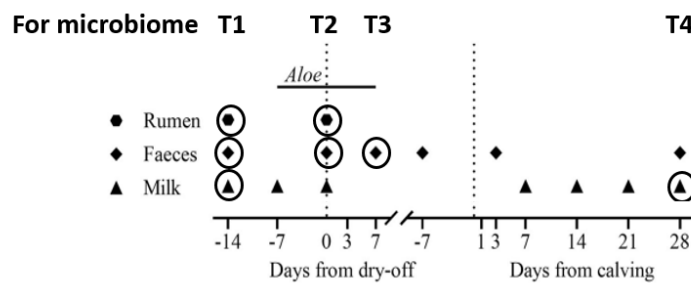


Supplementary File

Supplementary Figure 1 – STUDY DESIGN

Study design modified from Cattaneo et al., 2022, reporting the sampling collection and realized from September 2019 to April 2020. For this study, the timepoints analysed for microbiome are highlighted by the circled symbols. The lyophilized *Aloe arborescens* power was supplemented from -7 (T2) to 7 days from dry-off (T3). For microbiome analysis, rumen samples were collected at -14 (T1 in this study) and 0 (T2 in this study) days from dry-off; fecal samples were collected at -14 (T1), 0 (T2) and 7 (T3) days from dry-off, while milk samples at -14 (T1) days from dry-off and 28 (T4) days from calving. Sampling was not synchronous due to the differing physiological activities of each biological site. At the time of collection, the individual sample was assigned an acronym, and only at the end of the analyses, it was matched with the treatments.



Microbiological Analysis

Supplementary Table 1: Bacterial counts of raw milk samples collected in the three different cow groups during the experimental period (T1, and T4). The data were expressed as means and standard deviation of bacterial number of CFU/mL or MPN/mL transformed to $\log_{10}$.

Bacterial counts	Samples	Timepoints	
		T1	T4
Total mesophilic bacteria	Control	4.0±1.4	5.5±0.7
	Sealant	3.7±1.4	5.3±0.7
	Aloe	4.9±0.8	5.0±1.0
Total psychrotrophic bacteria	Control	2.3±2.0	4.7±1.0
	Sealant	2.7±1.5	4.0±1.4
	Aloe	3.5±1.6	3.1±1.8
Enterobacteriaceae	Control	1.0±0.8	1.4±1.0
	Sealant	0.5±0.0	1.7±0.9
	Aloe	1.2±1.2	1.5±1.1
<i>Escherichia coli</i>	Control	< 1.0	< 1.0
	Sealant	< 1.0	< 1.0
	Aloe	< 1.0	< 1.0
Coagulase positive staphylococci	Control	< 2.0	< 2.0
	Sealant	< 2.0	< 2.0
	Aloe	< 2.0	< 2.0
Lactic acid bacteria	Control	2.1±1.9	4.5±1.0
	Sealant	2.8±1.5	4.5±0.8
	Aloe	3.9±1.5	4.1±1.1
<i>Enterococcus</i> spp.	Control	2.0±1.8	3.5±1.1
	Sealant	2.0±1.4	3.4±1.2
	Aloe	2.4±1.7	3.4±1.3

Supplementary Table 2: Bacterial counts of fecal samples collected in the three different cow groups during the experimental period (T1, T2 and T3). The data were expressed as means and standard deviation of bacterial number of CFU/mL or MPN/mL transformed to log₁₀.

Bacterial counts	Samples	Timepoints		
		T1	T2	T3
Total mesophilic bacteria	Control	7.1±0.6	6.9±0.6	6.9±0.6
	Sealant	6.8±0.7	6.5±1.1	6.9±0.9
	Aloe	6.4±0.6	5.9±1.0	6.7±0.2
Total psychrotrophic bacteria	Control	5.1±1.0	5.4±1.2	5.3±0.6
	Sealant	4.8±1.2	4.9±1.0	5.2±1.7
	Aloe	4.3±0.8	4.5±0.5	5.0±0.5
Enterobacteriaceae	Control	2.4±1.2	2.2±0.9	1.9±0.8
	Sealant	2.8±0.9	2.8±1.9	2.4±1.0
	Aloe	3.0±1.4	3.3±1.2	2.9±1.4
<i>Escherichia coli</i>	Control	2.0±1.1	1.7±0.5	1.8±0.6
	Sealant	1.9±0.0	2.5±1.5	2.1±0.7
	Aloe	3.3±1.6	2.4±1.3	2.6±1.7
Lactic acid bacteria	Control	5.4±0.7	5.5±0.6	5.3±0.7
	Sealant	5.6±1.3	5.5±0.9	4.8±0.6
	Aloe	5.9±0.9	5.6±0.8	5.4±0.8
<i>Enterococcus</i> spp.	Control	4.2±1.4	3.4±1.4	3.3±1.8
	Sealant	3.0±2.3	3.4±1.9	2.9±1.0
	Aloe	4.1±1.0	3.9±1.1	2.5±1.3
No significant differences were determined (P > 0.05).				

Supplementary Table 3. Alpha diversity indices for the three different runs, rumen, rectum and milk.

Sample (N)	Observed	Chao1	ACE	Shannon	Simpson	Fisher	run	treatment	timepoint
10	1438	1872.616	1855.223	10.22383	0.999016	986.976	rumen	aloe	T1
10	1423.1	1936.114	1901.133	10.21639	0.999014	1019.973	rumen	aloe	T2
10	1356.4	1848.12	1804.373	10.12192	0.998928	953.2369	rumen	Control	T1
10	1310.1	1851.713	1779.248	10.0794	0.998901	937.8964	rumen	Control	T2
10	1418.9	1896.684	1873.113	10.1852	0.998975	962.3265	rumen	Sealant	T1
10	1358.9	1827.779	1794.365	10.13305	0.998943	951.3639	rumen	Sealant	T2

Sample (N)	Observed	Chao1	ACE	Shannon	Simpson	Fisher	run	treatment	timepoint
10	1060.7	1453.724	1403.574	9.721672	0.998574	636.9653	rectum	aloe	T1
10	1116.6	1493.269	1446.947	9.821026	0.998687	680.0717	rectum	aloe	T2
9	1184.222	1552.91	1502.674	9.892445	0.998748	685.9752	rectum	aloe	T3
9	1150.667	1548.793	1511.278	9.846091	0.998697	692.1277	rectum	control	T1
9	1224.556	1687.313	1626.02	9.943402	0.998784	752.6338	rectum	control	T2
9	958.1111	1188.577	1170.657	9.616893	0.998502	557.1734	rectum	control	T3
10	1022.3	1303.971	1276.813	9.698526	0.998577	608.7036	rectum	sealant	T1
10	1021	1288.956	1261.81	9.702052	0.998585	598.2269	rectum	sealant	T2
9	1067.111	1384.854	1351.369	9.753223	0.998623	636.5973	rectum	sealant	T3

Sample (N)	Observed	Chao1	ACE	Shannon	Simpson	Fisher	run	treatment	timepoint
36	671.6389	921.7286	913.2068	4.647242	0.960515	126.625	milk	aloe	T1
35	985.3143	1296.336	1265.774	5.277566	0.978102	202.6537	milk	aloe	T4
35	561.3714	754.6192	750.626	4.042905	0.882096	106.8236	milk	control	T1
40	720.525	979.8536	962.6744	4.865553	0.972309	140.6989	milk	control	T4
35	624.4118	851.8002	848.9504	4.545761	0.962644	121.36	milk	sealant	T1
38	781.2895	1041.268	1024.477	4.999089	0.97616	154.7888	milk	sealant	T4

Supplementary Table 4: A comprehensive list of the microbial phyla.

timepoint	treatment	phylum	avg	run
T1	aloe	Actinobacteria	0.008467027	rumen
T1	aloe	Bacteroidetes	0.425236591	rumen
T1	aloe	Chloroflexi	0.002300122	rumen
T1	aloe	Cyanobacteria	0.021326403	rumen
		Deinococcus-		
T1	aloe	Thermus	0.000138844	rumen
T1	aloe	Elusimicrobia	0.002622514	rumen
T1	aloe	Epsilonbacteraeota	0.000755523	rumen
T1	aloe	Euryarchaeota	0.013367084	rumen
T1	aloe	Fibrobacteres	0.011822092	rumen
T1	aloe	Firmicutes	0.352273445	rumen
T1	aloe	Kiritimatiellaeota	0.034497891	rumen
T1	aloe	Lentisphaerae	0.003537368	rumen
T1	aloe	Patescibacteria	0.023272958	rumen
T1	aloe	Planctomycetes	0.004433424	rumen
T1	aloe	Proteobacteria	0.046838587	rumen
T1	aloe	Spirochaetes	0.030968776	rumen
T1	aloe	Synergistetes	0.003003634	rumen
T1	aloe	Tenericutes	0.014900647	rumen
T1	aloe	Verrucomicrobia	0	rumen
T1	aloe	WPS-2	0.000237071	rumen
T1	control	Actinobacteria	0.01067595	rumen
T1	control	Bacteroidetes	0.415392445	rumen
T1	control	Chloroflexi	0.002554212	rumen
T1	control	Cyanobacteria	0.024252713	rumen
		Deinococcus-		
T1	control	Thermus	0.000125657	rumen
T1	control	Elusimicrobia	0.003756298	rumen
T1	control	Epsilonbacteraeota	0.000933565	rumen
T1	control	Euryarchaeota	0.017058922	rumen
T1	control	Fibrobacteres	0.011892426	rumen
T1	control	Firmicutes	0.36419383	rumen
T1	control	Kiritimatiellaeota	0.028298073	rumen
T1	control	Lentisphaerae	0.003177561	rumen
T1	control	Patescibacteria	0.023498314	rumen
T1	control	Planctomycetes	0.003644335	rumen
T1	control	Proteobacteria	0.043060837	rumen
T1	control	Spirochaetes	0.030706022	rumen
T1	control	Synergistetes	0.002676574	rumen
T1	control	Tenericutes	0.013627776	rumen
T1	control	Verrucomicrobia	9.22035E-05	rumen
T1	control	WPS-2	0.000382286	rumen
T1	sealant	Actinobacteria	0.014772748	rumen
T1	sealant	Bacteroidetes	0.401442385	rumen
T1	sealant	Chloroflexi	0.002318961	rumen

T1	sealant	Cyanobacteria	0.020333765	rumen
		Deinococcus-		
T1	sealant	Thermus	8.9799E-05	rumen
T1	sealant	Elusimicrobia	0.002936527	rumen
T1	sealant	Epsilonbacteraeota	0.000677539	rumen
T1	sealant	Euryarchaeota	0.018597603	rumen
T1	sealant	Fibrobacteres	0.009782035	rumen
T1	sealant	Firmicutes	0.380437009	rumen
T1	sealant	Kiritimatiellaeota	0.025612006	rumen
T1	sealant	Lentisphaerae	0.003033997	rumen
T1	sealant	Patescibacteria	0.028326228	rumen
T1	sealant	Planctomycetes	0.004794065	rumen
T1	sealant	Proteobacteria	0.037275364	rumen
T1	sealant	Spirochaetes	0.028229692	rumen
T1	sealant	Synergistetes	0.003037931	rumen
T1	sealant	Tenericutes	0.018036356	rumen
T1	sealant	Verrucomicrobia	0	rumen
T1	sealant	WPS-2	0.000265988	rumen
T2	aloe	Actinobacteria	0.005000871	rumen
T2	aloe	Bacteroidetes	0.435101328	rumen
T2	aloe	Chloroflexi	0.002340948	rumen
T2	aloe	Cyanobacteria	0.022095814	rumen
		Deinococcus-		
T2	aloe	Thermus	1.70681E-05	rumen
T2	aloe	Elusimicrobia	0.003423882	rumen
T2	aloe	Epsilonbacteraeota	0.000723006	rumen
T2	aloe	Euryarchaeota	0.012621864	rumen
T2	aloe	Fibrobacteres	0.012343248	rumen
T2	aloe	Firmicutes	0.341236092	rumen
T2	aloe	Kiritimatiellaeota	0.037856464	rumen
T2	aloe	Lentisphaerae	0.004590903	rumen
T2	aloe	Patescibacteria	0.022780416	rumen
T2	aloe	Planctomycetes	0.004712199	rumen
T2	aloe	Proteobacteria	0.045333924	rumen
T2	aloe	Spirochaetes	0.032512072	rumen
T2	aloe	Synergistetes	0.002600867	rumen
T2	aloe	Tenericutes	0.014396254	rumen
T2	aloe	Verrucomicrobia	0	rumen
T2	aloe	WPS-2	0.000312783	rumen
T2	control	Actinobacteria	0.009437593	rumen
T2	control	Bacteroidetes	0.426276329	rumen
T2	control	Chloroflexi	0.002790115	rumen
T2	control	Cyanobacteria	0.022440066	rumen
		Deinococcus-		
T2	control	Thermus	5.18089E-05	rumen
T2	control	Elusimicrobia	0.003150517	rumen
T2	control	Epsilonbacteraeota	0.000746442	rumen
T2	control	Euryarchaeota	0.014497371	rumen
T2	control	Fibrobacteres	0.010616989	rumen
T2	control	Firmicutes	0.363177306	rumen
T2	control	Kiritimatiellaeota	0.028366626	rumen
T2	control	Lentisphaerae	0.003514533	rumen
T2	control	Patescibacteria	0.024257716	rumen
T2	control	Planctomycetes	0.004464177	rumen

T2	control	Proteobacteria	0.037736483	rumen
T2	control	Spirochaetes	0.031407829	rumen
T2	control	Synergistetes	0.002806096	rumen
T2	control	Tenericutes	0.013973633	rumen
T2	control	Verrucomicrobia	0	rumen
T2	control	WPS-2	0.00028837	rumen
T2	sealant	Actinobacteria	0.007960513	rumen
T2	sealant	Bacteroidetes	0.42244648	rumen
T2	sealant	Chloroflexi	0.002774964	rumen
T2	sealant	Cyanobacteria	0.020933772	rumen
		Deinococcus-		
T2	sealant	Thermus	3.34672E-05	rumen
T2	sealant	Elusimicrobia	0.00325223	rumen
T2	sealant	Epsilonbacteraeota	0.00058898	rumen
T2	sealant	Euryarchaeota	0.013137025	rumen
T2	sealant	Fibrobacteres	0.010844667	rumen
T2	sealant	Firmicutes	0.369035976	rumen
T2	sealant	Kiritimatiellaeota	0.029178256	rumen
T2	sealant	Lentisphaerae	0.002992145	rumen
T2	sealant	Patescibacteria	0.025280234	rumen
T2	sealant	Planctomycetes	0.004792317	rumen
T2	sealant	Proteobacteria	0.040703378	rumen
T2	sealant	Spirochaetes	0.027830744	rumen
T2	sealant	Synergistetes	0.002710966	rumen
T2	sealant	Tenericutes	0.015152355	rumen
T2	sealant	Verrucomicrobia	4.15906E-05	rumen
T2	sealant	WPS-2	0.00030994	rumen
T1	aloe	Actinobacteria	0.002449516	rectum
T1	aloe	Bacteroidetes	0.250855226	rectum
T1	aloe	Chloroflexi	2.45009E-05	rectum
T1	aloe	Cyanobacteria	0.008165183	rectum
T1	aloe	Elusimicrobia	0.001140271	rectum
T1	aloe	Epsilonbacteraeota	0.001315114	rectum
T1	aloe	Euryarchaeota	0.009505006	rectum
T1	aloe		0.000578648	rectum
T1	aloe	Fibrobacteres	0.000560683	rectum
T1	aloe	Firmicutes	0.637417498	rectum
T1	aloe		3.80031E-05	rectum
T1	aloe	Kiritimatiellaeota	0.008300795	rectum
T1	aloe	Lentisphaerae	0.002775553	rectum
T1	aloe	Patescibacteria	0.00710813	rectum
T1	aloe	Planctomycetes	0.00077187	rectum
T1	aloe	Proteobacteria	0.030775495	rectum
T1	aloe	Spirochaetes	0.014104108	rectum
T1	aloe	Synergistetes	0.000213986	rectum
T1	aloe	Tenericutes	0.01621306	rectum
T1	aloe	Verrucomicrobia	0.007687353	rectum
T1	control	Actinobacteria	0.005186882	rectum
T1	control	Bacteroidetes	0.249066497	rectum
T1	control	Chloroflexi	0.000157828	rectum
T1	control	Cyanobacteria	0.01106635	rectum
T1	control	Elusimicrobia	0.000680407	rectum
T1	control	Epsilonbacteraeota	0.00026419	rectum
T1	control	Euryarchaeota	0.012468313	rectum

T1	control		0.000571641	rectum
T1	control	Fibrobacteres	0.000415777	rectum
T1	control	Firmicutes	0.639787878	rectum
T1	control		0	rectum
T1	control	Kiritimatiellaeota	0.006672844	rectum
T1	control	Lentisphaerae	0.002962071	rectum
T1	control	Patescibacteria	0.010386373	rectum
T1	control	Planctomycetes	0.000964042	rectum
T1	control	Proteobacteria	0.019234767	rectum
T1	control	Spirochaetes	0.011345775	rectum
T1	control	Synergistetes	0.00066984	rectum
T1	control	Tenericutes	0.018534074	rectum
T1	control	Verrucomicrobia	0.00956445	rectum
T1	sealant	Actinobacteria	0.008348109	rectum
T1	sealant	Bacteroidetes	0.247374038	rectum
T1	sealant	Chloroflexi	6.12595E-05	rectum
T1	sealant	Cyanobacteria	0.010547616	rectum
T1	sealant	Elusimicrobia	0.000535493	rectum
T1	sealant	Epsilonbacteraeota	0.000712834	rectum
T1	sealant	Euryarchaeota	0.01170179	rectum
T1	sealant		0.000353068	rectum
T1	sealant	Fibrobacteres	0.000718051	rectum
T1	sealant	Firmicutes	0.640560551	rectum
T1	sealant		4.61925E-05	rectum
T1	sealant	Kiritimatiellaeota	0.006834594	rectum
T1	sealant	Lentisphaerae	0.002500047	rectum
T1	sealant	Patescibacteria	0.007400896	rectum
T1	sealant	Planctomycetes	0.000743943	rectum
T1	sealant	Proteobacteria	0.023014114	rectum
T1	sealant	Spirochaetes	0.013013253	rectum
T1	sealant	Synergistetes	0.000324565	rectum
T1	sealant	Tenericutes	0.016898632	rectum
T1	sealant	Verrucomicrobia	0.008310952	rectum
T2	aloe	Actinobacteria	0.002478985	rectum
T2	aloe	Bacteroidetes	0.237161066	rectum
T2	aloe	Chloroflexi	8.5156E-05	rectum
T2	aloe	Cyanobacteria	0.011181513	rectum
T2	aloe	Elusimicrobia	0.001008291	rectum
T2	aloe	Epsilonbacteraeota	0.000441388	rectum
T2	aloe	Euryarchaeota	0.01022291	rectum
T2	aloe		0.00040825	rectum
T2	aloe	Fibrobacteres	0.000800704	rectum
T2	aloe	Firmicutes	0.656612675	rectum
T2	aloe		0	rectum
T2	aloe	Kiritimatiellaeota	0.006872542	rectum
T2	aloe	Lentisphaerae	0.002940769	rectum
T2	aloe	Patescibacteria	0.007493205	rectum
T2	aloe	Planctomycetes	0.00053944	rectum
T2	aloe	Proteobacteria	0.022610756	rectum
T2	aloe	Spirochaetes	0.011812528	rectum
T2	aloe	Synergistetes	0.000274401	rectum
T2	aloe	Tenericutes	0.017089456	rectum
T2	aloe	Verrucomicrobia	0.009965964	rectum
T2	control	Actinobacteria	0.009649277	rectum

T2	control	Bacteroidetes	0.242578994	rectum
T2	control	Chloroflexi	6.4073E-05	rectum
T2	control	Cyanobacteria	0.008215277	rectum
T2	control	Elusimicrobia	0.000336221	rectum
T2	control	Epsilonbacteraeota	0.001207036	rectum
T2	control	Euryarchaeota	0.012056153	rectum
T2	control		0.000347242	rectum
T2	control	Fibrobacteres	0.000572403	rectum
T2	control	Firmicutes	0.650540612	rectum
T2	control		3.40839E-05	rectum
T2	control	Kiritimatiellaeota	0.005212234	rectum
T2	control	Lentisphaerae	0.002995127	rectum
T2	control	Patescibacteria	0.008730247	rectum
T2	control	Planctomycetes	0.000918221	rectum
T2	control	Proteobacteria	0.0176492	rectum
T2	control	Spirochaetes	0.011204966	rectum
T2	control	Synergistetes	0.000608079	rectum
T2	control	Tenericutes	0.017589101	rectum
T2	control	Verrucomicrobia	0.009491454	rectum
T2	sealant	Actinobacteria	0.006768718	rectum
T2	sealant	Bacteroidetes	0.250848135	rectum
T2	sealant	Chloroflexi	0	rectum
T2	sealant	Cyanobacteria	0.013079924	rectum
T2	sealant	Elusimicrobia	0.00084706	rectum
T2	sealant	Epsilonbacteraeota	0.000510079	rectum
T2	sealant	Euryarchaeota	0.009927602	rectum
T2	sealant		0.000570904	rectum
T2	sealant	Fibrobacteres	0.000693568	rectum
T2	sealant	Firmicutes	0.642408724	rectum
T2	sealant		2.13034E-05	rectum
T2	sealant	Kiritimatiellaeota	0.004488345	rectum
T2	sealant	Lentisphaerae	0.004418232	rectum
T2	sealant	Patescibacteria	0.008480893	rectum
T2	sealant	Planctomycetes	0.00089327	rectum
T2	sealant	Proteobacteria	0.017970937	rectum
T2	sealant	Spirochaetes	0.011404891	rectum
T2	sealant	Synergistetes	0.000296789	rectum
T2	sealant	Tenericutes	0.016095472	rectum
T2	sealant	Verrucomicrobia	0.010275154	rectum
T3	aloe	Actinobacteria	0.002724134	rectum
T3	aloe	Bacteroidetes	0.22280131	rectum
T3	aloe	Chloroflexi	0.000145227	rectum
T3	aloe	Cyanobacteria	0.015589538	rectum
T3	aloe	Elusimicrobia	0.001438693	rectum
T3	aloe	Epsilonbacteraeota	0.002108048	rectum
T3	aloe	Euryarchaeota	0.009994819	rectum
T3	aloe		0.000950947	rectum
T3	aloe	Fibrobacteres	0.000348124	rectum
T3	aloe	Firmicutes	0.655911378	rectum
T3	aloe		0	rectum
T3	aloe	Kiritimatiellaeota	0.012186032	rectum
T3	aloe	Lentisphaerae	0.010466256	rectum
T3	aloe	Patescibacteria	0.008387764	rectum
T3	aloe	Planctomycetes	0.00099885	rectum

T3	aloe	Proteobacteria	0.018296045	rectum
T3	aloe	Spirochaetes	0.008772077	rectum
T3	aloe	Synergistetes	0.000294581	rectum
T3	aloe	Tenericutes	0.01720895	rectum
T3	aloe	Verrucomicrobia	0.011377225	rectum
T3	control	Actinobacteria	0.007880744	rectum
T3	control	Bacteroidetes	0.241545871	rectum
T3	control	Chloroflexi	0.000302427	rectum
T3	control	Cyanobacteria	0.018006056	rectum
T3	control	Elusimicrobia	0.001497426	rectum
T3	control	Epsilonbacteraeota	0.002547548	rectum
T3	control	Euryarchaeota	0.014415511	rectum
T3	control		0.000458923	rectum
T3	control	Fibrobacteres	0.000454843	rectum
T3	control	Firmicutes	0.634987184	rectum
T3	control		5.55045E-05	rectum
T3	control	Kiritimatiellaeota	0.011904407	rectum
T3	control	Lentisphaerae	0.008936296	rectum
T3	control	Patescibacteria	0.013629695	rectum
T3	control	Planctomycetes	0.001390727	rectum
T3	control	Proteobacteria	0.013771818	rectum
T3	control	Spirochaetes	0.003455546	rectum
T3	control	Synergistetes	0.000714232	rectum
T3	control	Tenericutes	0.011518061	rectum
T3	control	Verrucomicrobia	0.01252718	rectum
T3	sealant	Actinobacteria	0.01424987	rectum
T3	sealant	Bacteroidetes	0.22356846	rectum
T3	sealant	Chloroflexi	0.000194371	rectum
T3	sealant	Cyanobacteria	0.019966458	rectum
T3	sealant	Elusimicrobia	0.001527567	rectum
T3	sealant	Epsilonbacteraeota	0.001884131	rectum
T3	sealant	Euryarchaeota	0.011412435	rectum
T3	sealant		0.000409477	rectum
T3	sealant	Fibrobacteres	0.000789372	rectum
T3	sealant	Firmicutes	0.64239323	rectum
T3	sealant		4.9132E-05	rectum
T3	sealant	Kiritimatiellaeota	0.011177404	rectum
T3	sealant	Lentisphaerae	0.007644352	rectum
T3	sealant	Patescibacteria	0.012858959	rectum
T3	sealant	Planctomycetes	0.001284414	rectum
T3	sealant	Proteobacteria	0.018793852	rectum
T3	sealant	Spirochaetes	0.005987294	rectum
T3	sealant	Synergistetes	0.000752905	rectum
T3	sealant	Tenericutes	0.014303284	rectum
T3	sealant	Verrucomicrobia	0.010753032	rectum
T1	aloe		0.000821698	milk
T1	aloe	Actinobacteria	0.185375965	milk
T1	aloe		0.00021052	milk
T1	aloe	Bacteroidetes	0.062218061	milk
T1	aloe	Chloroflexi	0.002228156	milk
T1	aloe	Cyanobacteria	0.004339065	milk
T1	aloe		0	milk
T1	aloe	Deinococcus- Thermus	0.001998997	milk

T1	aloe		0	milk
T1	aloe	Elusimicrobia	0	milk
T1	aloe	Epsilonbacteraeota	0.000971137	milk
T1	aloe	Euryarchaeota	0.002760675	milk
T1	aloe	Fibrobacteres	0.000379026	milk
T1	aloe	Firmicutes	0.42897408	milk
T1	aloe		0.000693916	milk
T1	aloe		0.000423321	milk
T1	aloe		0	milk
T1	aloe	Kiritimatiellaeota	0.000398294	milk
T1	aloe	Lentisphaerae	0.000126765	milk
T1	aloe	Patescibacteria	0.004718693	milk
T1	aloe	Planctomycetes	0.001829772	milk
T1	aloe	Proteobacteria	0.297580388	milk
T1	aloe	Spirochaetes	0.000618589	milk
T1	aloe	Synergistetes	0.000452582	milk
T1	aloe	Tenericutes	0.00130362	milk
T1	aloe	Verrucomicrobia	0.001576681	milk
T1	aloe	WPS-2	0	milk
T1	control		0.000446095	milk
T1	control	Actinobacteria	0.179085236	milk
T1	control		0.000126112	milk
T1	control	Bacteroidetes	0.07191904	milk
T1	control	Chloroflexi	0.002636049	milk
T1	control	Cyanobacteria	0.007856289	milk
T1	control		6.71192E-05	milk
T1	control	Deinococcus- Thermus	0.001974023	milk
T1	control		0	milk
T1	control	Elusimicrobia	1.33555E-05	milk
T1	control	Epsilonbacteraeota	0.000774798	milk
T1	control	Euryarchaeota	0.003165354	milk
T1	control	Fibrobacteres	4.83427E-05	milk
T1	control	Firmicutes	0.375553096	milk
T1	control		0.000400194	milk
T1	control		0.001125108	milk
T1	control		0.001338816	milk
T1	control	Kiritimatiellaeota	0.000492014	milk
T1	control	Lentisphaerae	5.54145E-05	milk
T1	control	Patescibacteria	0.002769055	milk
T1	control	Planctomycetes	0.001152184	milk
T1	control	Proteobacteria	0.333134086	milk
T1	control	Spirochaetes	0.000329376	milk
T1	control	Synergistetes	0.000490466	milk
T1	control	Tenericutes	0.001088784	milk
T1	control	Verrucomicrobia	0.013924594	milk
T1	control	WPS-2	3.49974E-05	milk
T1	sealant		0.000653488	milk
T1	sealant	Actinobacteria	0.224884332	milk
T1	sealant		5.34156E-05	milk
T1	sealant	Bacteroidetes	0.049022481	milk
T1	sealant	Chloroflexi	0.001752851	milk
T1	sealant	Cyanobacteria	0.004547547	milk
T1	sealant		0	milk

T1	sealant	Deinococcus- Thermus	0.002178567	milk
T1	sealant		0	milk
T1	sealant	Elusimicrobia	5.36125E-06	milk
T1	sealant	Epsilonbacteraeota	0.001332145	milk
T1	sealant	Euryarchaeota	0.00311725	milk
T1	sealant	Fibrobacteres	0.000110142	milk
T1	sealant	Firmicutes	0.346645932	milk
T1	sealant		0.000699874	milk
T1	sealant		0.000412955	milk
T1	sealant		0	milk
T1	sealant	Kiritimatiellaeota	0.000364684	milk
T1	sealant	Lentisphaerae	1.18194E-05	milk
T1	sealant	Patescibacteria	0.003825013	milk
T1	sealant	Planctomycetes	0.000998186	milk
T1	sealant	Proteobacteria	0.353750609	milk
T1	sealant	Spirochaetes	0.000920999	milk
T1	sealant	Synergistetes	0.000456644	milk
T1	sealant	Tenericutes	0.00158609	milk
T1	sealant	Verrucomicrobia	0.002668274	milk
T1	sealant	WPS-2	1.34031E-06	milk
T4	aloe		0.003987362	milk
T4	aloe	Actinobacteria	0.196002545	milk
T4	aloe		0.000106344	milk
T4	aloe	Bacteroidetes	0.085369632	milk
T4	aloe	Chloroflexi	0.003223165	milk
T4	aloe	Cyanobacteria	0.005189138	milk
T4	aloe		0	milk
T4	aloe	Deinococcus- Thermus	0.00066034	milk
T4	aloe		0.000351988	milk
T4	aloe	Elusimicrobia	6.66426E-05	milk
T4	aloe	Epsilonbacteraeota	0.001035924	milk
T4	aloe	Euryarchaeota	0.001814889	milk
T4	aloe	Fibrobacteres	0.000370423	milk
T4	aloe	Firmicutes	0.413747835	milk
T4	aloe		0.002002999	milk
T4	aloe		1.63505E-05	milk
T4	aloe		0	milk
T4	aloe	Kiritimatiellaeota	0.000658665	milk
T4	aloe	Lentisphaerae	3.87156E-05	milk
T4	aloe	Patescibacteria	0.005955141	milk
T4	aloe	Planctomycetes	0.004724036	milk
T4	aloe	Proteobacteria	0.268707785	milk
T4	aloe	Spirochaetes	0.001026916	milk
T4	aloe	Synergistetes	0.000691488	milk
T4	aloe	Tenericutes	0.002288474	milk
T4	aloe	Verrucomicrobia	0.001963201	milk
T4	aloe	WPS-2	0	milk
T4	control		0.001018912	milk
T4	control	Actinobacteria	0.223916697	milk
T4	control		2.00501E-05	milk
T4	control	Bacteroidetes	0.074035024	milk
T4	control	Chloroflexi	0.000986612	milk

T4	control	Cyanobacteria	0.015369199	milk
T4	control		0.000104818	milk
		Deinococcus-		
T4	control	Thermus	0.001753903	milk
T4	control		6.35512E-05	milk
T4	control	Elusimicrobia	3.70028E-06	milk
T4	control	Epsilonbacteraeota	0.000868142	milk
T4	control	Euryarchaeota	0.004620315	milk
T4	control	Fibrobacteres	0.000167029	milk
T4	control	Firmicutes	0.379649296	milk
T4	control		0.000682454	milk
T4	control		1.38781E-05	milk
T4	control		0.000848223	milk
T4	control	Kiritimatiellaeota	0.000388764	milk
T4	control	Lentisphaerae	5.01354E-05	milk
T4	control	Patescibacteria	0.003572954	milk
T4	control	Planctomycetes	0.00121039	milk
T4	control	Proteobacteria	0.276584805	milk
T4	control	Spirochaetes	0.001393359	milk
T4	control	Synergistetes	0.000618098	milk
T4	control	Tenericutes	0.00168916	milk
T4	control	Verrucomicrobia	0.010369702	milk
T4	control	WPS-2	8.27952E-07	milk
T4	sealant		0.00085198	milk
T4	sealant	Actinobacteria	0.194986199	milk
T4	sealant		3.71013E-05	milk
T4	sealant	Bacteroidetes	0.083958219	milk
T4	sealant	Chloroflexi	0.001063249	milk
T4	sealant	Cyanobacteria	0.006165891	milk
T4	sealant		0	milk
		Deinococcus-		
T4	sealant	Thermus	0.001621154	milk
T4	sealant		0.000149201	milk
T4	sealant	Elusimicrobia	6.24866E-06	milk
T4	sealant	Epsilonbacteraeota	0.000747245	milk
T4	sealant	Euryarchaeota	0.003371186	milk
T4	sealant	Fibrobacteres	0.000117599	milk
T4	sealant	Firmicutes	0.407498718	milk
T4	sealant		0.00135103	milk
T4	sealant		0.000115431	milk
T4	sealant		0	milk
T4	sealant	Kiritimatiellaeota	0.000588058	milk
T4	sealant	Lentisphaerae	4.35343E-05	milk
T4	sealant	Patescibacteria	0.003258249	milk
T4	sealant	Planctomycetes	0.002204524	milk
T4	sealant	Proteobacteria	0.273888287	milk
T4	sealant	Spirochaetes	0.001939869	milk
T4	sealant	Synergistetes	0.000793944	milk
T4	sealant	Tenericutes	0.001541594	milk
T4	sealant	Verrucomicrobia	0.013701487	milk
T4	sealant	WPS-2	0	milk