

Area 1: Biobubbles 7 & 11

Cage Type/Containment system Exhaust ventilated caging in biobubbles

Sampling System Used	ages/sentinel	Age at introduction	Age at sampling
1. Soiled Bedding Sentinel (SB: Approx. 60)		4 -6 wks	12-14 wks
2. Random Sample (RS)			

	May-09	Aug-09	Nov-09	Feb-10	May-10	Sample System	Sample Type	Test Type
Viruses	pos/neg	pos/neg	pos/neg	pos/neg	pos/neg			
Mouse Hepatitis Virus	0/5	0/5	0/5	0/6	0/5	SBS	Serum	EIA/IFA
Mouse Parvovirus	0/5	0/5	0/5	0/6	0/5	SBS	Serum	EIA/IFA
Minute Virus of Mice	0/5	0/5	0/5	0/6	0/5	SBS	Serum	EIA/IFA
Mouse Rotavirus	0/5	0/5	0/5	0/6	0/5	SBS	Serum	EIA/IFA
Theiler's Encephalomyelitis virus	0/5	0/5	0/5	0/6	0/5	SBS	Serum	EIA/IFA
Mouse Norovirus	0/5	0/5	0/5	0/6	0/5	SBS	Serum	EIA/IFA
Pneumonia Virus of Mice	0/5	0/5	0/5	0/6	0/5	SBS	Serum	EIA/IFA
Adenovirus Type 1&2	NT	0/5	NT	0/6	NT	SBS	Serum	EIA/IFA
Ectromelia	NT	0/5	NT	0/6	NT	SBS	Serum	EIA/IFA
Hantavirus	NT	NT	NT	0/6	NT	SBS	Serum	EIA/IFA
LCMV	NT	0/5	NT	0/6	NT	SBS	Serum	EIA/IFA
Murine Cytomegalovirus	NT	0/5	NT	0/6	NT	SBS	Serum	EIA/IFA
Polyoma Virus	NT	NT	NT	0/6	NT	SBS	Serum	EIA/IFA
Reovirus Type 3	NT	0/5	NT	0/6	NT	SBS	Serum	EIA/IFA
Sendai Virus	NT	0/5	NT	0/6	0/5	SBS	Serum	EIA/IFA
Bacteria								
Mycoplasma pulmonis	0/5	0/5	0/5	0/6	0/5	SBS	Serum	EIA/IFA
Helicobacter spp	0/5	0/5	0/5	0/6	0/5	RS&SBS	ooled Faec	PCR
Citrobacter rodentium	NT	0/6	NT	0/6	NT	SBS	Caecum	Culture
Staphylococcus aureus	NT	0/6	NT	0/6	NT	SBS	NT wash	Culture
Pseudomonas aeruginosa	NT	0/6	NT	0/6	NT	SBS	Intestine	Culture
Streptococci (beta haem)	NT	0/6	NT	0/6	NT	SBS	NT wash	Culture
Salmonella spp	NT	0/6	NT	0/6	NT	SBS	Intestine	Culture
Pasteurella pneumotropica	NT	0/6	NT	0/6	NT	SBS	NT wash	Culture
CAR Bacillus	NT	NT	NT	0/6	NT	SBS	Serum	EIA/IFA
Clostridium piliforme	NT	NT	NT	0/6	NT	SBS	Serum	EIA/IFA
Corynebacterium kutscheri	NT	0/6	NT	0/6	NT	SBS	NT wash	Culture
Klebsiella pneumoniae	NT	0/6	NT	0/6	NT	SBS	NT wash	Culture
Streptobacillus moniliformis	NT	0/6	NT	0/6	NT	SBS	NT wash	Culture
Streptococcus pneumoniae	NT	0/6	NT	0/6	NT	SBS	NT wash	Culture
Parasites								
Ectoparasites	NT	0/6	NT	0/6	0/5	SBS	Pelage	TT/visual
							Caecal contents & pooled faeces	
Syphacia spp	0/5	0/6	0/5	0/6	0/5	SBS	faeces	TT/FF/WM
							Caecal contents & pooled faeces	
Aspicularis spp	0/5	0/6	0/5	0/6	0/5	SBS	faeces	TT/FF/WM
Giardia spp	NT	0/6	NT	0/6	0/5	SBS	Intestine	Wet Mount
Eimeria spp (intestinal)	NT	0/6	NT	0/6	0/5	SBS	Intestine	Wet Mount
Spironucleus spp	NT	0/6	NT	0/6	0/5	SBS	Intestine	Wet Mount
Cryptosporidium	NT	0/6	NT	0/6	0/5	SBS	Intestine	Histo
Encephalitozoon cuniculi	NT	0/6	NT	0/6	NT	SBS	Serum	EIA/IFA
Klossiella spp	NT	0/6	NT	0/6	0/5	SBS	Intestine	Wet Mount
Hymenolepis nana	NT	0/6	NT	0/6	NT	SBS	estine:Faec	FF/WM
Fungi								
Pneumocystis carinii	NT	NT	NT	NT	0/5	RS	Lung	Histo:PCR

Area 2: Biobubbles 4, 6 & 8

	May-09	Aug-09	Nov-09	Feb-10	May-10	Sample System	Sample Type	Test Type
Viruses	pos/neg	pos/neg	pos/neg	pos/neg	pos/neg			
Mouse Hepatitis Virus	0/20	0/20	0/20	0/20	0/22	SBS	Serum	EIA/IFA
Mouse Parvovirus	0/20	0/20	0/20	0/20	0/22	SBS	Serum	EIA/IFA
Minute Virus of Mice	0/20	0/20	0/20	0/20	0/22	SBS	Serum	EIA/IFA
Mouse Rotavirus	0/20	0/20	0/20	0/20	0/22	SBS	Serum	EIA/IFA

Theiler's Encephalomyelitis virus	0/20	0/20	0/20	0/20	0/22	SBS	Serum	EIA/IFA
Mouse Norovirus	0/20	0/20	0/20	0/20	0/22	SBS	Serum	EIA/IFA
Pneumonia Virus of Mice	0/20	0/20	0/20	0/20	0/22	SBS	Serum	EIA/IFA
Adenovirus Type 1&2	NT	0/20	NT	0/20	NT	SBS	Serum	EIA/IFA
Ectromelia	NT	0/20	NT	0/20	NT	SBS	Serum	EIA/IFA
Hantavirus	NT	NT	NT	0/20	NT	SBS	Serum	EIA/IFA
LCMV	NT	0/20	NT	0/20	NT	SBS	Serum	EIA/IFA
Murine Cytomegalovirus	NT	0/20	NT	0/20	NT	SBS	Serum	EIA/IFA
Polyoma Virus	NT	NT	NT	0/20	NT	SBS	Serum	EIA/IFA
Reovirus Type 3	NT	0/20	NT	0/20	NT	SBS	Serum	EIA/IFA
Sendai Virus	NT	0/20	NT	0/20	0/22	SBS	Serum	EIA/IFA

Bacteria

Mycoplasma pulmonis	0/20	0/20	0/20	0/20	0/22	SBS	Serum	EIA/IFA
Helicobacter spp	0/20	0/20	0/20	0/20	0/22	RS&SBS	ooled Faec	PCR
Citrobacter rodentium	NT	0/20	NT	0/20	NT	SBS	Caecum	Culture
Staphylococcus aureus	NT	0/20	NT	0/20	NT	SBS	NT wash	Culture
Pseudomonas aeruginosa	NT	0/20	NT	0/20	NT	SBS	Intestine	Culture
Streptococci (beta haem)	NT	0/20	NT	0/20	NT	SBS	NT wash	Culture
Salmonella spp	NT	0/20	NT	0/20	NT	SBS	Intestine	Culture
Pasteurella pneumotropica	NT	0/20	NT	0/20	NT	SBS	NT wash	Culture
CAR Bacillus	NT	NT	NT	0/20	NT	SBS	Serum	EIA/IFA
Clostridium piliforme	NT	NT	NT	0/20	NT	SBS	Serum	EIA/IFA
Corynebacterium kutscheri	NT	0/20	NT	0/20	NT	SBS	NT wash	Culture
Klebsiella pneumoniae	NT	0/20	NT	0/20	NT	SBS	NT wash	Culture
Streptobacillus moniliformis	NT	0/20	NT	0/20	NT	SBS	NT wash	Culture
Streptococcus pneumoniae	NT	0/20	NT	0/20	NT	SBS	NT wash	Culture

Parasites

Ectoparasites	NT	0/20	NT	0/20	NT	SBS	Pelage	TT/Visual
							Caecal contents & pooled faeces	
Syphacia spp	0/20	0/20	0/20	0/20	0/22	SBS	Caecal contents & pooled faeces	TT/FF/WM
							Caecal contents & pooled faeces	
Aspicularis spp	0/20	0/20	0/20	0/20	0/20	SBS	Intestine	TT/FF/WM
Giardia spp	NT	0/20	NT	0/20	NT	SBS	Intestine	Wet Mount
Eimeria spp (intestinal)	NT	0/20	NT	0/20	NT	SBS	Intestine	Wet Mount
Spironucleus spp	NT	0/20	NT	0/20	NT	SBS	Intestine	Wet Mount
Cryptosporidium	NT	0/20	NT	0/20	NT	SBS	Intestine	Histo
Encephalitozoon cuniculi	NT	0/20	NT	0/20	NT	SBS	Serum	EIA/IFA
Klossiella spp	NT	0/20	NT	0/20	NT	SBS	Intestine	Wet Mount
Hymenolepis nana	NT	0/20	NT	0/20	NT	SBS	Intestine:Faec	FF/WM

Fungi

Pneumocystis carinii	NT	NT	NT	NT	NT	RS	Lung	Histo:PCR
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Area 3: Biobubble 9

	May-09	Aug-09	Nov-09	Feb-10	May-10	Sample System	Sample Type	Test Type
Viruses	pos/neg	pos/neg	pos/neg	pos/neg	pos/neg			
Mouse Hepatitis Virus	0/9	0/9	0/10	0/10	0/10	SBS	Serum	EIA/IFA
Mouse Parvovirus	0/9	0/9	0/10	0/10	0/10	SBS	Serum	EIA/IFA
Minute Virus of Mice	0/9	0/9	0/10	0/10	0/10	SBS	Serum	EIA/IFA
Mouse Rotavirus	0/9	0/9	0/10	0/10	0/10	SBS	Serum	EIA/IFA
Theiler's Encephalomyelitis virus	0/9	0/9	0/10	0/10	0/10	SBS	Serum	EIA/IFA
Mouse Norovirus	0/9	0/9	3/15	0/10	0/10	SBS	Serum	EIA/IFA
Pneumonia Virus of Mice	0/9	0/9	0/10	0/10	0/10	SBS	Serum	EIA/IFA
Adenovirus Type 1&2	NT	0/9	NT	0/10	NT	SBS	Serum	EIA/IFA
Ectromelia	NT	0/9	NT	0/10	NT	SBS	Serum	EIA/IFA
Hantavirus	NT	NT	NT	0/10	NT	SBS	Serum	EIA/IFA
LCMV	NT	0/9	NT	0/10	NT	SBS	Serum	EIA/IFA
Murine Cytomegalovirus	NT	0/9	NT	0/10	NT	SBS	Serum	EIA/IFA
Polyoma Virus	NT	NT	NT	0/10	NT	SBS	Serum	EIA/IFA
Reovirus Type 3	NT	0/9	NT	0/10	NT	SBS	Serum	EIA/IFA
Sendai Virus	NT	0/9	NT	0/10	0/10	SBS	Serum	EIA/IFA
Bacteria								
Mycoplasma pulmonis	0/9	0/9	0/10	0/10	0/10	SBS	Serum	EIA/IFA
Helicobacter spp	0/9	0/9	1/17	0/10	0/10	RS&SBS	ooled Faec	PCR

Citrobacter rodentium	NT	0/9	NT	0/10	NT	SBS	Caecum	Culture
Staphylococcus aureus	NT	0/9	NT	0/10	NT	SBS	NT wash	Culture
Pseudomonas aeruginosa	NT	0/9	NT	0/10	NT	SBS	Intestine	Culture
Streptococci (beta haem)	NT	0/9	NT	0/10	NT	SBS	NT wash	Culture
Salmonella spp	NT	0/9	NT	0/10	NT	SBS	Intestine	Culture
Pasteurella pneumotropica	NT	0/9	NT	0/10	NT	SBS	NT wash	Culture
CAR Bacillus	NT	NT	NT	0/10	NT	SBS	Serum	EIA/IFA
Clostridium piliforme	NT	NT	NT	0/10	NT	SBS	Serum	EIA/IFA
Corynebacterium kutscheri	NT	0/9	NT	0/10	NT	SBS	NT wash	Culture
Klebsiella pneumoniae	NT	0/9	NT	0/10	NT	SBS	NT wash	Culture
Streptobacillus moniliformis	NT	0/9	NT	0/10	NT	SBS	NT wash	Culture
Streptococcus pneumoniae	NT	0/9	NT	0/10	NT	SBS	NT wash	Culture
Parasites								
Ectoparasites	NT	0/9	NT	0/10	NT	SBS	Pelage	TT/visual
							Caecal contents & pooled faeces	
Syphacia spp	0/9	0/9	0/10	0/10	0/10	SBS	faeces	TT/FF/WM
							Caecal contents & pooled faeces	
Aspicularis spp	0/9	0/9	0/10	0/10	0/10	SBS	faeces	TT/FF/WM
Giardia spp	NT	0/9	NT	0/10	NT	SBS	Intestine	Wet Mount
Eimeria spp (intestinal)	NT	0/9	NT	0/10	NT	SBS	Intestine	Wet Mount
Spirotrichium spp	NT	0/9	NT	0/10	NT	SBS	Intestine	Wet Mount
Cryptosporidium	NT	0/9	NT	0/10	NT	SBS	Intestine	Histo
Encephalitozoon cuniculi	NT	0/9	NT	0/10	NT	SBS	Serum	EIA/IFA
Klossiella spp	NT	0/9	NT	0/10	NT	SBS	Intestine	Wet Mount
Hymenolepis nana	NT	0/9	NT	0/10	NT	SBS	Intestine:Faeces	FF/WM
Fungi								
Pneumocystis carinii	NT	NT	NT	NT	NT	RS	Lung	Histo:PCR

Notes:

a. **Norovirus & Helicobacter**- When 1 sentinel tested positive to Norovirus & Helicobacter in November all lines on the position rack were re-tested. Three recently imported lines testing positive for Norovirus were immediately removed from Bubble 9 for **No lines tested positive to Helicobacter on the re-screen**. Regular monthly re-screens on adjacent lines are planned for e

Area 4: Biobubbles	1 & 3
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	May-09	Aug-09	Nov-09	Feb-10	May-10	Sample System	Sample Type	Test Type
Viruses								
Mouse Hepatitis Virus	0/10	0/15	0/20	0/20	0/20	SBS	Serum	EIA/IFA
Mouse Parvovirus	0/10	0/15	0/20	0/20	0/20	SBS	Serum	EIA/IFA
Minute Virus of Mice	0/10	0/15	0/20	0/20	0/20	SBS	Serum	EIA/IFA
Mouse Rotavirus	0/10	0/15	0/20	0/20	0/20	SBS	Serum	EIA/IFA
Theiler's Encephalomyelitis virus	0/10	0/15	0/20	0/20	0/20	SBS	Serum	EIA/IFA
Mouse Norovirus	0/10	0/15	1/19	0/20	0/20	SBS	Serum	EIA/IFA
Pneumonia Virus of Mice	0/10	0/15	0/20	0/20	0/20	SBS	Serum	EIA/IFA
Adenovirus Type 1&2	NT	0/15	NT	0/20	NT	SBS	Serum	EIA/IFA
Ectromelia	NT	0/15	NT	0/20	NT	SBS	Serum	EIA/IFA
Hantavirus	NT	NT	NT	0/20	NT	SBS	Serum	EIA/IFA
LCMV	NT	0/15	NT	0/20	NT	SBS	Serum	EIA/IFA
Murine Cytomegalovirus	NT	0/15	NT	0/20	NT	SBS	Serum	EIA/IFA
Polyoma Virus	NT	NT	NT	0/20	NT	SBS	Serum	EIA/IFA
Reovirus Type 3	NT	0/15	NT	0/20	NT	SBS	Serum	EIA/IFA
Sendai Virus	NT	0/15	NT	0/20	0/20	SBS	Serum	EIA/IFA
Bacteria								
Mycoplasma pulmonis	0/10	0/15	0/20	0/20	0/20	SBS	Serum	EIA/IFA
Helicobacter spp	1/21	1/21	1/19	1/19	0/20	RS&SBS	pooled Faec	PCR
Citrobacter rodentium	NT	0/15	NT	0/20	NT	SBS	Caecum	Culture
Staphylococcus aureus	NT	0/15	NT	0/20	NT	SBS	NT wash	Culture
Pseudomonas aeruginosa	NT	0/15	NT	0/20	NT	SBS	Intestine	Culture
Streptococci (beta haem)	NT	0/15	NT	0/20	NT	SBS	NT wash	Culture
Salmonella spp	NT	0/15	NT	0/20	NT	SBS	Intestine	Culture
Pasteurella pneumotropica	NT	0/15	NT	0/20	NT	SBS	NT wash	Culture
CAR Bacillus	NT	NT	NT	0/20	NT	SBS	Serum	EIA/IFA
Clostridium piliforme	NT	NT	NT	0/20	NT	SBS	Serum	EIA/IFA
Corynebacterium kutscheri	NT	0/15	NT	0/20	NT	SBS	NT wash	Culture
Klebsiella pneumoniae	NT	0/15	NT	0/20	NT	SBS	NT wash	Culture
Streptobacillus moniliformis	NT	0/15	NT	0/20	NT	SBS	NT wash	Culture
Streptococcus pneumoniae	NT	0/15	NT	0/20	NT	SBS	NT wash	Culture
Parasites								
Ectoparasites	NT	0/15	NT	0/20	NT	SBS	Pelage	TT/visual
							Caecal contents & pooled faeces	
Syphacia spp	0/10	0/15	0/20	0/20	0/20	SBS	Caecal contents & pooled faeces	TT/FF/WM
							Caecal contents & pooled faeces	
Aspicularis spp	0/10	0/15	0/20	0/20	0/20	SBS	Intestine	TT/FF/WM
Giardia spp	NT	0/15	NT	0/20	NT	SBS	Intestine	Wet Mount
Eimeria spp (intestinal)	NT	0/15	NT	0/20	NT	SBS	Intestine	Wet Mount
Spiroucleus spp	NT	0/15	NT	0/20	NT	SBS	Intestine	Wet Mount
Cryptosporidium	NT	0/15	NT	0/20	NT	SBS	Intestine	Histo
Encephalitozoon cuniculi	NT	0/15	NT	0/20	NT	SBS	Serum	EIA/IFA
Klossiella spp	NT	0/15	NT	0/20	NT	SBS	Intestine	Wet Mount
Hymenolepis nana	NT	0/15	NT	0/20	NT	SBS	Intestine:Faec	FF/WM
Fungi								
Pneumocystis carinii	NT	NT	NT	NT	NT	RS	Lung	Histo:PCR

Notes:

a. **Helicobacter bubble 3**- In May and Aug 09 one rack tested positive for Helicobacter in bubble 3. On re-screen in May the infected line was detected and removed from bubble 3 for rederivation. When a second line tested positive in Aug the infected line and adjacent lines were placed on medicated feed for Helicobacter. Helicobacter was not detected in bubble 3 in the November screen. Monthly re-screens are planned for early 2010. In Feb 2010 one sentinel tested positive in bubble 3 for Helicobacter despite negative screens in December and January. In May 2010 no positive results for Helicobacter were detected in bubble 3.

b. **Helicobacter bubble 1** - In November one rack tested positive to Helicobacter in bubble 1. **The re-screen failed to detect any positive lines.** Monthly re-screens are planned for early 2010. Screens in December 09 , January, February and May 2010 failed to detect helicobacter in bubble 1.

c. **Norovirus bubble 3**- In November one sentinel tested positive to Norovirus. On re-screen one recently imported line was seropositive. The line has been removed from bubble 3 for rederivation. Monthly re-screens are planned for early 2010. Screens in December 09 , January, February and May 2010 failed to detect norovirus in bubble 3.

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