>ApoE^{tm1Unc}</i> /J				•			•	•	•
NOD	NOD/ShiLtJ				•				•	•

Inflammation and Immunology Models

Ly5.1	B6.SJL- <i>Ptprc^aPepc^b</i> /BoyCrI	•			•				•	•
OT I	C57BL/6-Tg(TcraTcrb)1100Mjb/CrI			•						
OT II	C57BL/6-Tg(TcraTcrb)425Cbn/CrI			•						

Oncology Models

Please see list of immunodeficient models below

Central Nervous System Models

PGP	CrI:CF1- <i>Abcb1a^{mds}</i>	•								
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Immunodeficient Models

Athymic Nude	CrI:NU(NCr)- <i>Foxn1^{nu}</i>	•	•			•				•
CD-1® Nude	CrI:CD1- <i>Foxn1^{nu}</i>	•	•		•	•		•		•
Swiss Nude	CrI:NU(lco)- <i>Foxn1^{nu}</i>			•						•
NMRI Nude	CrI:NMRI- <i>Foxn1^{nu}</i>		•							•
BALB/c Nude J	CBy.Cg- <i>Foxn1^{nu}</i> /J			•						•
BALB/c Nude N	CAN.N.Cg- <i>Foxn1^{nu}</i> /CrI	•	•			•		•		•
SCID	CB17/lcr- <i>Prkdc^{scid}</i> /lcrIcoCrI	•	•	•		•		•		•
SCID Beige	CB17.Cg- <i>Prkdc^{scid}Lyst^{tg-J}</i> /CrI	•	•			•		•		•
NOD SCID N	NOD.CB17- <i>Prkdc^{scid}</i> /NcCrI	•				•				•
NOD SCID J	NOD.CB17- <i>Prkdc^{scid}</i> /J			•				•		•
NSG®	NOD.Cg- <i>Prkdc^{scid}Il2rg^{tm1Wjl}</i> /SzJ		•	•		•		•		•
NRG	NOD.Cg- <i>Rag1^{tm1Mom}Il2rg^{tm1Wjl}</i> /SzJ					•				•
Nude Rat	CrI:NIH- <i>Foxn1^{nu}</i>	•	•							•
NIH-III	CrI:NIH- <i>Lyst^{tg-J}-Foxn1^{nu}Btk^{xid}</i>	•								•
Nude Mouse	CrI:NU- <i>Foxn1^{nu}</i>	•								•
SHC	CB17.Cg- <i>Prkdc^{scid}Hr^{hr}</i> /lcrCrI	•								•
SHO®	CrI:SHO- <i>Prkdc^{scid}Hr^{hr}</i>	•						•		•

Rabbits, Guinea Pigs, Gerbils, Hamsters

Rabbits

New Zealand White	CrI:KBL(NZW)	•		•					•	•
Chinchilla Bastard	CrI:Crlg(CHB)			•					•	•

Guinea Pigs

Dunkin Hartley	CrI:HA	•		•			•		•	•
Hairless	CrI:HA- <i>Hr^{hr}</i>	•							•	•

Gerbils

Gerbils	CrI:MON(Tum)	•			•				•	•
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Hamsters

Syrian Hamster	CrI:LVG(SYR)	•							•	•
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C = Cryopreserved

Preconditioning Services, Surgery and Contract Services

Preconditioning Services

Surgery Services

Vascular Catheters

Non-vascular Catheters

Excision Surgery

Disease Models

Neurological Procedures

Device Implantations

Training, On-site Surgery,

Customised Surgical Procedures

Biospecimens

ALZET® Osmotic Pumps

Antibody Production

Pharmaceutical Quality Control (biological tests)

360 Diagnostics™

360 Diagnostics™

Health Monitoring (HM) Programmes

Alternative (Sentinel-Free) Programmes

Hybrid programmes

Traditional Whole-Animal Sentinel Programmes

PRIA® (PCR Rodent Infectious Agent) Panels

Serology Profiles

Microbiology Culture

Rodent Parasitology, Pathology and Other Services

Zebrafish Health Surveillance

Cell Line and Research Biologics Screening

Microbiome Diagnostic Services

Genetically Engineered Models and Services

Colony Management

Quarantine Services

Breeding Services

Embryology Services – Mice

Rederivation

Cryopreservation

Cyorecovery

Combined Services

Assisted Reproduction

Embryo Kits

Mouse Embryo Assays

Embryology Services – Rats

Rederivation

Cryopreservation

Cyorecovery

Custom Model Creation Services

Microinjection Services

Genetic Testing Services



Insourcing SolutionsSM

Staffing and Facility Management

Expert Consulting

Charles River Campus - E-learning

Customised Training, Regulatory Training and Continuing Education

Modular buildings

Resources

[Glossary of Terms](#)

[General Terms and Conditions of Sale](#)



Consumable Products

www.hylascobio.com

sales@hylascobio.com

Aspen Shavings : For the comfort of mice

Contact bedding processed from virgin aspen hardwood chips

- ❖ Compatible with all small animals, including transgenic breeds
- ❖ Heat-treated to reduce bacteria and enhance absorbency
- ❖ Proven track record of superior performance
- ❖ Free-flowing chips are compatible with most bedding dispensers
- ❖ Aspirated to remove dust
- ❖ Regular changing prevents the development of ammonia
- ❖ Creates a comfortable habitat with a natural appearance
- ❖ Low density hardwood produces easy-to-handle package
- ❖ Ideal bedding for Individually Ventilated Rack Systems (IVC's)



Beta Chips[®] : Best use for Rats

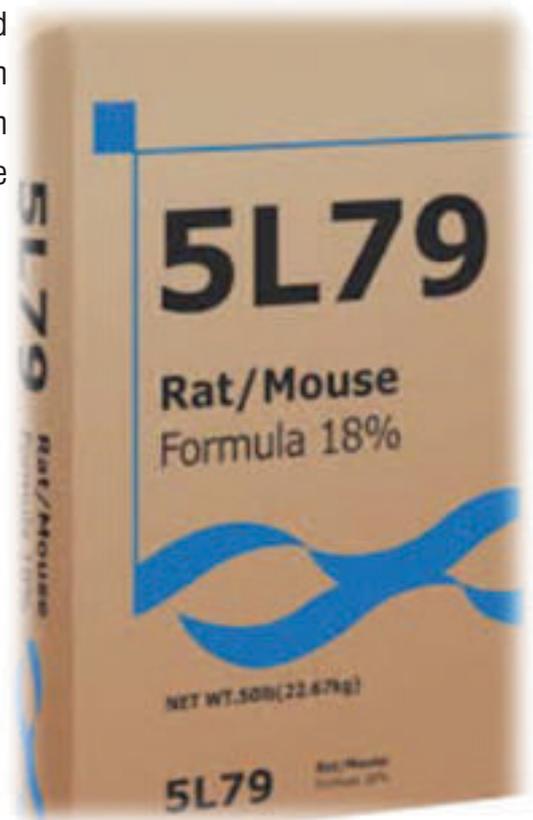
Contact bedding processed from virgin hardwood chips

- ❖ Compatible with all small animals, including transgenic breeds
- ❖ Heat-treated to reduce bacteria and enhance absorbency
- ❖ Proven track record of superior performance
- ❖ Free-flowing chips are compatible with most bedding dispensers
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- ❖ Regular changing prevents the development of ammonia
- ❖ Creates a comfortable habitat with a natural appearance
- ❖ Ideal bedding for Individually Ventilated Rack Systems (IVC's)



PMI-5L79-18% diet : Maintenance & Breeding

As a world leader in laboratory animal nutrition, LabDiet® feed nutritionists are committed to conducting innovative research programs. We have a long and proud history of close collaboration with life science investigators worldwide. LabDiet® products have been the nutritional baseline used by researchers for over 70 years!





Zebra Fish Diet

INGREDIENTS

Fish Meal, Poultry By-Product Meal, Wheat Flour, Hydrolyzed Poultry Feather Meal, Soy Protein Concentrate, Fish Oil, Fish Protein Concentrate, Soy Protein Isolate, Grain Distillers Dried Yeast, Soy Lecithin, Monocalcium Phosphate, Yeast Culture, Vitamin A Acetate, Vitamin D3 Supplement, dl-Alpha Tocopheryl Acetate (Vitamin E Supplement), Vitamin B12 Supplement, Riboflavin-5-Phosphate, Niacin, d-Calcium Pantothenate, Menadione Sodium Bisulfite Complex (source of Vitamin K Activity), Folic Acid, Thiamine Mononitrate, Pyridoxine Hydrochloride, Biotin, Inositol, L-Ascorbyl-2-Polyphosphate (source of Vitamin C), Choline Chloride, Yeast Extract, Manganese Proteinate, Zinc Proteinate, Copper Proteinate, Calcium Iodate, Iron Proteinate, Cobalt Proteinate, Calcium Carbonate, Sodium Selenite, Calcium Propionate (Preservative), Astaxanthin, Zinc Oxide.

FEATURES & BENEFITS

- ❖ It is specially formulated to promote healthy fin and tissue development and has demonstrated increased fecundity in laboratory conditions.
- ❖ The diet utilize highly digestible ingredients which minimizes excreted waste thereby helping to maintain good water quality.

PRODUCT APPLICATION

- ❖ Adult Zebrafish Diet should be fed 2-3 times daily
- ❖ Add the amount of food to each tank that can be consume within 5 minutes.
- ❖ No supplementation is necessary for long-term maintenance of healthy zebrafish in the laboratory.

PACKAGING

16 oz. Pouch

PARTICLE SIZE

Slow-Sinking Pellet (1mm)

GUARANTEED ANALYSIS

Crude Protein	Minimum	55.0%
Crude Fat	Minimum	15.0%
Crude Fiber	Maximum	1.5%
Moisture	Maximum	12.0%
Ash	Maximum	12.0%
Phosphorus	Minimum	1.5%

PRODUCT STORAGE

- ❖ Use within 3 months after opening.
- ❖ Unopened bags may be stored up to 2 years.
- ❖ To maximize shelf-life and maintain nutritive value, keep stored in a closed container in a cool, dry place away from sunlight.

Clidox:

Pharmaceutical Research Laboratories has been the leading manufacturer and supplier of high quality sanitation products developed exclusively for the Laboratory Animal Science field. Our extensive chemical research and field testing offers the professional responsible for the animal environment, products that exceed industry standards for efficacy and safety.

Pharmaceutical Research Laboratories employs strict manufacturing standards and an extensive in-house quality control program. This ensures product consistency, reliability and customer satisfaction.

Clidox®-S is a chlorine dioxide based sterilant . This product is Sporicidal, Tuberculocidal, Bactericidal, Virucidal and Fungicidal. Clidox®-S can be mixed at 1:3:1, 1:4:1 or 1:18:1 . This product kills both enveloped and non-enveloped viruses.



Sterilizing Level: CLIDOX-S® diluted 1:3:1 kills bacteria including dried spores of Clostridium sporogenes ATCC 3584 and Bacillus subtilis ATCC 19659 on environmental surfaces in 5 hours at 25oC.

Disinfecting Level: CLIDOX-S® diluted 1:18:1 kills vegetative bacteria including Pseudomonas aeruginosa ATCC 15442, Staphylococcus aureus ATCC 6538, and Salmonella enterica ATCC 10708, pathogenic fungi (Trichophyton mentagrophytes ATCC 9533), viruses*, and Mycobacterium bovis ATCC 35743 (tuberculosis bacteria) in 5 minutes at 20°C when used on precleaned surfaces.

*This product completely inactivates Minute Virus (Parvovirus) of Mice ATCC-VR-1346 when diluted 1:18:1 at 5 minutes at 21.5°C on pre-cleaned surfaces. This product completely inactivates Herpes Simplex Virus type 2 (G-Strain), Polio Virus type 1 (Brunhilde-VR-ATCC-58), and Human Immunodeficiency Virus Type 1 (RFStrain) (HIV-1)(associated with AIDS) when diluted 1:18:1 at 3 minutes at 20°C on pre-cleaned surfaces.

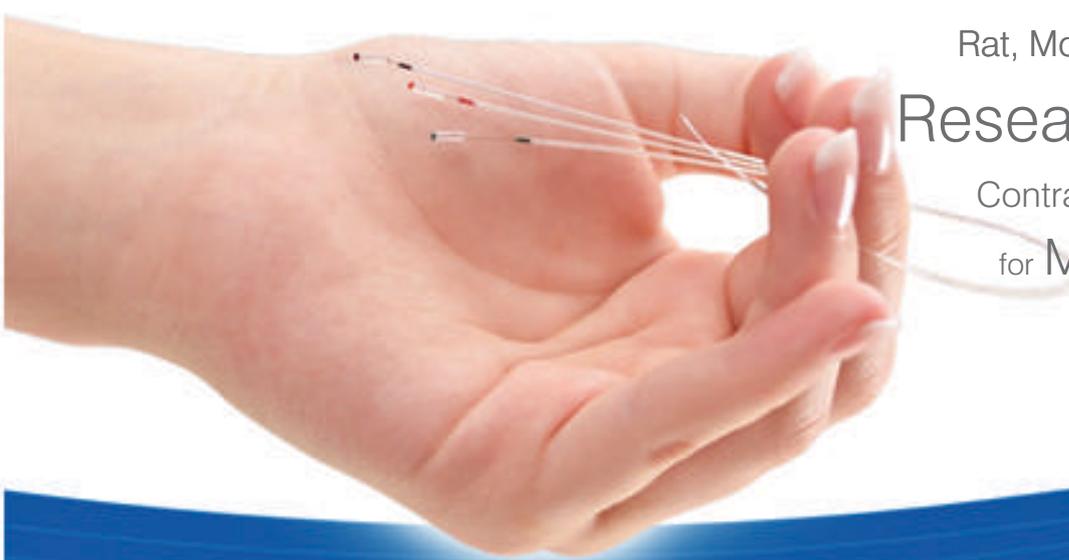
This product also completely inactivates Murine Norovirus MNV-1.CW1 when diluted at 1:4:1 in 5 minutes at 20°C on pre-cleaned surfaces. See concentrated product label for application directions and claims.

Product (Sizes available)	4/1 Gallon	5 Gallon Cube	30Gallon Drum	55 Gallon Drum
Clidox -S Activator	95120F	95125F	95130F	95155F
Clidox -S Base	96120F	96125F	96130F	96155F



ReCathCo

Manufacturer of Precision Engineered
Rat, Mouse, and Small Animal
Research Catheters.
Contract Manufacturing
for Medical Device
Catheters.



Catheter and Tubing Products

In-Stock & Custom Catheters and Tubing, to Exacting Specifications Whether you need a few standard off-the shelf catheters; a roll of bulk tubing; or a run of custom devices manufactured to your specifications, ReCathCo is at your service with our customary ISO Compliance, expedited turnaround, and focus on customer-satisfaction.
ReCathCo JVC (Jugular Vein) Catheter for mice and rat.

Labsand

LabSand is revolutionary biodegradable hydrophobic sand that has a natural non-toxic urine repelling coating. It allows scientists, researchers, and technicians to quickly and easily collect urine samples without resorting to invasive procedures.

To use, simply spread the contents of a **LabSand** bag onto a clean surface, and let the animal freely urinate on the sand. The urine will stay on top, allowing you to easily collect the sample with a pipette and vial or by dipping a testing strip directly on to the droplet while it is on the sand. **LabSand** is based on the technology used in Kit4Cat, a product widely used by veterinarians and research facilities in 43 countries worldwide.



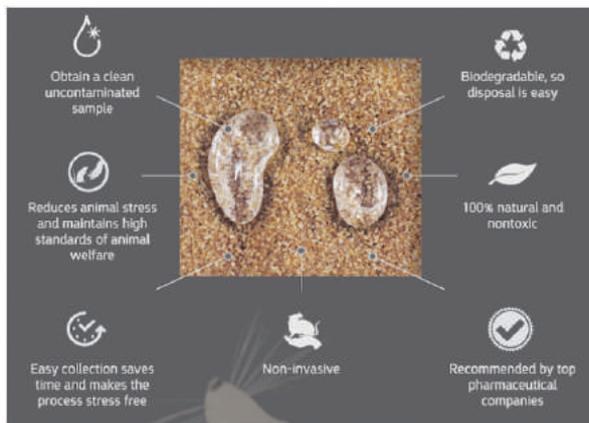
Urine sample collection sand.



Cages with hydrophobic sand



Metaboli Cages



Collecting urine with a pipette

Dyets Inc. caters to American Society of Nutritional Science (ASNS) & National Research Council (NRC)

Standard and Special/Custom Diets

Purified diets
L-amino acid diets
Vitamins and minerals mixtures
Liquids diets
Cereal based diets
High Fat diets
High Sucrose diets
Minerals and Vitamins Mixes
Choline Deficient and Iron Supplements diets
Folate Deficient Amino Acis Rodent diets
L-Amino Acis Defined diets for Rodents
Food based Enrichment treats



Purified Diets

Made with selected Proteins, Carbohydrates and Fats
Standard formulations, (AIN 76A, 93G, and 93M) available
Free of isoflavones and Luminescent Components
Precise Nutrient Delivery
Unsurpassed Reproducibility
Nutritionally Adjustable

Available in different forms and Pacakaging

Pellete form - Convenient, different sizes and color
Powder form - Good for adding compounds in your lab
Liquid form - Best for Gavage or Alcohol studies
Vacuum pack, Nitrogen pack and Frozen Bubble pack for diets containing High Fat at extra charge



Experienced In Homogeneously Blending almost any Test Regardless of Physical Properties into L-amino Acid Defined, Purified, or Cereal-based Diets



Imported Equipment

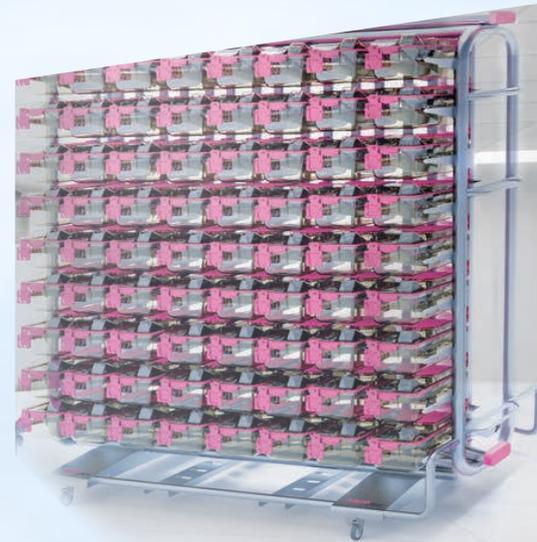
www.hylascobio.com

sales@hylascobio.com

MSRSII-IVS

Features : Rack

- Efficient Usage of space
- Improvement in air quality with in the research environment
- Financial benefits compared to barrier rooms
- Safe study conditions for both the animals and researchers
- Individual Cage barrier system (cross contamination free)
- Unified conditions for all cages
- Secures high level of BIO-SAFTEY environment
- Maintains microbiological contamination free environment
- TOG system-no need to open cage cover for feeding



Features : Control Panel

- Safety cover on the touch monitor protects the monitor and prevents input errors
- Simple design, 8in. touch screen and user friendly UI offers convenience to the researchers
- The casters allows convenient mobility and the break clips are placed to keep the unit firm in its place once positioned



The Most Versatile Mouse Cage, Used for stock and breeding

Features : Cages

- Enables to feed without opening the entire cage cover
- HEPA filter inserted between the grille cover and body
- Simple and easy View lessens the stress of animals inside



INDIVIDUALLY VENTILATED CAGING SYSTEM

MSRSII- mini IVS

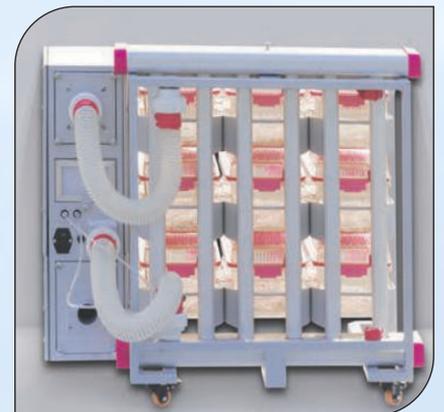
Features

- Standard Model : 3s X 3r
- Standard Model size : 645 x 480 x 780 (Duct, M-ECU excluded)
- Quantity of Loading Cage : 9 cages
- Rack material: sts304



Features

- Duct material: aluminium
- Detachable M-ECU & Extra Movable Model
- Desk model, stand model : Two types of model design available:
Table Top Floor mounting



Features

- All parts can be assembled & disassembled easily
- Racks can be linked for consumers' needs
- Measure the cage temperature, humidity & Alarm system
- Measure the cage pressure & Alarm system
- Fan: Alarm system
- Suitable for saving consumer's operational costs
- Simple operation mode
- Useful for small quantities & various experiments
- Capable of making special model designed by consumer's request



MSRSII mini model is developed to fulfill diverse customers' needs and various types of tests.

BlueSwan



BlueSwan Precise Pipetting with Handy and Elegant Design



With full-featured functions, the BlueSwan pipette controller brings comfort and precision to your pipetting. Wall mount and self-inverted design saves your work space. The UV resistant cover and autoclavable nose cone, pipette holder and filter simplify decontamination. Furthermore, the light-weight and ergonomic design free you from fatigue and occupational injury while you do repetitive pipetting all day long.

BluePette



BluePette

Precise Pipetting and Force-Saving Ergonomic Design

- > **Automatic Switch-On Calibration** for high accuracy and precision
- > **Unique Force-Saving Design** to reduce stress and fatigue from repetitive pipetting
- > **360° Revolving Collar** for greatest positioning comfort
- > **9 Memory Settings** to save protocol set-up time
- > **User-Friendly Interface** and easy-to-operate buttons
- > **High Capacity Lithium Battery** for high stamina continuous use
- > **5 Speeds for Aspiration and Dispensing** depending on liquid viscosity



Automatic Switch-On Calibration



Force-Saving Design



9 Memory Settings

TurboCycler 2

Intuitive Operation Experience

Easy to Control

The sensitive 7" capacitive touchscreen enables easy operation even with laboratory gloves on.



Highly Flexible Design

The compact A4 footprint allows side-by-side placement of units to save bench-top space



Easy-to-operate heated lid design, compatible with most of the PCR vessels on the market



Power failure recovery keeps the experiment safe



USB port support for protocol transfer



Outstanding Performance

- > Fast ramping rate up to 5.5 °C/sec
- > Excellent temperature accuracy and uniformity (+/- 0.3 °C)
- > 12-section gradient temperature range from 1 to 24.9 °C for PCR optimization
- > The quick boot-up takes only 45 seconds

The high ramping rate and precise temperature control of TurboCycler 2 gives excellent PCR efficiency.

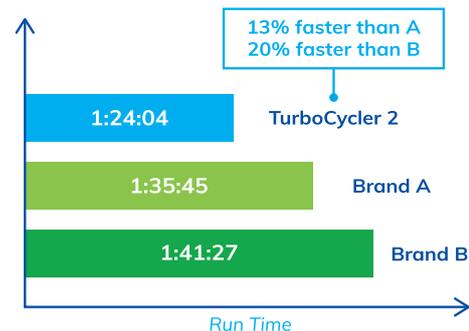


Figure 1: Comparison of run time between TurboCycler 2 and competitors.

The gradient function enables users to screen optimal experimental conditions in a single PCR run.

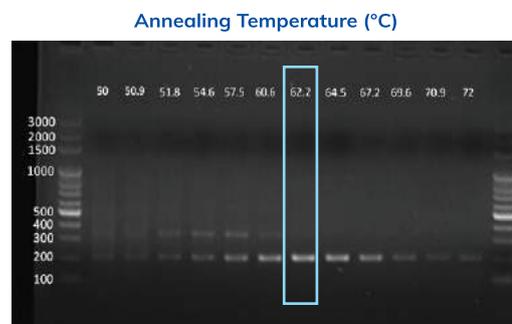


Figure 2: The specific 200bp PCR product has the best PCR yield at an annealing temperature of 62.2 °C.

TurboFuge

The TurboFuge is a compact microcentrifuge with 24-place capacity and a speed up to 21,400 x g that satisfies a wide range of applications. Many safety features ensure safe and reliable operation.



Multiple Safety Design

Lid Drop Protection

The lid is held at 30-40 degrees to allow easy loading and unloading of tubes.

A Robust Metal Chamber

the solid construction of the metal chamber provides stability and ample protection from the hazard of rotor imbalance.

The Autoclavable Aluminum Rotor

withstands strong acids and bases to ensure an unlimited life cycle.

Intelligent Imbalance Detection

The rotor imbalance sensor turns the centrifuge off immediately if rotor imbalance is detected.

The Motorized Dual Lock

ensures that the lid is always safely locked when the rotor is running.

Ease of Operation

The TurboFuge has a clear graphics LED display that allows easy and intuitive operation.

Intuitive Control

The graphics icons show the status and settings of the centrifuge, and allow adjustment functions at a touch of the SYSTEM button.

Software Functions

- > Auto Lid: Lid opens automatically after a run
- > Alarm: Generates a sound that corresponds to the operation
- > Slow: Soft acceleration and breaking time for sensitive cells
- > Count up: Counts the time after a run
- > Short Spin: Short run at set speed(rpm) or gx force(rcf) Run Status

Visual Indication

- > The distinct blue/red backlight shows the run status
- > A high-brightness blue Lid Open key indicator



Reliable

- > The robust ventilation design keeps the chamber temperature down in a quiet condition to protect sensitive samples
- > The motor of the centrifuge has passed 1,500 hours of continuous run
- > The lid has passed the 20,000 open/close cycle test



Specifications

Max. Speed	15,000 rpm
Max. RCF	21,400 x g
Max. Capacity	24 x 1.5/2.0 ml
Acceleration Time	15s
Deceleration Time	16s
Timer	30s to 9:59 h, with continuous mode
Safety	Metal chamber, aluminum rotor, motorized dual lock, imbalance detection, lid drop protection
Power Supply	VAC 100-240, 50/60 Hz
Power Requirement	230 W
Dimensions (W x D x H)	29 x 48 x 26 cm
Weight without rotor	10 kg
Certifications	CE IVD, RoHs

Specifications are subject to change without prior notice.

Ordering Information

AAMC-2410	TurboFuge with aluminum rotor and plastic lid
AAMC-a001	Metal lid

EzScope 101

Live Cell Imaging System



Exceptional Image Quality

Adopts high contrast brightfield optical configuration, coupled with precise motorized focusing, and two interchangeable magnifying objective lenses.

Remote Monitoring of Experiment

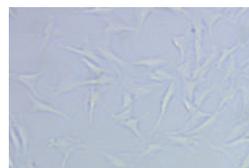
Allows flexible remote monitoring the assay via Windows-based remote desktop software.

Easy Image Editor

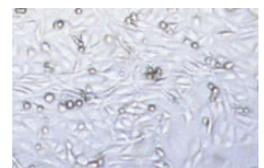
- Live preview for up to 4 units of EzScope
- Capture single image or time-lapse series
- Flatfielding correction for even brightfield background
- Time-lapse video output
- Spatial calibration
- Measure and convergence analysis

Applications

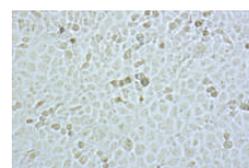
Widely used in a variety of cell-related assays. See more applications at www.blue-raybio.com



Synovial Mesenchymal Stem Cell



MDA-MB-231



Cancer Cell Line



Cardiac Muscle Cell

Multi-function Anesthesia Solutions

The experimental system is equipped with a gas recovery system to provide a safe experimental environment to maximize the protection of the operator; by replacing different types of anesthesia machines and masks to meet the needs of animal experiments, such as cerebral is chemia and myocardial is chemia model,

osteoporosis model, tail vein injection, abdominal aorta blood sampling, heart blood sampling, ventricular injection, tissue / organ removal and other animal surgery experiments



Stereotaxic Anesthesia Solutions

By changing the different types of stereotaxic instruments and adaptors to meet the needs of different animal experiments, such as disease models (such as Parkinson, Alzheimer's disease, cranio cerebral injury, spinal cord injury, etc.), brain drug injection, Cannula Implantation (long term repeated administration),

physiology experiment (such as nerve stimulation, signal recording, wireless telemetry, etc.), microdialysis experiments (probe implantation and short-term dialysis) and other experiments.



Multi-function Anesthesia Solutions

This program is the combination of anesthesia machine and ventilator. While keeping the animal under anesthesia, it provides accertain volume (tidal volume) of oxygen and respiratory rate to support the normal breathing of animals.

It can meet the requirements of long surgeries or surgeries on animals suffering from certain diseases (such as cardiovascular and cerebrovascular diseases, hypertension, cerebral infarction, thrombosis), and suitable for mice, rats, rabbits, cats and other animals within 5KG.





Our Services

www.hylascobio.com

sales@hylascobio.com



360 Diagnostics™

Charles River 360 Diagnostics™ is the only comprehensive partner that offers solutions from prevention to resolution. Through innovations like the HemaTIP™ Microsampler, Laboratory Testing Management® (LTM™), MALDITOF for microbial identification, and Exhaust Air Dust (EAD®) testing with our PCR Rodent Infectious Agent (PRIA®) panels, we can manage your animal health surveillance program effectively and efficiently.

- ❁ **Health Monitoring (HM) Programmes**
- ❁ **PRIA® (Pcr Rodent Infectious Agent) Panels**
- ❁ **Serology Profiles**
- ❁ **Microbiology Culture**
- ❁ **Parasitology, Pathology, and Other Services**
- ❁ **Zebrafish Health Surveillance**
- ❁ **Cell Line and Research Biologics Screening**
- ❁ **Microbiome Diagnostic Services**

HemaTIP™ Microsampler



360 DIAGNOSTICS™

HemaTIP™ Advantages

- Minimal set-up
- Reduced stress to the animal
- Rapid collection
- Ergonomic design

For over 50 years, serologic immunoassays have been the standard method for screening serum samples for specific antibodies to infectious agents. Often, small research animals, such as mice or rats, had to be euthanized to obtain enough blood to conduct larger panels of assays. However, recent advances in multiplexing technology have made it possible to perform comprehensive testing with smaller amounts of blood. This reality has given rise to the development of alternative methods of sampling that can facilitate survival blood collection; – this is an example of efficiency and refinement that is aligned with Charles River’s mission to observe the 3Rs in the use of animals in biomedical research.

Blood Sampling Technology

Collecting blood from research animals can be a cumbersome and time consuming process that often leads to an increased level of stress in the animal. The HemaTIP™ blood microsampler simplifies this process by placing the collection media on the tip of an easy-to-hold stylus. Once the sample is ready to be collected, a technician need only touch the tip of the stylus to the blood and its super absorptive matrix media wicks the sample in 3-6 seconds.

HemaTIP™ was originally used for human sampling. However, Charles River adapted and further qualified this technology for collecting samples in rodent laboratory species. The collection tip is engineered to draw only 20 µl, enough for preliminary and confirmatory serology testing by our laboratory.

Method Comparison

There are several methods for collecting blood samples; these range from survival to terminal collection and differ in required equipment and training. The following chart demonstrates the benefits of HemaTIP™ when compared to two widely used blood collection methods. The comparisons were based on the following: a range of animals, qualification protocols performed by Charles River, and sample volumes required to perform an Assessment Plus MFIA® Serology Profile.

	HemaTIP™	Dried Blood Spot (DBS)	Standard Serum Collection
Materials	HemaTIP™ Microsampler	DBS Card	Buffering solution
	Lancet	Lancet/capillary tube or needle/syringe*	Needle/syringe
			Serum vial
			Centrifuge
			Pipette
Volume Required	20 µL blood	25-50 µL blood	1 mL blood
Sampling Time	2-6 seconds	> 10 seconds (based on technique used)	30 minutes (includes sample centrifugation)
Hematocrit Bias	No	Yes	Unknown
Species Range	Mouse	Mouse	Rodent
	Rat	Rat	Rabbit
			Nonhuman primates
			Other
Ease of Use	Gently restrain animal	Gently restrain animal	Euthanize animal
	Expose blood	Expose blood	Collect sufficient blood volume
	Touch HemaTIP™ to blood	Align collection site with spot on card or use a capillary tube or needle and syringe to transfer blood drop to spot	Centrifuge
			Separate serum
Collection Type	Survival collection	Survival collection	Terminal collection**
Shipping	Ambient	Ambient	Frozen/cool/ambient
Dry Time	60 minutes	60 minutes	N/A
* Lancet (with or without a capillary tube) or needle/syringe are used to collect sufficient blood and precisely fill the entire spot on the collection paper.			
** Often the case in small animal models (e.g., mice)			

We are Accredited by AAALAC International

What it means...

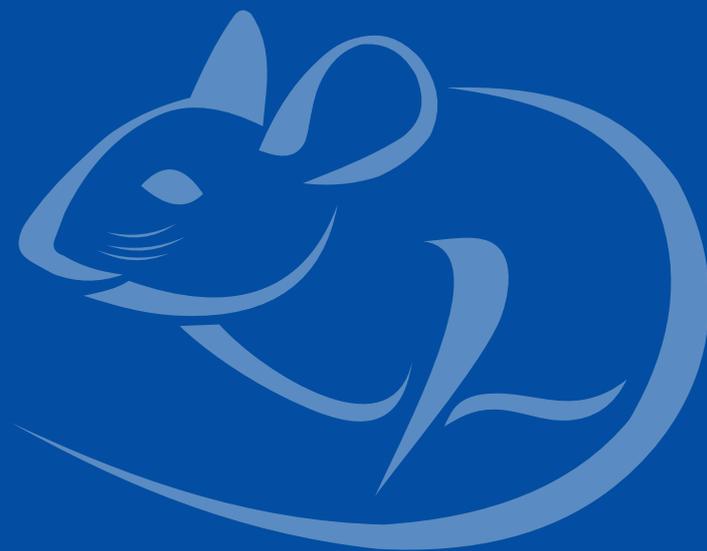
Accreditation is completely voluntary, and we have chosen to meet standards that go above and beyond the animal research regulations required by law. AAALAC International offers the only international accreditation for animal care and use programs, and it has become recognized around the world as a sign of quality and sound science.

Why it matters...

We care deeply about the quality of our research and the welfare of the animals that enable us to conduct it. Accreditation demonstrates that our institution is serious about setting, achieving and maintaining high standards for animal care and use and that we are committed to animal welfare and good science.



Learn more at www.aaalac.org



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charles river

www.criver.com

A photograph showing a laboratory setting with several petri dishes containing red agar media, arranged in a tray. Some dishes have yellow streaks or spots on the surface, indicating bacterial growth. The background is slightly blurred, showing more laboratory equipment.

Routine Health Monitoring of VAF/Elite® Animals

RESEARCH MODELS AND SERVICES NA

Summary

VAF/Elite® mice are housed in isolators or individually ventilated cages (IVC) to limit the exposure to opportunistic bacteria, as some of these organisms could pose unwanted variables in research studies. This document reviews the health surveillance program of Charles River's VAF/Elite® mice.

Rodents with the VAF/Elite® health profile are defined by the confirmed absence of specific bacterial species: *Klebsiella oxytoca*, *Klebsiella pneumoniae*, *Pasteurella pneumotropica*, *Proteus mirabilis*, *Pseudomonas aeruginosa*, *Staphylococcus aureus*, and beta-hemolytic *Streptococcus*, in addition to those agents excluded from the VAF/Plus® profile. VAF/Elite® rodents are maintained in a high-level biosecurity environment to limit exposure to these specific opportunistic bacteria commonly found in or on humans. The VAF/Elite® profile eliminates common opportunistic bacteria that could pose unwanted variables in certain research studies. Every 4 to 6 weeks, samples are collected and tested to ensure the VAF/Elite® rodents maintain the bacterial profile consistent with the VAF/Elite® health profile. Quarterly, the colony is screened for prevalent viruses. Rodents are submitted annually for comprehensive health monitoring including full serology assessment, bacteriology of the respiratory and gastrointestinal tracts, PCR testing, complete parasitology of the pelt and GI tract, and a complete necropsy with histopathology of all lesions. Health monitoring reports are provided by Charles River on our website (www.criver.com/products-services/research-models-services/health-reports) and are continuously updated as new results become available. These documents describe the status of the composite of all VAF/Elite® mice in the colony located on a given site. We are committed to providing our customers with the information that they require for thoughtful animal health management decisions. Should you require any additional information or have a specific request, please contact our Inbound Customer Support and Technical Assistance Department at 1.877.CRIVER1 (1.877.274a.8371) or askcharlesriver@crl.com.

Plasma, Blood & Organs

Monkey

Beagle Dog

Mini Pig / Pig

Guinea Pigs

Chicken

Rabbit



Training Services

Facility Services

Facility Designs

Whole blood, Serum, Plasma and eye or any organs from below SPF rodents can be supplied upon your purchase order receipt from Hyderabad

1. CD1 mice	4. C57/BL6 mice
2. Balb/C mice	5. CD-SD rats
3. Athymic Nude mice	6. WI Wistar rats