

Global Rodent Health Monitoring Procedures

At Inotiv, we remain dedicated to providing high-quality research models backed by transparent, scientifically rigorous health monitoring standards. As part of our global “One Inotiv” strategy, we are pleased to announce comprehensive enhancements and harmonization across our North American (NA) and European (EMEA) health monitoring programs.

By simplifying and standardizing our health monitoring frameworks across all global production sites, our primary goal is to deliver seamless consistency, elevated surveillance precision, and clear documentation for your research programs.

We are committed to providing the highest quality animals and our health testing program provides you with assurance of that commitment.

HEALTH STANDARDS

At Inotiv, safeguarding the health and integrity of research models is paramount. We maintain two rigorous health standards to meet your specific research requirements: **Biosecure** and **Biosecure Plus**.

Biosecure

Our foundational **Biosecure** standard provides a dependable SPF (Specific Pathogen Free) health status. Biosecure designation secures that our animal models are completely free of specific viruses, bacteria, fungi and parasites that could cause clinical disease or compromise experimental results. Animals are housed in barrier housing, isolated from the outside environment but require the use of HEPA filtered and controlled air pressure systems, autoclaved or sterilized feed, bedding, water and enrichment.

This health standard rigorously excludes:

- Pathogenic murine viruses
- Ectoparasites
- Pathogenic bacteria
- Endoparasites

Biosecure Plus

Building upon our standard SPF exclusion list, the **Biosecure Plus** tier incorporates SOPF (Specific and Opportunistic Pathogen Free) parameters that actively exclude both core specific pathogens (SPF) and opportunistic organisms that do not cause overt disease in normal animals, but can compromise experimental results. Animals are housed in individual ventilated cages (IVC) or positive pressure isolators.

In addition to standard SPF exclusions, the **Biosecure Plus** standard screens out and excludes:

- *Beta hemolytic Streptococcus (non-group D)*
- *Staphylococcus aureus*
- *Klebsiella oxytoca*
- *Proteus spp.*
- *Klebsiella pneumoniae*
- *Bordetella bronchiseptica*
- *Pseudomonas aeruginosa*
- *Corynebacterium bovis (nudes)*

Selecting the Right Standard

Both health statuses are maintained under strict environmental controls to ensure consistent, reliable models for your facility.

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 by phone or email when an excluded organism is identified after results are confirmed.

DIAGNOSTIC LABORATORY

Inotiv primarily utilizes our own ISO-9001 IEC 17025 certified diagnostic laboratory for routine health monitoring. Additional commercial diagnostic laboratories are used as necessary.

Inotiv employs the use of a hybrid-based routine health monitoring program. On an annual basis, live animals from all housing types - barrier (open top), IVC and isolator - are submitted for necropsy and comprehensive health screening. Various test methodologies are utilized as appropriate for the agent screened, including pathology, culture, PCR, ELISA, Bead, IFA and microscopy (see following tables). Sample types include oral swab, dried blood spot, fur swab, fecal pellet and SiFT filter. During the remaining months (between live animals and full sample screening), fecal samples and SiFT filters are collected based on the approved schedule.

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Biosecure Models	Barriers - Mouse and Rat	NSP	Fecal	SiFT	Live Animal	Fecal	SiFT	NSP	Fecal	SiFT	NSP	Fecal	SiFT
Biosecure Plus Models	Isolators and IVCS - Mouse and Rat	NSP	Fecal	SiFT	Live Animal	Fecal	SiFT	NSP	Fecal	SiFT	NSP	Fecal	SiFT
Biosecure	Hamster	NSP	Fecal	SiFT	Live Animal	Fecal	SiFT	NSP	Fecal	SiFT	NSP	Fecal	SiFT
Biosecure	Guinea Pig	Fecal	Live Animal	SiFT	Fecal	NSP	SiFT	Fecal	NSP	SiFT	Fecal	NSP	SiFT
Biosecure	Cotton Rat	NSP	Fecal	Fecal	SiFT	Fecal	Fecal	NSP	Fecal	Fecal	SiFT	Fecal	Fecal

MOUSE AND RAT HEALTH MONITORING & VIRUS TESTING PROTOCOL

Frequency Key: M = Monthly, BiM - BiMonthly, Q = Quarterly, A=Annually

Monthly testing implies quarterly and annual testing as well.

VIRUS / PATHOGEN NAME	BARRIER - BIOSECURE	IVC - BIOSECURE	IVC - BIOSECURE PLUS	ISOLATOR - BIOSECURE PLUS	SPECIES	TEST METHOD
Ectromelia Virus (Mousepox)	A	A	A	A	M	Bead or PCR
Hantaan virus	A	A	A	A	M, R	ELISA (R), Bead (M) or PCR
K virus	A	A	A	A	M	ELISA or PCR
Kilham's Rat Virus (KRV)	M, Q, A	BiM	Q, A	Q, A	R	ELISA or PCR
Lactic Dehydrogenase-Elevating Virus (LDEV)	A	A	A	A	M	ELISA or PCR
Lymphocytic Choriomeningitis Virus (LCMV)	A	A	A	A	M, R	ELISA (R), Bead (M) or PCR
Mouse Adenovirus-1 (MAD-1)	A	A	A	A	M, R	ELISA (R), Bead (M) or PCR
Mouse Adenovirus-2 (MAD-2)	A	A	A	A	M, R	ELISA (R), Bead (M) or PCR
Mouse Cytomegalovirus (MCMV)	A	A	A	A	M	Bead or PCR
Mouse Hepatitis Virus (MHV)	M, Q, A	BiM	Q, A	Q, A	M	Bead or PCR
Mouse Minute Virus (MMV)	M, Q, A	BiM	Q, A	Q, A	M	Bead or PCR
Mouse Parvovirus (MPV)	M, Q, A	BiM	Q, A	Q, A	M	Bead or PCR
Mouse Rotavirus (EDIM)	M, Q, A	BiM	Q, A	Q, A	M	Bead or PCR
Mouse Thymic Virus (MTV)	A	A	A	A	M	IFA or PCR
Murine Norovirus (MNV)	M, Q, A	BiM	Q, A	Q, A	M	Bead or PCR
Murine Chapparovirus/ Mouse Kidney Parvovirus (MuCPV/MKPV)	Q	Q	Q, A	Q, A	M	IFA or PCR
Pneumonia Virus of Mice (PVM)	Q	Q	Q, A	Q, A	M, R	ELISA (R), Bead (M) or PCR
Polyoma Virus	A	A	Q, A	A	M	ELISA or PCR
Rat Minute Virus (RMV)	M, Q, A	BiM	Q, A	Q, A	R	ELISA or PCR
Rat Parvovirus (RPV)	M, Q, A	BiM	Q, A	Q, A	R	ELISA or PCR
Rat Polyoma Virus 2 (RatPyV2)*	A	A	Q, A	Q, A	R	ELISA or PCR
Rat Theiler Virus (RTV)	M, Q, A	BiM	Q, A	Q, A	R	ELISA or PCR
Respiratory Enteric Virus III (REO 3)	A	A	A	A	M, R	ELISA (R), Bead (M) or PCR
Sendai virus	A	A	A	A	M, R	ELISA (R), Bead (M) or PCR
Sialodacryoadenitis Virus (SDAV/RCV)	Q	Q	Q, A	Q, A	R	ELISA or PCR
Theiler's Mouse Encephalomyelitis Virus (TMEV/GDVII)	Q	Q	Q, A	Q, A	M	ELISA (R), Bead (M) or PCR
Toolan's H-1 Parvovirus	M, Q, A	BiM	Q, A	Q, A	R	ELISA or PCR

BioSecure Models have an SPF health profile.

BioSecure Plus Models have an SOPF health profile

BACTERIA AND FUNGI / PATHOGEN NAME	BARRIER - BIOSECURE	IVC - BIOSECURE	IVC - BIOSECURE PLUS	ISOLATOR - BIOSECURE PLUS	SPECIES	TEST METHOD
Beta hemolytic Streptococcus (non-Group D)	Q, A	Q, A	M, Q, A	M, Q, A	M	PCR
Bordetella bronchiseptica	Q, A	Q, A	M, Q, A	M, Q, A	R	PCR
Citrobacter rodentium	A	A	A	A	M	Culture
Clostridium piliforme (Tyzzer's disease)	Q, A	Q, A	Q, A	Q, A	M, R	ELISA (R), Bead (M) or PCR
Corynebacterium bovis			M, Q, A	M, Q, A	M, R	PCR
Corynebacterium kutscheri	Q, A	Q, A	Q, A	Q, A	M, R	Culture
Encephalitozoon cuniculi	A	A	A	A	M, R	ELISA or PCR
Filobacterium rodentium (CAR bacillus)	A	A	A	A	M, R	ELISA or PCR
Helicobacter spp.	M, Q, A	BiM, Q, A	Q, A	Q, A	M, R	PCR
Klebsiella oxytoca	Q, A	Q, A	M, Q, A	M, Q, A	M, R	Culture
Klebsiella pneumoniae	Q, A	Q, A	M, Q, A	M, Q, A	M, R	Culture
Mycoplasma pulmonis	Q, A	Q, A	Q, A	Q, A	M, R	ELISA (R, H), Bead (M) or PCR
Pasteurella multocida	Q, A	Q, A	A	Q, A	M	PCR
Pneumocystis murina	A	A	A	Q, A	M	PCR
Pneumocystis carinii	A	A	A	A	R	PCR
Proteus spp.	Q, A	Q, A	M*, Q, A	M, Q, A	M, R	Culture
Pseudomonas aeruginosa	Q, A	Q, A	M, Q, A	M, Q, A	M, R	Culture
Rodentibacter heyltii	M, Q, A	BiM, Q, A	Q	Q, A	M, R	PCR
Rodentibacter pneumotropicus	M, Q, A	BiM, Q, A	Q	Q, A	M, R	Culture
Salmonella spp.	A	A	A	A	M, R	Culture
Staphylococcus aureus	Q, A	Q, A	M, Q, A	M, Q, A	M, R	Culture
Streptobacillus moniliformis	A	A	A	A	M, R	PCR
Streptococcus pneumoniae	Q, A	Q, A	Q, A	Q, A	M, R	PCR
Ectoparasites	M, Q, A	BiM, Q, A	Q, A	Q, A	M, R	Microscopy and PCR
Endoparasites	M, Q, A	BiM, Q, A	Q, A	Q, A	M, R	Microscopy and PCR
Enteric Protozoan	M, Q, A	BiM, Q, A	Q, A	Q, A	M, R	Microscopy and PCR
Dermatophytes	A	A	A	A	M, R	Microscopy and PCR

BioSecure Models have an SPF health profile.
 BioSecure Plus Models have an SOPF health profile

Monthly testing involves fecal sampling.
 Quarterly testing involves either SIFT or NSP sampling.
 Annual testing involves the submission of live animal.

HAMSTER, GUINEA PIG AND COTTON RAT HEALTH MONITORING & VIRUS TESTING PROTOCOL

Frequency Key: M = Monthly, Q = Quarterly, A=Annually

Monthly and quarterly testing implies annual testing.

VIRUS / PATHOGEN NAME	HAMSTER BIOSECURE - BARRIER	GUINEA PIG BIOSECURE - BARRIER	COTTON RAT BIOSECURE - IVC	TEST METHOD
Ectromelia Virus (Mousepox)			A	Bead/ELISA/PCR
Guinea Pig Adenovirus		M		ELISA/PCR
Hantaan virus			Q	Bead/ELISA/PCR
K virus			A	Bead/ELISA/PCR
Kilham's Rat Virus (KRV)			Q	Bead/ELISA/PCR
Influenza A/B			M	Bead/ELISA/PCR
Lymphocytic Choriomeningitis Virus (LCMV)	M	Q	Q	Bead/ELISA/PCR
Mouse Cytomegalovirus (MCMV)			A	Bead/PCR
Mouse Hepatitis Virus (MHV)			Q	Bead/PCR
Mouse Minute Virus (MMV)			Q	Bead/ELISA/PCR
Mouse Parvovirus (MPV)			M	Bead/PCR
Pneumonia Virus of Mice (PVM)	M		M	Bead/ELISA/PCR
Polyoma Virus			Q	Bead/ELISA/PCR
Rat Minute Virus (RMV)			A	Bead/ELISA/PCR
Rat Parvovirus (RPV)			M	Bead/ELISA/PCR
Rat Theiler Virus (RTV)			A	Bead/ELISA/PCR
Respiratory Enteric Virus III (REO 3)	M		Q	Bead/ELISA/PCR
Respiratory Syncytial Virus (RSV)			M	Bead/ELISA/PCR
Sendai virus	M	M	M	Bead/ELISA/PCR
Sialodacryoadenitis Virus (SDAV/RCV)			M	Bead/ELISA/PCR
Simian Virus 5 (SV-5)	M			Bead/ELISA/PCR
Toolan's H-1 Parvovirus			M	Bead/ELISA/PCR

BACTERIA AND FUNGI / PATHOGEN NAME	HAMSTER BIOSECURE - BARRIER	GUINEA PIG BIOSECURE - BARRIER	COTTON RAT BIOSECURE -IVC	TEST METHOD
Beta hemolytic Streptococcus Group A	Q	M	M	Culture/PCR
Beta hemolytic Streptococcus Group B			M	Culture/PCR
Beta hemolytic Streptococcus Group G		M	M	Culture/PCR
Bordetella bronchiseptica	Q	M	M	Culture/PCR
Campylobacter jejuni	Q			Culture
Chlamydia psittaci		A		IFA
Clostridium piliforme (Tyzzer's disease)	M	Q	Q	Bead/ELISA/PCR
Corynebacterium kutscheri	Q	M	Q	Culture/PCR
Encephalitozoon cuniculi	Q	M	A	ELISA/PCR
Filobacterium rodentium (CAR bacillus)			Q	Bead/ELISA/PCR
Helicobacter spp.	Q		Q	PCR
Klebsiella oxytoca	Q			Culture/PCR
Klebsiella pneumoniae	Q		Q	PCR
Lawsonia intracellularis	Q			ELISA/PCR
Mycoplasma pulmonis	Q		Q	Bead/ELISA
Pasteurella spp.		M		PCR/IFA
Pasteurella multocida			A	PCR
Pneumocystis spp.	Q		M	PCR
Pseudomonas aeruginosa	Q		Q	Culture/PCR
Rodentibacter heylii			Q	PCR
Rodentibacter pneumotropicus	Q		Q	PCR
Salmonella spp.	M		A	Culture
Staphylococcus aureus	Q		Q	Culture
Streptobacillus moniliformis		Q	Q	PCR
Streptococcus pneumoniae	Q	M	Q	Culture/PCR
Yersinia pseudotuberculosis		A		Culture
Ectoparasites	M	M	M	Microscopy and PCR
Endoparasites	M	M	M	Microscopy and PCR
Enteric Protozoan	M	M	M	Microscopy and PCR
Dermatophytes	A	A	A	Microscopy and PCR