



**Area 1: Biobubbles 7 & 11**

Cage Type/Containment system Exhaust ventilated caging in biobubbles

Sampling System Used	Cages/sentinel	Age at introduction	Age at sampling
1. Soiled Bedding Sentinel (SBS) <sup>1</sup>	Approx. 60	4 -6 wks	12-14 wks
2. Random Sample (RS)			

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

**Area 2: Biobubbles 4 & 6**

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

**Notes:**  
a Staphylococcus ( Coag +ve) - 1 positive in BB6 in Feb  
b Pasteurella pneumotropica - 1 positive in BB6 in Feb

Area 3: Biobubble 9

	Feb-09	May-09	Aug-09	Nov-09	Feb-10	Sample System	Sample Type	Test Type
	pos/neg	pos/neg	pos/neg	pos/neg	pos/neg			
<b>Viruses</b>								
Mouse Hepatitis Virus	0/9	0/9	0/9	0/10	0/10	SBS	Serum	EIA/IFA
Mouse Parvovirus	0/9	0/9	0/9	0/10	0/10	SBS	Serum	EIA/IFA
Minute Virus of Mice	0/9	0/9	0/9	0/10	0/10	SBS	Serum	EIA/IFA
Mouse Rotavirus	0/9	0/9	0/9	0/10	0/10	SBS	Serum	EIA/IFA
Theiler's Encephalomyelitis virus	0/9	0/9	0/9	0/10	0/10	SBS	Serum	EIA/IFA
Mouse Norovirus	0/9	0/9	0/9	3/15	0/10	SBS	Serum	EIA/IFA
Pneumonia Virus of Mice	0/9	0/9	0/9	0/10	0/10	SBS	Serum	EIA/IFA
Adenovirus Type 1&2	0/9	NT	0/9	NT	0/10	SBS	Serum	EIA/IFA
Ectromelia	0/9	NT	0/9	NT	0/10	SBS	Serum	EIA/IFA
Hantavirus	0/9	NT	NT	NT	0/10	SBS	Serum	EIA/IFA
LCMV	0/9	NT	0/9	NT	0/10	SBS	Serum	EIA/IFA
Murine Cytomegalovirus	0/9	NT	0/9	NT	0/10	SBS	Serum	EIA/IFA
Polyoma Virus	0/9	NT	NT	NT	0/10	SBS	Serum	EIA/IFA
Reovirus Type 3	0/9	NT	0/9	NT	0/10	SBS	Serum	EIA/IFA
Sendai Virus	0/9	NT	0/9	NT	0/10	SBS	Serum	EIA/IFA
<b>Bacteria</b>								
Mycoplasma pulmonis	0/9	0/9	0/9	0/10	0/10	SBS	Serum	EIA/IFA
Helicobacter spp	0/9	0/9	0/9	1/17	0/10	RS&SBS	ooled Faec	PCR
Citrobacter rodentium	0/9	NT	0/9	NT	0/10	SBS	Caecum	Culture
Staphylococcus aureus	0/9	NT	0/9	NT	0/10	SBS	NT wash	Culture
Pseudomonas aeruginosa	0/9	NT	0/9	NT	0/10	SBS	Intestine	Culture
Streptococci (beta haem)	0/9	NT	0/9	NT	0/10	SBS	NT wash	Culture
Salmonella spp	0/9	NT	0/9	NT	0/10	SBS	Intestine	Culture
Pasteurella pneumotropica	0/9	NT	0/9	NT	0/10	SBS	NT wash	Culture
CAR Bacillus	0/9	NT	NT	NT	0/10	SBS	Serum	EIA/IFA
Clostridium piliforme	0/9	NT	NT	NT	0/10	SBS	Serum	EIA/IFA
Corynebacterium kutscheri	0/9	NT	0/9	NT	0/10	SBS	NT wash	Culture
Klebsiella pneumoniae	0/9	NT	0/9	NT	0/10	SBS	NT wash	Culture
Streptobacillus moniliformis	0/9	NT	0/9	NT	0/10	SBS	NT wash	Culture
Streptococcus pneumoniae	0/9	NT	0/9	NT	0/10	SBS	NT wash	Culture
<b>Parasites</b>								
Ectoparasites	0/9	NT	0/9	NT	0/10	SBS	Pelage	TT/Visual
							Caecal contents & pooled faeces	
Syphacia spp	0/9	0/9	0/9	0/10	0/10	SBS	Caecal contents & pooled faeces	TT/FF/WM
							Caecal contents & pooled faeces	
Aspicularis spp	0/9	0/9	0/9	0/10	0/10	SBS	Intestine	TT/FF/WM
Giardia spp	0/9	NT	0/9	NT	0/10	SBS	Intestine	Wet Mount
Eimeria spp (intestinal)	0/9	NT	0/9	NT	0/10	SBS	Intestine	Wet Mount
Spiroplasma spp	0/9	NT	0/9	NT	0/10	SBS	Intestine	Wet Mount
Cryptosporidium	0/9	NT	0/9	NT	0/10	SBS	Intestine	Histo
Encephalitozoon cuniculi	0/9	NT	0/9	NT	0/10	SBS	Serum	EIA/IFA
Klossiella spp	0/9	NT	0/9	NT	0/10	SBS	Intestine	Wet Mount
Hymenolepis nana	0/9	NT	0/9	NT	0/10	SBS	Intestine:Faeces	FF/WM
<b>Fungi</b>								
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 positive rack were re-tested. Three recently imported lines testing positive for Norovirus were immediately removed from **Bubble 9** for rederivation. **No lines tested positive to Helicobacter on the re-screen.** Regular monthly re-screens on adjacent lines are planned for early 2010.

**Area 4: Biobubbles 1 & 3**

	Feb-09	May-09	Aug-09	Nov-09	Feb-10	Sample System	Sample Type	Test Type
<b>Viruses</b>								
Mouse Hepatitis Virus	0/10	0/10	0/15	0/20	0/20	SBS	Serum	EIA/IFA
Mouse Parvovirus	0/10	0/10	0/15	0/20	0/20	SBS	Serum	EIA/IFA
Minute Virus of Mice	0/10	0/10	0/15	0/20	0/20	SBS	Serum	EIA/IFA
Mouse Rotavirus	0/10	0/10	0/15	0/20	0/20	SBS	Serum	EIA/IFA
Theiler's Encephalomyelitis virus	0/10	0/10	0/15	0/20	0/20	SBS	Serum	EIA/IFA
Mouse Norovirus	0/10	0/10	0/15	1/19	0/20	SBS	Serum	EIA/IFA
Pneumonia Virus of Mice	0/10	0/10	0/15	0/20	0/20	SBS	Serum	EIA/IFA
Adenovirus Type 1&2	0/10	NT	0/15	NT	0/20	SBS	Serum	EIA/IFA
Ectromelia	0/10	NT	0/15	NT	0/20	SBS	Serum	EIA/IFA
Hantavirus	0/10	NT	NT	NT	0/20	SBS	Serum	EIA/IFA
LCMV	0/10	NT	0/15	NT	0/20	SBS	Serum	EIA/IFA
Murine Cytomegalovirus	0/10	NT	0/15	NT	0/20	SBS	Serum	EIA/IFA
Polyoma Virus	0/10	NT	NT	NT	0/20	SBS	Serum	EIA/IFA
Reovirus Type 3	0/10	NT	0/15	NT	0/20	SBS	Serum	EIA/IFA
Sendai Virus	0/10	NT	0/15	NT	0/20	SBS	Serum	EIA/IFA
<b>Bacteria</b>								
Mycoplasma pulmonis	0/10	0/10	0/15	0/20	0/20	SBS	Serum	EIA/IFA
Helicobacter spp	0/10	1/21	1/21	1/19	1/19	RS&SBS	ooled Faec	PCR
Citrobacter rodentium	0/10	NT	0/15	NT	0/20	SBS	Caecum	Culture
Staphylococcus aureus	1/9	NT	0/15	NT	0/20	SBS	NT wash	Culture
Pseudomonas aeruginosa	0/10	NT	0/15	NT	0/20	SBS	Intestine	Culture
Streptococci (beta haem)	0/10	NT	0/15	NT	0/20	SBS	NT wash	Culture
Salmonella spp	0/10	NT	0/15	NT	0/20	SBS	Intestine	Culture
Pasteurella pneumotropica	1/9	NT	0/15	NT	0/20	SBS	NT wash	Culture
CAR Bacillus	0/10	NT	NT	NT	0/20	SBS	Serum	EIA/IFA
Clostridium piliforme	0/10	NT	NT	NT	0/20	SBS	Serum	EIA/IFA
Corynebacterium kutscheri	0/10	NT	0/15	NT	0/20	SBS	NT wash	Culture
Klebsiella pneumoniae	0/10	NT	0/15	NT	0/20	SBS	NT wash	Culture
Streptobacillus moniliformis	0/10	NT	0/15	NT	0/20	SBS	NT wash	Culture
Streptococcus pneumoniae	0/10	NT	0/15	NT	0/20	SBS	NT wash	Culture
<b>Parasites</b>								
Ectoparasites	0/10	NT	0/15	NT	0/20	SBS	Pelage	TT/Visual
							Caecal contents & pooled faeces	
Syphacia spp	0/10	0/10	0/15	0/20	0/20	SBS		TT/FF/WM
							Caecal contents & pooled faeces	
Aspicularis spp	0/10	0/10	0/15	0/20	0/20	SBS		TT/FF/WM
Giardia spp	0/10	NT	0/15	NT	0/20	SBS	Intestine	Wet Mount
Eimeria spp (intestinal)	0/10	NT	0/15	NT	0/20	SBS	Intestine	Wet Mount
Spiroplasma spp	0/10	NT	0/15	NT	0/20	SBS	Intestine	Wet Mount
Cryptosporidium	0/10	NT	0/15	NT	0/20	SBS	Intestine	Histo
Encephalitozoon cuniculi	0/10	NT	0/15	NT	0/20	SBS	Serum	EIA/IFA
Klossiella spp	0/10	NT	0/15	NT	0/20	SBS	Intestine	Wet Mount
Hymenolepis nana	0/10	NT	0/15	NT	0/20	SBS	Intestine:Faec	FF/WM
<b>Fungi</b>								
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

**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 and February 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 and February 2010 failed to detect norovirus in bubble 3.

**d Staphylococcus ( Coag +ve) -** 1 positive in BB3 in Feb 09

**e.Pasteurella pneumotropica -** 1 positive in BB3 in Feb 09



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