

Rodent Health Monitoring Procedures

North America

Dear Colleagues,

Envigo continues to advance its health testing procedures based on the latest information on microbial pathogenicity and testing technology. We are committed to providing the highest quality animals to the research community and our health testing program provides you with assurance of that commitment.

Microbiologically defined rodent commercial colonies are maintained within maximum security production barriers and flexible-film isolators. Colonies are monitored daily for clinical signs of disease, injury, or abnormal behavior by trained and highly skilled personnel who are supported by the veterinary medical staff. Testing profiles and frequencies are selected to effectively monitor the colonies for pathogenic and select opportunistic flora. Routinely tested and reported organisms are listed below; additional information is available upon request. In attempt to only provide you with animals that meet your specific health requirements, customers are encouraged to provide Customer Service with a facility or institutional bioexclusion list.

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Bioexclusion Levels:

Organisms are excluded from the colonies, and changes in health status are reported according to the bioexclusion levels defined below. Bioexclusion levels for each organism are indicated on the Organism list chart.

Level 1: Excluded from all animals. If a colony is confirmed positive, customers are notified and the colony is closed and repopulated with organism-free animals.

Level 2: Excluded from immunodeficient animals, but not immunocompetent animals. If a colony is confirmed positive, customers are notified. Immunodeficient animal colonies are closed and repopulated with organism-free animals. Immunocompetent colonies are maintained according to customer demand.

Level 3: Excluded based on customer demand. If a colony is confirmed positive, customers are notified and are maintained according to customer demand.

COLONY	CAGES SAMPLED	NUMBER CAGES SAMPLED
Rat and Mouse Barrier	Sentinels ¹	1/species/room
	Colony animals	1/strain/room, 4 total minimum/ barrier
Cotton Rat Barrier	Rat and mouse sentinel ³	1 of each/room
	Colony animals ³	2/room
Hamster Barrier	Sentinel ¹	1/room
	Colony animals	5/room
Rodent Isolator	Sentinels ⁴	2 immunocompetent & 2 immunodeficient/isolator

¹ Young adult animals are housed on a bottom shelf, near the room exhaust, and receive dirty bedding from colony residents.

² Semi-annual tests are performed on one (1) sentinel/species/room minimum, six (6) animals/barrier minimum

³ Cotton rats are not tested serologically; rat and mouse sentinels for this species are tested.

⁴ Immunodeficient strains are not tested serologically; instead immunocompetent heterozygotes or isolator reared sentinels are used.

Reporting and Customer Notification of Health Status Changes:

Health reports list the most recent test results as well as 18-month historical results and are updated monthly. Routine findings are reported on our website and to individuals who have requested to be placed on our contact list. Customers are notified of changes in health status, once the results are confirmed, by phone or email.

Diagnostic Laboratory:

Envigo primarily utilizes our own diagnostic laboratory for routine health monitoring. Additional commercial diagnostic laboratories are used as necessary.

Envigo is transitioning to the use of a non-sacrificial panel (NSP) sampling based program for routine health monitoring.

In this phased approach, Phase I will include the use of fecal samples to screen organisms via culture or PCR. Phase II will utilize four sample types to screen colonies. Samples will be acquired from live animals in our facilities and include fur swab, oral swab, fecal sample, and dried blood spot. Phase III will include the use of Phase II screening but will include the addition of annual necropsy and collection of tissue for histologic evaluation.

Organism List and Testing Frequency

Legend: A = annually, Semi = semi-annually, Q = quarterly, M = monthly, - = not tested. PCR = Polymerase Chain Reaction

VIRUSES	BIOEXCLUSION LEVEL	MICE		RATS		HAMSTERS	COTTON RATS	TEST METHODS
		BARRIER	ISOLATOR	BARRIER	ISOLATOR	BARRIER	BARRIER	
Kilham's Rat Virus (KRV)	1	-	-	M	Q	-	M ^a	PCR
Mouse Hepatitis Virus (MHV)	1	M	Q	-	-	-	M ^a	PCR
Mouse Minute Virus(MMV)	1	M	Q	-	-	-	M ^a	PCR
Mouse Parvovirus (MPV)	1	M	Q	-	-	-	M ^a	PCR
Parvovirus NS-1	1	M	Q	M	Q	-	M ^a	PCR
Pneumonia Virus of Mice (PVM)	1	M	Q	M	Q	M	M ^a	PCR
Rotavirus (EDIM)	1	M	Q	-	-	-	M ^a	PCR
Rat Minute Virus (RMV)	1	-	-	M	Q	-	M ^a	PCR
Rat Parvovirus (RPV)	1	-	-	M	Q	-	M ^a	PCR
Rat Theiler Virus (RTV)	1	-	-	M	Q	-	M ^a	PCR
Reovirus 3 (REO 3)	1	Q	Q	Q	Q	M	Q ^a	PCR
Sialodacryoadenitis Virus (SDAV/RCV)	1	-	-	M	Q	-	M ^a	PCR
Sendai virus	1	M	Q	M	Q	M	M ^a	PCR
Theiler's Mouse Encephalomyelitis Virus (TMEV/GDVII)	1	M	Q	-	-	-	M ^a	PCR
Toolan's H-1 Parvovirus	1	-	-	M	Q	-	M ^a	PCR
Mouse Norovirus (MNV)	1	Q	Q	-	-	-	Q ^a	PCR
Simian Virus 5 (SV-5)	1	-	-	-	-	M	-	PCR
Ectromelia (Mousepox)	1	Semi	A	-	-	-	Semi ^a	PCR
Hantaan virus	1	Semi	A	Semi	A	-	Semi ^a	PCR
Lymphocytic Choriomeningitis Virus (LCMV)	1	Semi	A	Semi	A	M	Q ^a	PCR
Mouse Adenovirus-1 (MAD-1)	1	Semi	A	Semi	A	-	Semi ^a	PCR
Mouse Adenovirus-2 (MAD-2)	1	Semi	A	Semi	A	-	Semi ^a	PCR
Mouse Cytomegalovirus (MCMV)	1	Semi	A	-	-	-	Semi ^a	PCR
Polyoma Virus	1	Semi	A	-	-	-	Semi ^a	PCR
K virus	1	Semi	A	-	-	-	Semi ^a	PCR
Lactic Dehydrogenase-Elevating Virus (LDEV)	1	Semi	A	-	-	-	Semi ^a	PCR
Mouse Thymic Virus (MTV)	1	Semi	A	-	-	-	Semi ^a	PCR

^a Cotton rats are not tested serologically; therefore, mouse or rat sentinels are utilized.

BACTERIA AND FUNGI	BIOEXCLUSION LEVEL	MICE		RATS		HAMSTERS	COTTON RATS	TEST METHODS
		BARRIER	ISOLATOR	BARRIER	ISOLATOR	BARRIER	BARRIER	
<i>Bordetella bronchiseptica</i>	3	Semi	A	Q	Q	Q	Q	Culture
<i>Campylobacter jejuni</i>	1	-	-	-	-	Q	-	PCR
CAR bacillus	1	Semi	A	Q	Q	-	Q ^a	PCR
<i>Citrobacter rodentium</i>	1	Q	Q	-	-	-	Q ^a	Culture
<i>Clostridium piliforme</i> (Tyzzer's disease)	1	Q	Q	Q	Q	M	Q ^a	PCR
<i>Corynebacterium bovis</i>	1	-	Q	-	-	-	-	PCR
<i>Corynebacterium kutscheri</i>	1	Q	Q	Q	Q	Q	Q	Culture
Dermatophytes	1	Semi	Q	Semi	Q	-	Semi ^a	Culture
<i>Encephalitozoon cuniculi</i>	1	Semi	A	Semi	A	Q	Semi ^a	PCR
<i>Helicobacter</i> spp.	1	Q	Q	Q	Q	Q	Q	PCR
<i>Klebsiella oxytoca</i>	3	Q	Q	Q	Q	Q	Q	Culture
<i>Klebsiella pneumoniae</i>	3	Q	Q	Q	Q	Q	Q	Culture
<i>Lawsonia intracellularis</i>	1	-	-	-	-	Q	-	PCR
<i>Mycoplasma pulmonis</i>	1	Q	Q	Q	Q	Q	Q ^a	PCR
<i>Pasteurella multocida</i>	1	Semi	A	Semi	A	-	-	Culture
<i>Pasteurella pneumotropica</i>	1	M	Q	M	Q	Q	M	Culture
<i>Pneumocystis</i> spp.	1	Q	Q	Q	Q	Q	Q	PCR
<i>Proteus mirabilis</i>	3	-	Q	-	Q	-	-	Culture
<i>Pseudomonas aeruginosa</i>	2	Q	Q	Q	Q	Q	Q	Culture
<i>Salmonella</i> spp.	1	Q	Q	Q	Q	M	Q	Culture
<i>Staphylococcus aureus</i>	2	Q	Q	Q	Q	Q	Q	Culture
<i>Streptococcus</i> spp. Group B beta	3	Q	Q	Q	Q	Q	Q	Culture
<i>Streptobacillus moniliformis</i>	1	Semi	A	Q	Q	-	Q	PCR
<i>Streptococcus pneumoniae</i>	1	Q	Q	Q	Q	Q	Q	Culture

PARASITES	BIOEXCLUSION LEVEL	MICE		RATS		HAMSTERS	COTTON RATS	TEST METHODS
		BARRIER	ISOLATOR	BARRIER	ISOLATOR	BARRIER	BARRIER	
Endoparasites	1 / 2 ^b	M	Q	M	Q	M	M	PCR
Ectoparasites	1 / 2 ^c	M	Q	M	Q	M	M	PCR

^b Endoparasites in Bioexclusion Level 2 include *Chilomastix* sp., flagellates, *Entamoeba muris*, and trichomonads.

^c Ectoparasites in Bioexclusion Level 2 include *Demodex* spp. in hamsters.

All other endoparasites and all ectoparasites are Bioexclusion Level 1

Contact us

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