Table 1

Arthropod Order	Number of individuals (%)
Diptera	15,215 (76.3%)
Hemiptera	2,774 (13.9%)
Hymenoptera	933 (4.7%)
Lepidoptera	587 (2.9%)
Coleoptera	399 (2%)
Neuroptera	19 (0.1%)
Thysanoptera	4 (<0.1%)
Psocoptera	2 (<0.1%)
Trichoptera	2 (<0.1%)
Symphyta	1 (<0.1%)
Aranae	1 (<0.1%)

Table 2

	Spring	Summer	Autumn	Winter
Diptera	299	202	223	124
Coleoptera	4	7	6	8
Lepidoptera	4	13	6	10
Hemiptera	8	83	6	31
Hymenoptera	8	22	10	7

	Sample pool identifier	Located from	Number of flies pooled	Bacteria isolated	Internal / External	CFU (per fly per ml)
Musca domestica	A	Café Kitchen	5	*Pantoea* sp.	Internal	$5.4x10^4$
	B	Main Kitchen	6	*Pantoea sp. 1*	Internal	$3x10^6$
				Pantoea sp. 2		$3x10^6$
				Bacillus subtilis		$6x10^7$
	C	Main Kitchen	5	*Enterobacter cloacae*	Internal	$1x10^{10}$
				Pantoea sp.		$1x10^{10}$
				Clostridium sp		10
	D	Restaurant	2	*Clostridium beijerinckii/butyrricum*	Internal	10
	E	Main Kitchen	5	*Clostridium clostridioforme*	Internal	10
	F	Ward	1	*Enterobacter asburiae*	Internal	90
	G	Catering	1	*Citrobacter freundii*	Internal	$2.11x10^3$
	H	Ward	1	*Staphylococcus aureus*	Internal	$4.4x10^2$
	I	Ward	4	*Raoultella terrigena*	Internal	$6.7x10^2$
	J	Cafe / Deli	12	*Eschericia hermannii*	Internal	$4.3x10^3$
				Klebsiella pneumoniae ssp *pneumoniae*	Internal	$1.09x10^4$
				Bacillus subtilis	Internal	$2x10^3$

	Sample pool identifier	Located from	Number of flies pooled	Bacteria isolated	Internal / External	CFU (per fly per ml)
				Streptococci	External	150
					Internal	$2x10^4$
	K	Café Bar	8	*Bacillus lentus*	Internal	$1x10^{10}$
					External	$9.3x10^2$
	L	Mortuary	7	*Bacillus licheniformis*	Internal	10
	M	Ward Kitchens	5	*Bacillus subtilis*	Internal	$4.7x10^2$
					External	$3.3x10^2$
	N	Ward	1	*Bacillus subtilis*	External	$1.9x10^2$
	O	Cooked food store	4	*Bacillus pumilus*	Internal	10
	P	Catering	1	*Staphylococcus aureus*	Internal	50
	Q	Kitchen	6	*Eschericia coli*	Internal	$6.3x10^2$
				Klebsiella oxytoca	Internal	$3.4x10^2$
	R	Café Bar	8	*Enterobacter cloacae*	Internal	$3.1x10^4$
				Klebsiella pneumoniae ssp *pneumoniae 1*	Internal	$8x10^2$
				Klebsiella pneumoniae ssp *pneumoniae 2*	Internal	$3x10^2$

	Sample pool identifier	Located from	Number of flies pooled	Bacteria isolated	Internal / External	CFU (per fly per ml)
Calliphora vicina	A	Main kitchen	4	*Klebsiella oxytoca*	Internal	$2.9x10^7$
	B	Dry food store	4	*Klebsiella pneumoniae* ssp *ozaenae*	Internal	45
				Enterobacter sp	Internal	45
	C	Restaurant	5	*Eschericia coli*	Internal	$1.3x10^3$
				Staphylococcus aureus	Internal	10
	D	Restaurant	6	*Staphylococcus aureus*	External	10
				Staphylococcus hominis	Internal	10
	E	Neonatal ward	3	Negative		
	F	Medical illustration toilet	5	*Citrobacter freundii*	Internal	$1.6x10^7$
				Enterobacter asburiae 1	Internal	$1.7x10^7$
				Enterobacter asburiae 2	External	$4.8x10^6$
				Pantoea sp.	External	$2.8x10^6$
	G	G wing	21	*Leclercia adecarboxylata*	Internal	$7.1x10^3$
	H	Main kitchen	14	*Aerococcus*	Internal	$4.2x10^3$
				Unknown	Internal	$3.5x10^3$
	I	Mortuary	3	*Raoultella terrigena 1*	External	$1.7x10^4$

	Sample pool identifier	Located from	Number of flies pooled	Bacteria isolated	Internal / External	CFU (per fly per ml)
				Raoultella terrigena 2	Internal	$2.9x10^5$
	J	Postgrad kitchen	20	*Staphylococcus aureus*	Internal	$1x10^3$
	K	Maternity ward	6	*B-haemolytic Streptoccocus*	Internal	$3.5x10^3$
				Non-haemolytic Streptococci	Internal	$1.9x10^2$
Musca autumnalis	A	Café kitchen	2	*Eschericia vulneris*	Internal	$2.9x10^2$
	B	Café deli Ch wing (x11), L wing kitchen (x1), G wing restaurant (x2)	14	*Klebsiella pneumoniae ssp pneumoniae*	Internal	$3.1x10^4$
				Enterobacter cloacae	Internal	$9x10^3$
				Raoultella terrigena	Internal	$2.5x10^4$
				Staphylococcus aureus	Internal	$1.1x10^2$
					External	30
				Staphylococcus saprophyticus	Internal	$2.6x10^2$

	Sample pool identifier	Located from	Number of flies pooled	Bacteria isolated	Internal / External	CFU (per fly per ml)
					External	$1x10^2$
Fannia canicularis	A	Coffee Shop 2	2	*Bacillus subtilis*	External	5
	B	G wing kitchen (x2), Regen kitchen (x5), G wing restaurant (x6)	13	*Pantoea sp.*	Internal	$1.3x10^3$
				Enterococcus sp.	Internal	$1x10^2$
					External	80
				Staphylococcus aureus	Internal	$7.9x10^2$
					External	$2.5x10^2$
	C	Ward kitchens D9, F22, E40	15	*Staphylococcus aureus*	External	10
	D	Main kitchens	12	*Micrococcus* sp	External	10
	E	Maternity ward	1	Negative		
Lucilia sericata	A	Main kitchen	11	*Eschericia coli*	Internal	$3.1x10^4$
				Enterobacter cloacae	Internal	$9x10^3$

	Sample pool identifier	Located from	Number of flies pooled	Bacteria isolated	Internal / External	CFU (per fly per ml)
				Klebsiella pneumoniae ssp pneumoniae	Internal	$8x10^4$
				Staphylococcus aureus	Internal	$1.1x10^2$
				Bacillus brevis	Internal	$7.2x10^5$
Psychodidae	A	Restaurant	15	*Bacillus cereus*	Internal	7.3
				Staphylococcus sp.	Internal	3.3
	B	Restaurant	22	Negative		
	C	Neonatal & maternity	20	*Micrococcus* sp	Internal	90
Phoridae	A	Kitchen	5	*Bacillus cereus*	Internal	84
	B	Main Kitchen	80	*Bacillus cereus*	Internal	13.8
					External	0.25
				Bacillus sphaericus	Internal	12.7
					External	1.4
				Clostridium sp.	Internal	0.25
	C	Kitchen sluice	10	Negative		
Sphaeroceridae	A	Neonatal & maternity	30	*Clostridium clostridioforme*	Internal	0.3

	Sample pool identifier	Located from	Number of flies pooled	Bacteria isolated	Internal / External	CFU (per fly per ml)
				Staphylococcus aureus	Internal	1
				Bacillus sphaericus	Internal	3
				Bacillus cereus	Internal	32
Trichiaspsis sp.	A	Café Entrance & Kitchen Stores	12	*Staphylococcus aureus*	Internal	0.8
				Bacillus licehniformis	Internal	0.8
Drosophila sp.	A	Cooked food store, raw meat & raw veg store	6	*Bacillus pumilus*	Internal	$2x10^2$
Dolichopodidae	A	Neonatal intensive care	10	*Pantoea* sp.	Internal	3
	B	Neonatal	13	*Bacillus pumilus*	Internal	1.5
	C	Restaurant	7	Negative		
Hypoponera punctatissima	A	Neonatal	14	*Bacillus megaterium*	External	0.7

	Sample pool identifier	Located from	Number of flies pooled	Bacteria isolated	Internal / External	CFU (per fly per ml)
	B	Kitchen	15	Negative		
	C	Neonatal incubator room	1	Negative		
	D	Kitchen sluice	10	Negative		
Phaonia sp.	A	Cooked food store	1	*Staphylococcus aureus*	Internal	10
Helina sp.	A	Entrance café	5	*Bacillus lentus*	Internal	$1.1x10^2$
Chironomidae	A	Café Kitchen	10	Negative		
Culex pipiens	A	Kitchen	1	Negative		
Pollenia rudis	A	Coffee shop	5	Negative		
Sarcophaga carnaria	A	Mortuary	1	Negative		
Harmonia axyridis	A	Coffee shop	5	Negative		

Table 3

		Bacterial load cfu / fly / ml			
		Min	Max	Median	Std. Dev
M. domestica	Internal	10	$1x10^{10}$	$8.0 x10^{2}$	$3.2x10^{9}$
	External	$1.9x10^{2}$	$9.3x10^{2}$	$3.3 x10^{2}$	$3.9x10^{2}$
C. vicina	Internal	10	$2.9x10^{7}$	$3.5 x10^{3}$	$8.9x10^{6}$
	External	10	$4.8x10^{6}$	$1.4x10^{6}$	$2.3x10^{6}$
M. autumnalis	Internal	$1.1x10^{2}$	$3.1x10^{4}$	$4.6 x10^{3}$	$1.3x10^{4}$
	External	30	$1x10^{2}$	65	50
F. canicularis	Internal	$1x10^{2}$	$1.35x10^{3}$	$7.9 x10^{2}$	$6.2x10^{2}$
	External	5	$2.5x10^{2}$	10	$1x10^{2}$
L. sericata	Internal	$1.1x10^{2}$	$7.2x10^{5}$	$3.1x10^{4}$	$3.1x10^{5}$
	External	<10	<10	<10	<10
Psychodidae	Internal	3	90	7	48
	External	<10	<10	<10	<10
Phoridae	Internal	<1	84	13.3	38
	External	<1	1	<10	<1
Sphaeroceridae	Internal	<1	32	2.0	15
	External	<10	<10	<10	<10
Trichiaspsis sp.	Internal	<10	<10	<10	$2.1x10^{-5}$
	External	<10	<10	<10	<10
Dolichopodidae	Internal	2	3	2	1
	External	<10	<10	<10	<10

Table 4

Enterobacteriaceae													
Bacterial strain (Sample pool)	**Isolated from**	**Antibiotics susceptibility**											**No. of strains isolated/no. of MDR strains**
		AMP 10 µg	**AMC 20/10 µg**	**FEP 30 µg**	**FOX 30 µg**	**IMP 10 µg**	**ETP 10 µg**	**CIP 5 µg**	**LEV 5 µg**	**TOB 10 µg**	**CN 10 µg**	**ATM 30 µg**	**C 30 µg**
Pantoea spp.													5/1
Pantoea sp. 1 (A)	*M. domestica*	S	S	S	S	S	S	S	S	S	S	S	S
Pantoea sp. 2 (B)	*M. domestica*	S	R	S	S	S	S	S	S	S	S	S	S
Pantoea sp. 3 (B)	*M. domestica*	S	S	S	S	S	S	S	S	S	S	S	S
Pantoea sp. 4 (B)	*F. canicularis*	R	R	S	R	S	S	S	S	S	S	S	S
Pantoea sp. 5 (A)	Dolichopodidae	S	S	S	S	S	S	S	S	S	S	R	S
	Isolated from	**Antibiotics susceptibility**											

Bacterial strain (pool)		**AMP 10 µg**	**AMC 20/10 µg**	**FEP 30 µg**	**FOX 30 µg**	**IMP 10 µg**	**ETP 10 µg**	**CIP 5 µg**	**LEV 5 µg**	**TOB 10 µg**	**CN 10 µg**	**ATM 30 µg**	**C 30 µg**	**No. of strains isolated/no. of MDR strains**
Enterobacter spp.														8/0
E. cloaceae (C)	*M. domestica*	NT	NT	S	NT	S	S	S	S	S	S	S	S	
E. asburiae (F)	*M. domestica*	NT	NT	S	NT	S	S	S	S	S	S	S	S	
E. cloaceae (R)	*M. domestica*	NT	NT	S	NT	S	S	S	S	S	S	S	S	
Enterobacter sp.(B)	*C. vicina*	NT	NT	S	NT	S	S	S	S	S	S	S	S	
E. asburiae 1 (F)	*C. vicina*	NT	NT	S	NT	S	S	S	S	S	S	S	S	
E. asburiae 2 (F)	*C. vicina*	NT	NT	S	NT	S	S	S	S	S	S	S	S	
E. cloaceae (B)	*M. autumnalis*	NT	NT	S	NT	I	R	S	S	S	S	S	S	
E. cloaceae (A)	*L. sericata*	NT	NT	S	NT	I	R	S	S	S	S	S	S	
	Isolated from	**Antibiotics susceptibility**												

Bacterial strain (pool)		**AMP 10 µg**	**AMC 20/10 µg**	**FEP 30 µg**	**FOX 30 µg**	**IMP 10 µg**	**ETP 10 µg**	**CIP 5 µg**	**LEV 5 µg**	**TOB 10 µg**	**CN 10 µg**	**ATM 30 µg**	**C 30 µg**	**No. of strains isolated/no. of MDR strains**
Raoultella spp.														4/0
R. terrigena (I)	*M. domestica*	R	S	S	S	S	S	S	S	S	S	S	S	
R. terrigena 1 (I)	*C. vicina*	R	S	S	S	S	S	S	S	S	S	S	S	
R. terrigena 2 (I)	*C. vicina*	R	S	S	S	S	S	S	S	S	S	S	S	
R. terrigena (B)	*M. autumnalis*	R	S	S	S	S	S	S	S	S	S	S	S	
Escherichia spp.														5/0
E. coli (Q)	*M. domestica*	S	S	S	S	S	S	S	S	S	S	S	S	
E. hermannii (J)	*M. domestica*	R	S	S	S	S	S	S	S	S	S	S	S	
E. coli (C)	*C. vicina*	R	S	S	S	S	S	S	S	S	S	S	S	
E. vulneris (A)	*M. autumnalis*	S	S	S	S	S	S	S	S	S	S	S	S	
E. coli (A)	*L. sericata*	S	S	S	S	S	S	S	S	S	S	S	S	
Bacterial strain (pool)	**Isolated from**	**Antibiotics susceptibility**												**No. of strains isolated/no. of MDR strains**
		AMP 10 µg	**AMC**	**FEP 30 µg**	**FOX 30 µg**	**IMP 10 µg**	**ETP**	**CIP 5 µg**	**LEV 5 µg**	**TOB**	**CN**	**ATM**	**C**	

			20/10 µg				**10 µg**			**10 µg**	**10 µg**	**30 µg**	**30 µg**	
Citrobacter spp.														2/0
C. freundii (G)	*M. domestica*	NT	NT	S	NT	S	S	S	S	S	S	S	S	
C. freundii (F)	*C. vicina*	NT	NT	S	NT	S	S	S	S	S	S	S	S	
Klebsiella spp.														7/0
K. pneumoniae spp pneumoniae (J)	*M. domestica*	NT	NT	S	NT	S	S	S	S	S	S	S	S	
K. oxytoca (Q)	*M. domestica*	NT	NT	S	NT	S	S	S	S	S	S	S	S	
K. pneumoniae spp pneumoniae 1 (R)	*M. domestica*	NT	NT	S	NT	S	S	S	S	S	S	S	S	
K. pneumoniae spp pneumoniae 2 (R)	*M. domestica*	NT	NT	S	NT	S	S	S	S	S	S	S	S	
K. oxytoca (A)	*C. vicina*	NT	NT	S	NT	S	S	S	S	S	S	S	S	
K. pneumoniae spp pneumoniae (B)	*M. autumnalis*	NT	NT	S	NT	S	S	S	S	S	S	S	S	
K. pneumoniae spp pneumoniae (A)	*L. sericata*	NT	NT	S	NT	S	S	S	S	S	S	S	S	

Leclercia spp. *L. adecarboxylata* *(G)*	*C. vicina*	S	S	S	S	S	S	S	S	S	S	S	S	1/0
***Staphylococcus* spp.**														
Bacterial strain	**Isolated from**	**Antibiotics susceptibility**												

		P 1 unit	FOX 30 µg	IMP 10 µg	ETP 10 µg	CIP 5 µg	LEV 5 µg	CN 10 µg	TOB 10 µg	TE 30 µg	C 30 µg	DA 2 µg	E 15 µg	No. of strains isolated/no. of MDR strains
Staphylococcus aureus														11/5
S. aureus (H)	*M. domestica*	R	S	S	S	S	S	S	S	S	S	S	S	
S. aureus (P)	*M. domestica*	R	S	S	S	S	S	S	S	R	S	R	S	
S. aureus (J)	*C. vicina*	R	S	S	S	S	S	S	S	S	S	S	S	
S. aureus (B)	*M. autumnalis*	R	S	S	S	S	S	S	S	S	S	R	S	
S. aureus (B)	*F. canicularis*	R	S	S	S	S	S	S	S	S	S	S	S	
S. aureus (A)	*L. sericata*	R	S	S	S	S	S	S	S	R	S	I	S	
S. aureus (A)	Spaheroceridae	R	S	S	S	S	S	S	S	R	S	R	S	
S. aureus (A)	*Trichiaspsis* sp.	S	S	S	S	S	S	S	S	S	S	S	R	
S. aureus (A)	Psychodidae	S	S	S	S	S	S	S	S	S	S	S	S	
S. aureus (A)	*Phaonia* sp.	R	S	S	S	S	S	S	S	S	S	S	S	

Bacterial strain	Isolated from	Antibiotics susceptibility											No. of strains isolated/no. of MDR strains
		P 1 unit	**FOX 30 µg**	**IMP 10 µg**	**ETP 10 µg**	**CIP 5 µg**	**LEV 5 µg**	**CN 10 µg**	**TOB 10 µg**	**TE 30 µg**	**C 30 µg**	**DA 2 µg**	**E 15 µg**	
S. aureus (C)	*F. canicaluris*	NT	S	S	S	S	S	S	S	S	S	S	S	
Staphylococcus saprophyticus														1/0
S. saprophyticus(B)	*M. autumnalis*	NT	S	S	S	S	S	S	S	S	S	S	S	

***Bacillus* spp.**														
Bacterial strain	**Isolated from**	**Antibiotics susceptibility (expressed in mm)**												**No. of strains isolated/no. of MDR strains**
		FEP 30 µg	**FOX 30 µg**	**IMP 10 µg**	**CIP 5 µg**	**LEV 5 µg**	**CN 10 µg**	**S 300 µg**	**TE 30 µg**	**C 30 µg**	**DA 2 µg**	**E 15 µg**	**VA 5 µg**	
Bacillus subtilis														5/1
B. subtilis (B)	*M. domestica*	29	24	25	28,5	27	19,75	22	25	24,25	0	0	0	
B. subtilis (J)	*M. domestica*	31	30,25	43,75	31	30	25	25,75	20,5	28,5	22,25	27	18	
B. subtilis (M)	*M. domestica*	16,5	30	37,25	35,5	32,75	27,5	27,5	32,75	14,25	0	27,75	16,25	
B. subtilis (N)	*M. domestica*	16,75	28,5	36,5	35	33,5	25	30	33,25	25,5	0	23,5	15,25	
B. subtilis (A)	*F. canicularis*	29,75	30	46,75	33,75	32,75	23	23,5	22	26	20	24,5	17	
Bacillus cereus														3/0
B. cereus (A)	Psychodidae	0	10,5	25	25	25	22,5	23,5	21	19	17,75	17	13,25	
B. cereus (A)	Phoridae	8	9	25	27	25,25	22,75	25	25	25,5	19,25	18,25	14	
B. cereus (B)	Phoridae	10,25	10,75	31,75	26,25	25,75	22,25	23,5	25	25,5	18	24	15	

Bacterial strain	Isolated from	Antibiotics susceptibility (expressed in mm)											No. of strains isolated/no. of MDR strains
		FEP 30 µg	**FOX 30 µg**	**IMP 10 µg**	**CIP 5 µg**	**LEV 5 µg**	**CN 10 µg**	**S 300 µg**	**TE 30 µg**	**C 30 µg**	**DA 2 µg**	**E 15 µg**	**VA 5 µg**	
Bacillus ssp.														9/1
B. licheniformis (L)	*M. domestica*	16,75	29,5	36	33,25	31,25	25,25	24,5	32,5	25	0	25,25	15	
B. lentus (K)	*M. domestica*	14,25	27,75	42	35	34,25	28,5	29,25	30,5	20,3	24,5	30	17,75	
B. lentus (A)	Helina sp.	31,75	24,75	23	28	25	25	27,75	24	24,5	0	0	0	
B. pumilus (O)	*M. domestica*	7	20,5	33,5	31	30,5	25,5	24,5	28,25	21,25	13,75	27,5	15,25	
B. pumilus(B)	Dolichopodidae	15	28,5	41	29,5	28,5	28,75	27,5	30	22	23,5	25	18	
B. brevis (A)	*L. sericata*	27,25	32,75	30	27,75	27,25	29,25	30	30	26,5	24,5	30	17,75	
B. sphaericus (B)	Phoridae	22,75	26,5	33,25	29,75	28	25,25	0	30,25	28,25	19,5	28,5	18,5	
B. sphaericus (A)	Sphaeroceridae	18,25	22,5	32	24,5	24	25	0	23,5	25,5	20,5	15	18	
B.megaterium (A)	*H.punctatissima*	27,25	30	35,5	30	28,5	31	32	34,75	29,25	24,25	25,75	19,25	

Gram positive cocci															
Bacterial strain	**Isolated from**	**Antibiotic Susceptibility**													**No. of strains isolated/no. of MDR strains**
		AMP *2 µg °10 µg	**P *°§1 unit**	**FEP °30 µg**	**IMP *°10 µg**	**CIP °*5 µg**	**CN *°10 µg**	**LEV §5 µg**	**TOB °10 µg**	**TE °§30 µg**	**C °§30 µg**	**S *300 µg**	**DA °§2 µg**	**E °§15 µg**	**VA *§5 µg**
Micrococcus sp.° (C)	Psychodidae	S	S	S	S	S	S	NT	S	S	S	NT	S	S	S	5/2
Aerococcus sp° (H)	*C. vicina*	S	S	S	S	S	S	NT	S	S	S	NT	S	S	S	
Enterococcus sp.(B)*	*F. cannicularis*	S	NT	NT	S	R	S	R	NT	NT	NT	S	NT	NT	S	
ß- haemolytic Streptococcus§ (K)	*C. vicina*	NT	R	NT	NT	NT	NT	S	NT	S	S	NT	R	R	S	
Non-haemolytic Streptococcus§(K)	*C. vicina*	NT	R	NT	NT	NT	NT	S	NT	S	S	NT	R	S	S	

Gram positive anaerobes									
Bacterial strain	**Isolated from**	**Antibiotic Susceptibility**							**No. of strains isolated/no. of MDR strains**
		AMP 0.016-256 µg/ml	**AMC 0.016-256 µg/ml**	**P 0.002-32 µg/ml**	**IMP 0.002-32 µg/ml**	**C 0.016-256 µg/ml**	**DA 0.016-256 µg/ml**	**VA 0.016-256 µg/ml**	
Clostridium sp. (C)	*M. domestica*	S	S	R	S	R	R	R	1/1

P = Penicillin G; AMP = Ampicillin; AMC = Amoxicillin-Clavulanic Acid; FEP = Cefepime; FOX = Cefoxitin; IMP = Imipenem; ETP = Ertapenem; CIP = Ciprofloxacin; LEV = Levofloxacin; TOB = Tobramycin; CN = Gentamycin; S = Streptomycin TE = Tetracycline; ATM = Aztreonam; C = Chloramphenicol. DA = Clindamycin; E = Erythromycin VA= Vancomycin. S= Sensitive; R= Resistant; I= Intermediate, NT = Not Tested, because of natural resistance of the bacterial Genus