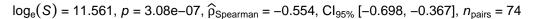
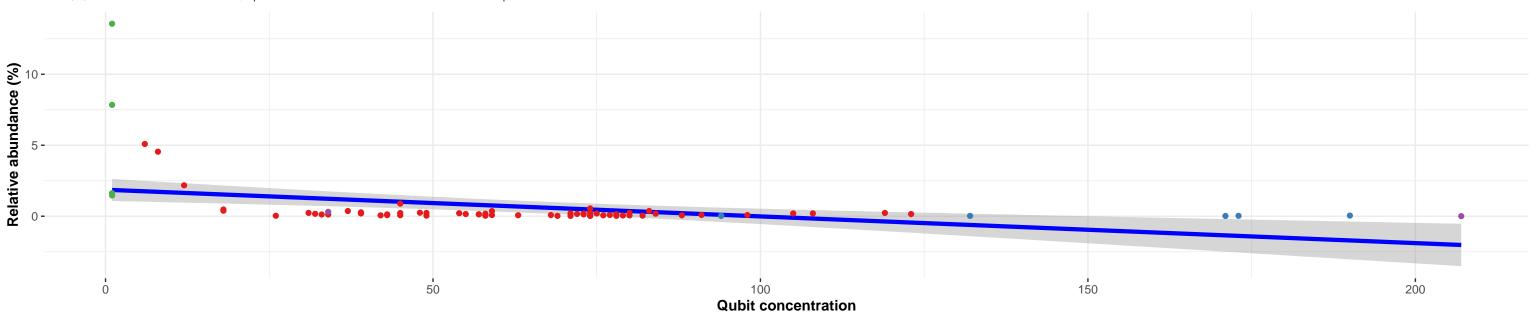


**Qubit concentration** 

### **Correlation with all samples**



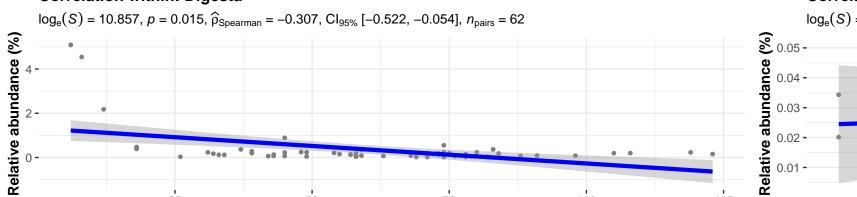


Sample\_type •

100

#### Correlation within: Digesta

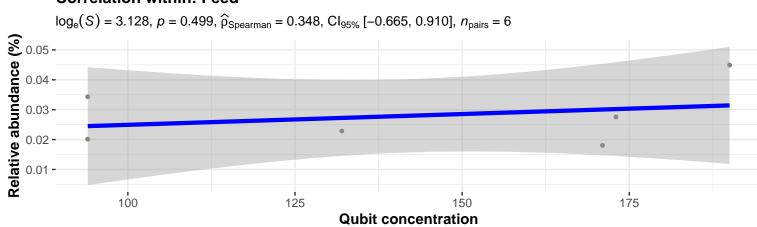
25

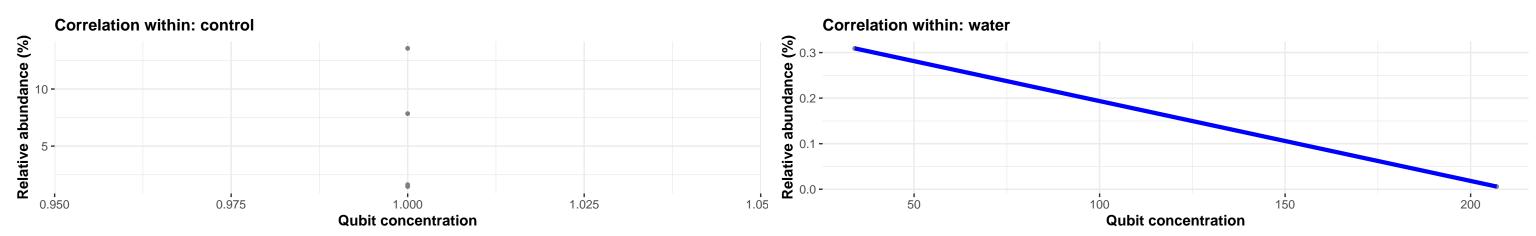


**Qubit concentration** 

#### Correlation within: Feed

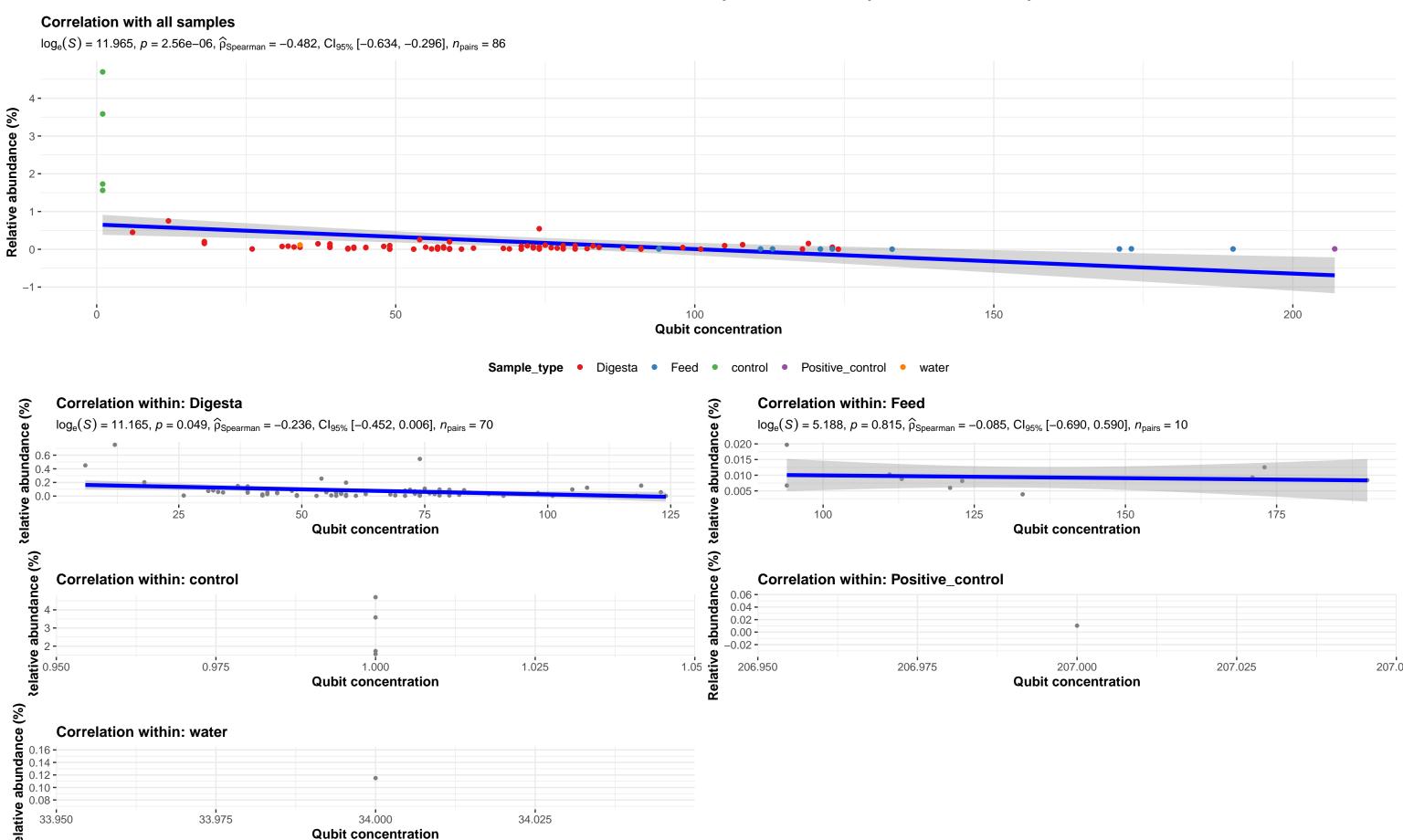
Digesta • Feed • control • water



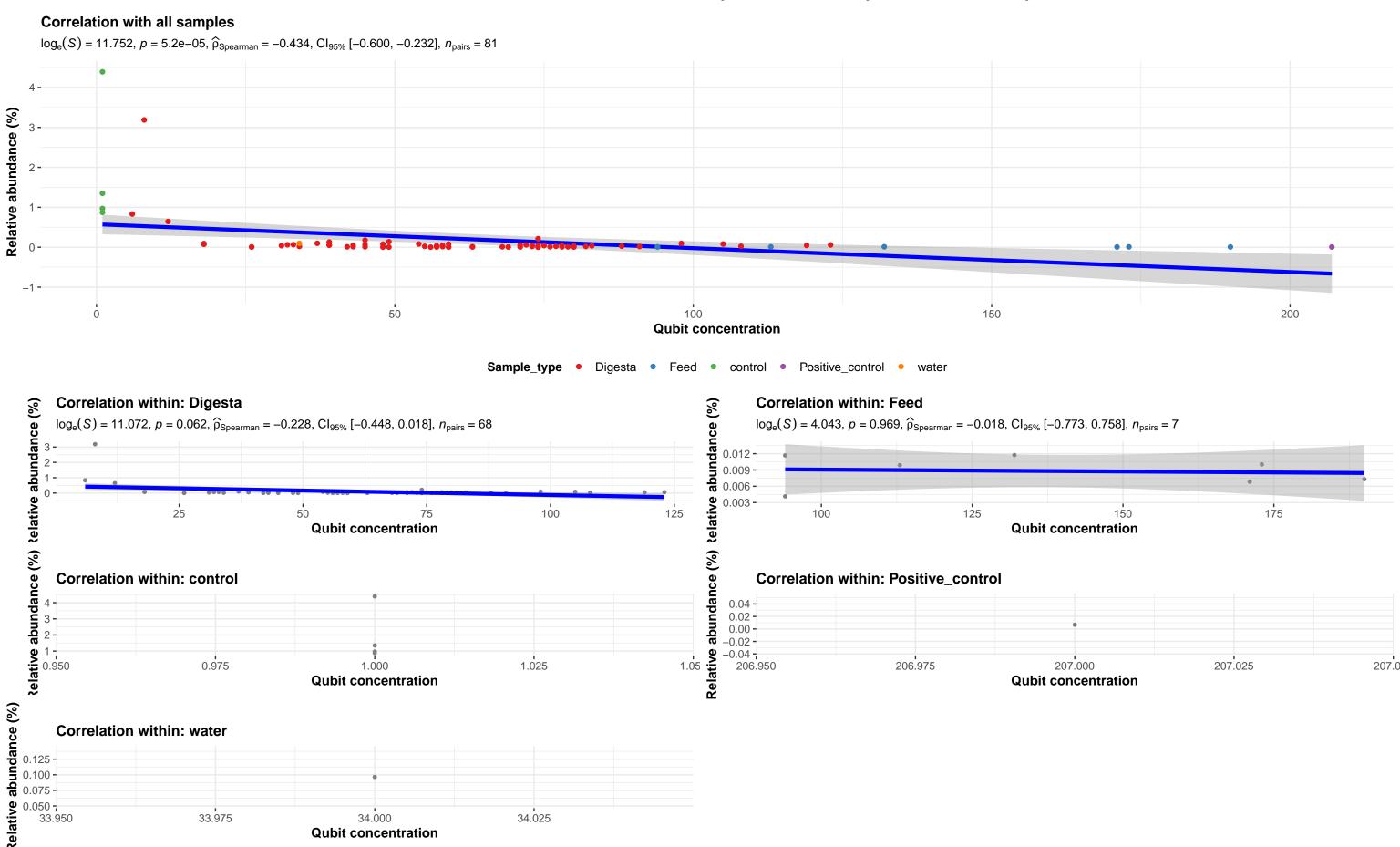


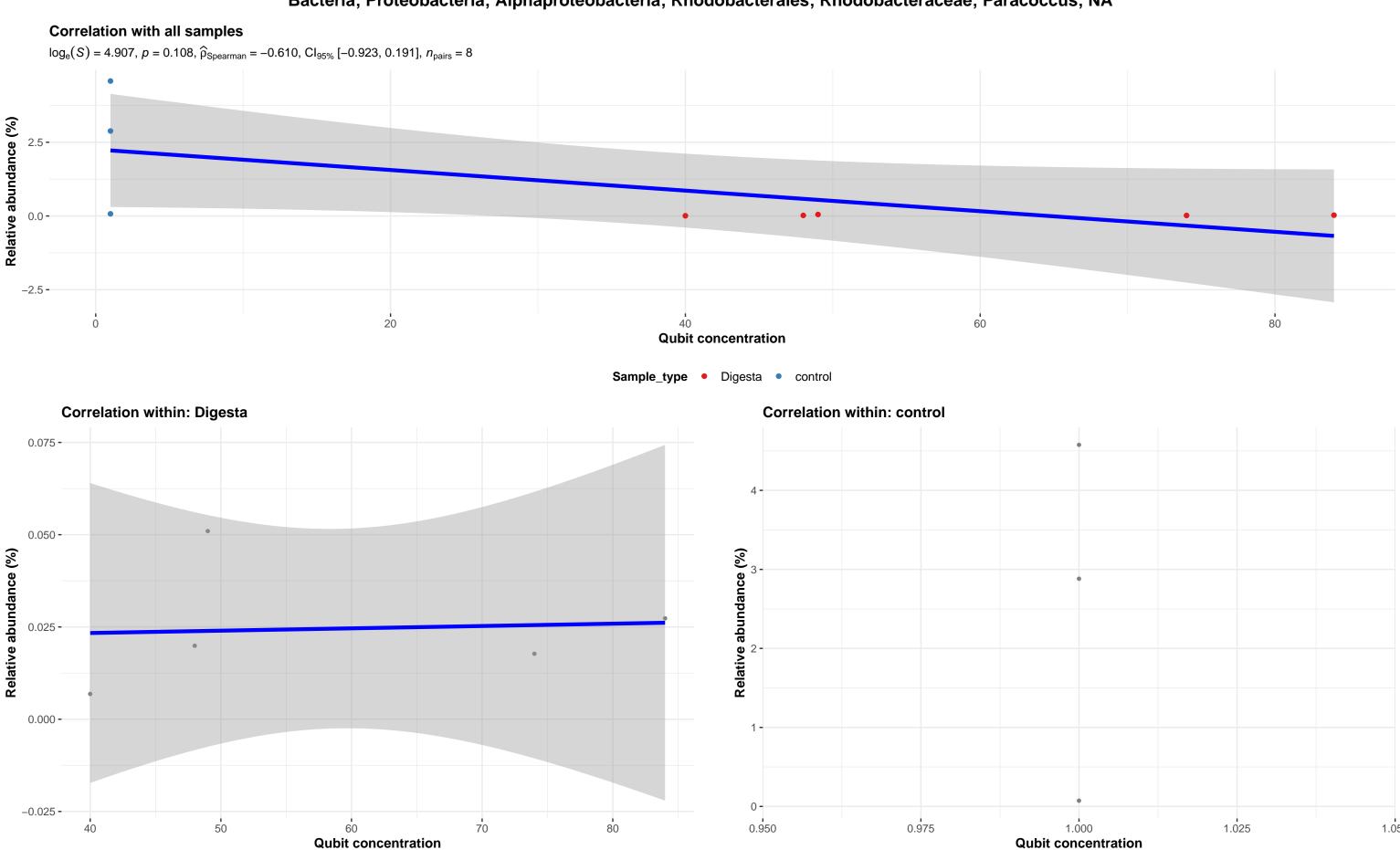
125

# Bacteria; Actinobacteriota; Actinobacteria; Actinomycetales; Actinomycetaceae; Actinomyces; NA



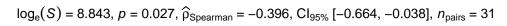
# Bacteria; Actinobacteriota; Actinobacteria; Actinomycetales; Actinomycetaceae; Actinomyces; NA

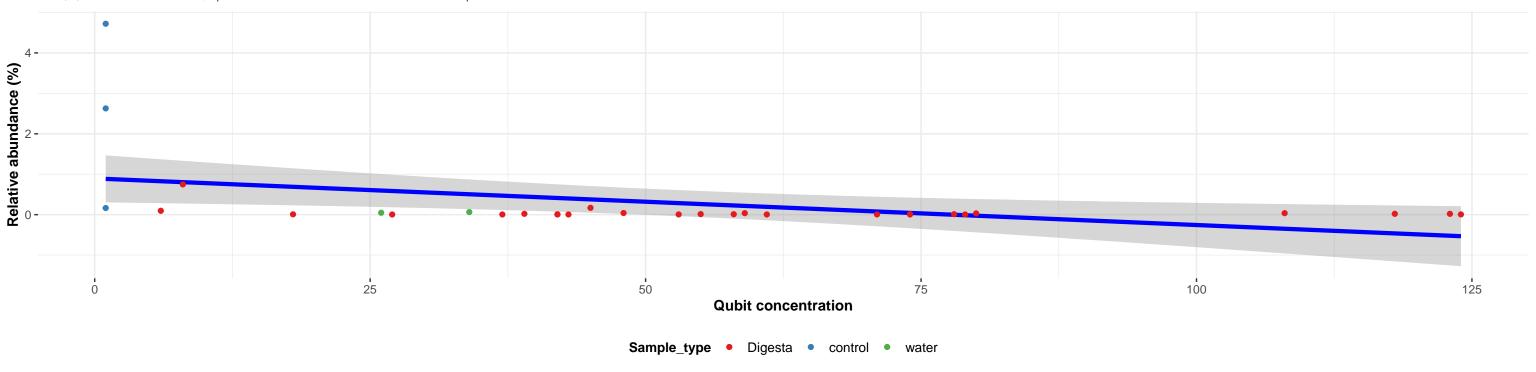


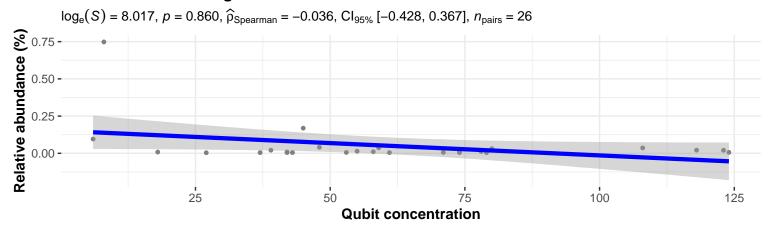


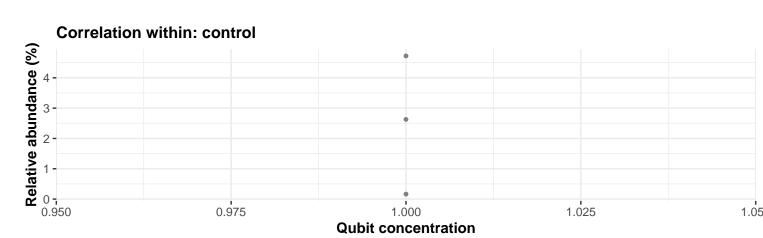
# Bacteria; Actinobacteriota; Actinobacteria; Micrococcales; Micrococcaceae; Micrococcus; NA

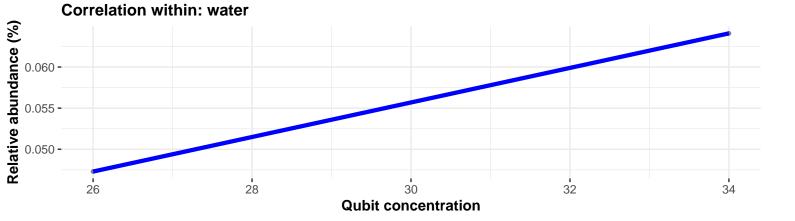
#### **Correlation with all samples**





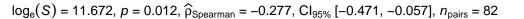


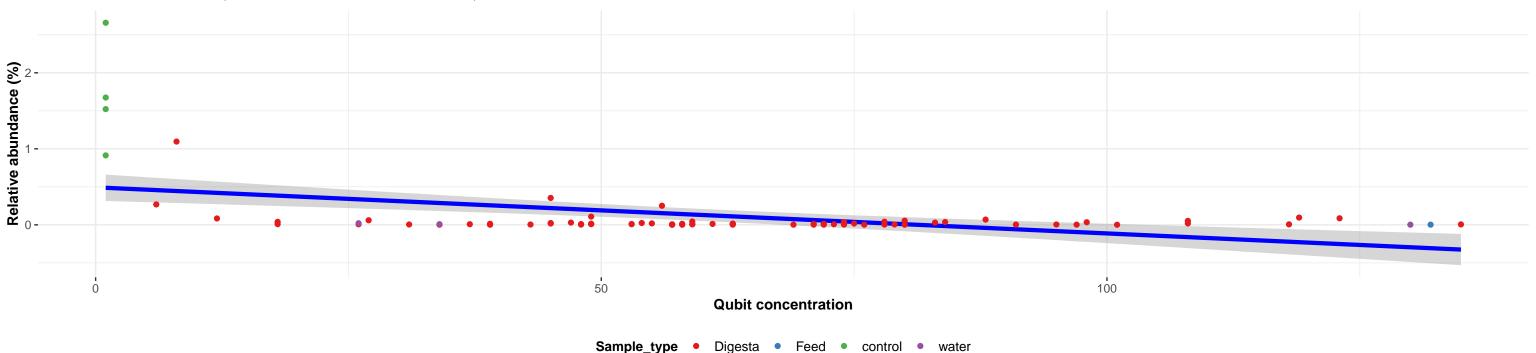


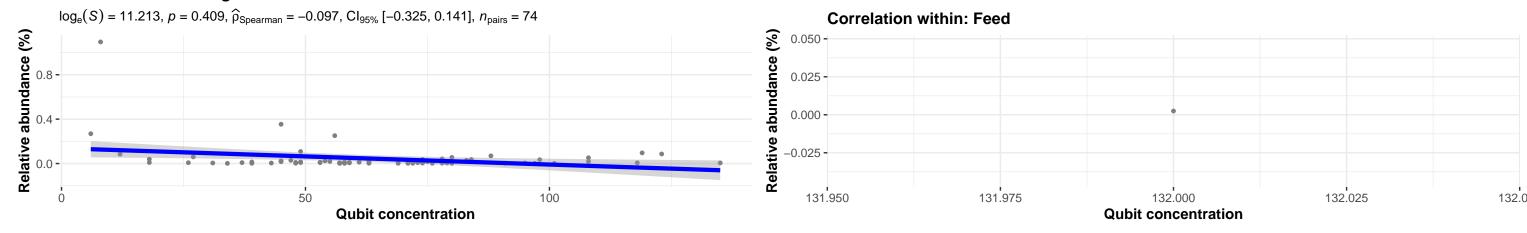


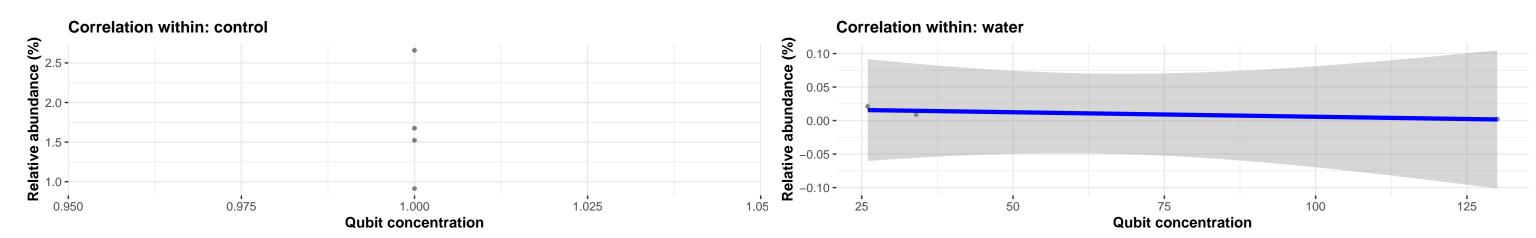
### Bacteria; Actinobacteriota; Actinobacteria; Propionibacteriales; Propionibacteriaceae; Cutibacterium; NA

#### **Correlation with all samples**









### Bacteria; Firmicutes; Bacilli; Bacillales; Bacillaceae; Oceanobacillus; caeni

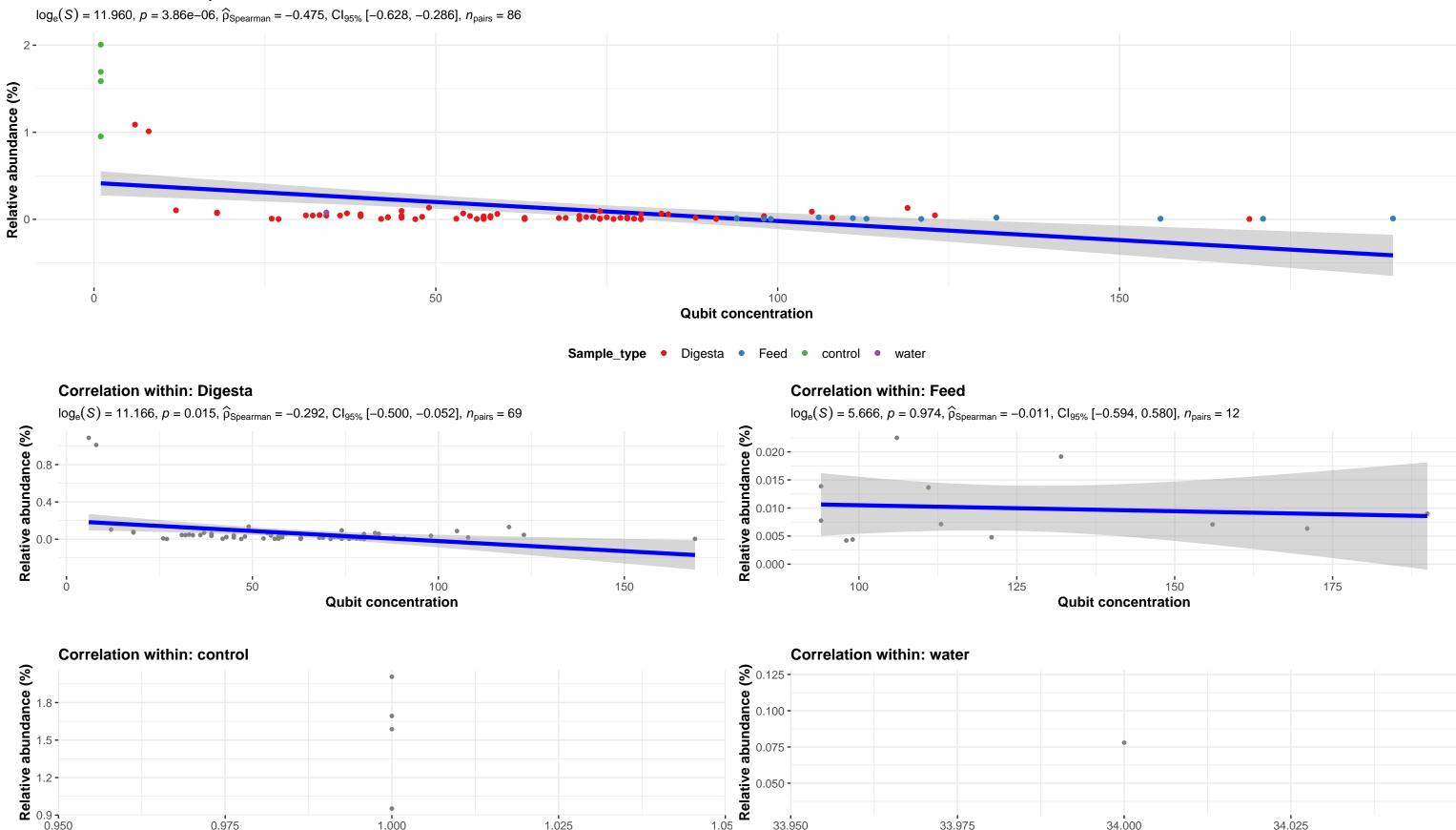


0.975

1.000

**Qubit concentration** 

1.025



33.950

1.05

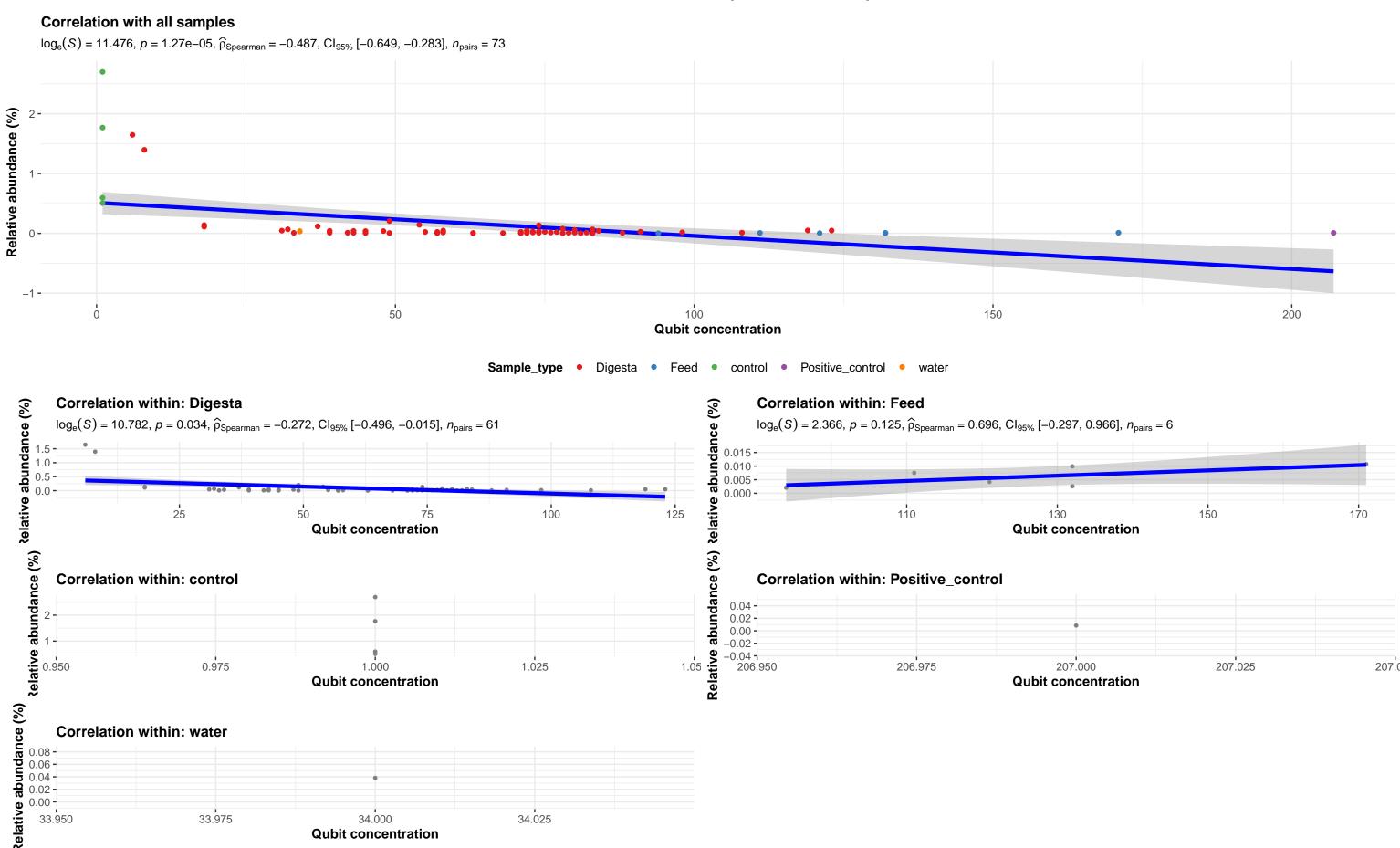
33.975

34.000

**Qubit concentration** 

34.025

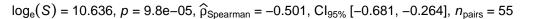
### Bacteria; Firmicutes; Clostridia; Lachnospirales; Lachnospiraceae; NA; NA

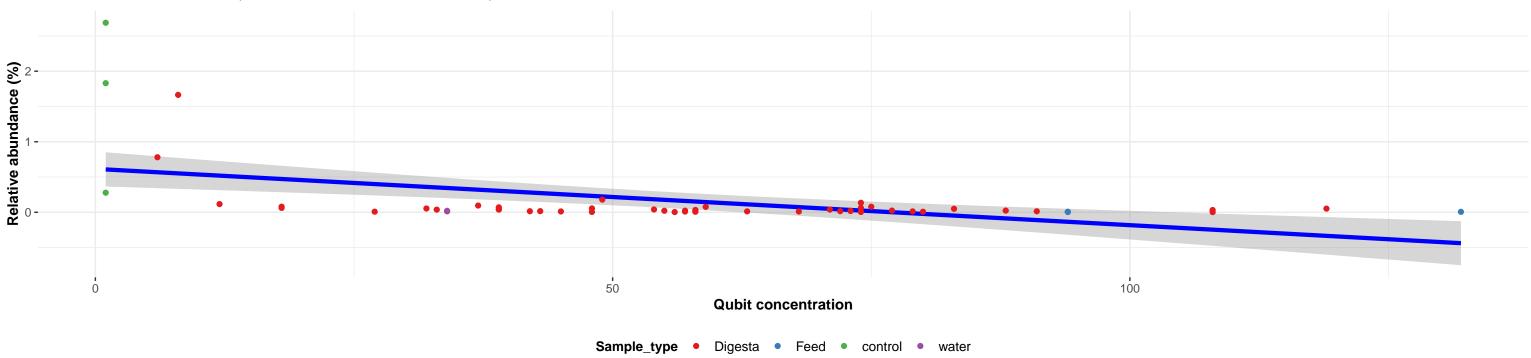


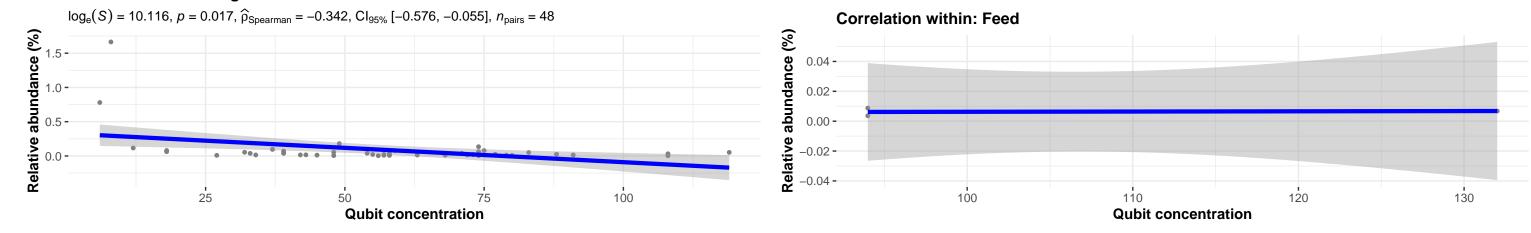
**Qubit concentration** 

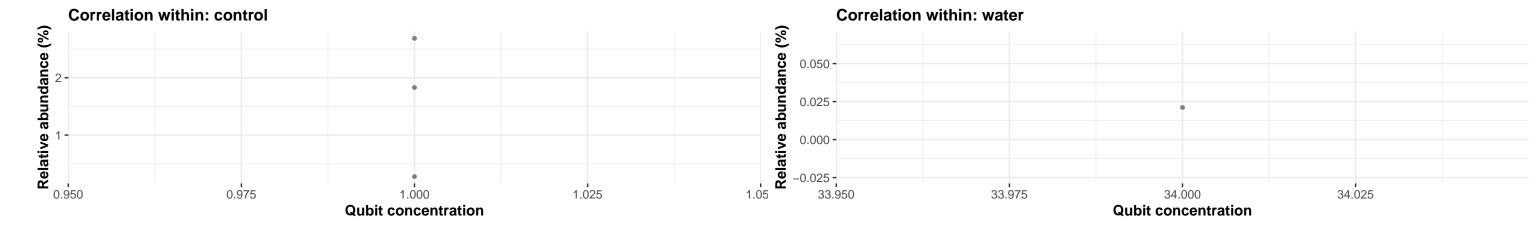
# Bacteria; Actinobacteriota; Actinobacteria; Micrococcales; Beutenbergiaceae; Salana; NA

#### **Correlation with all samples**



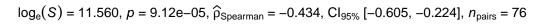


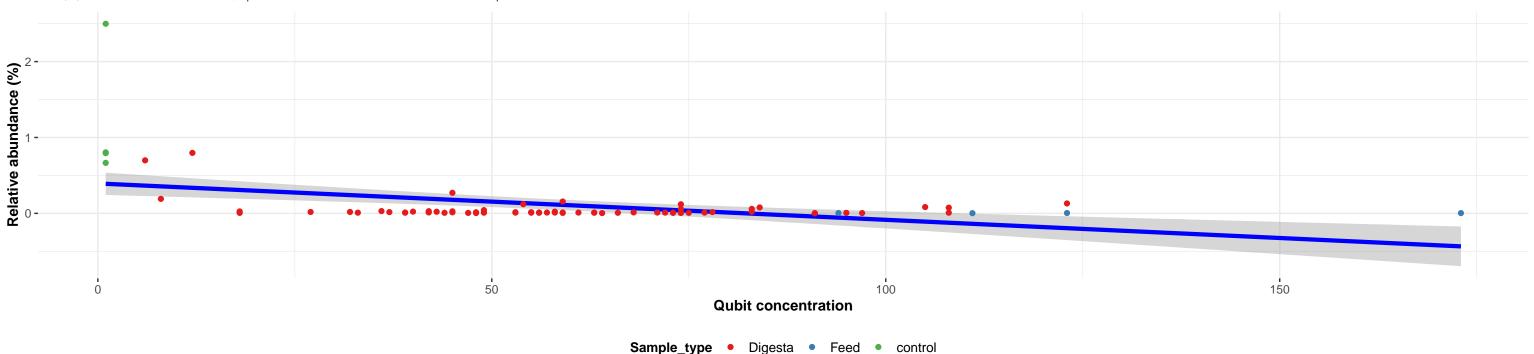


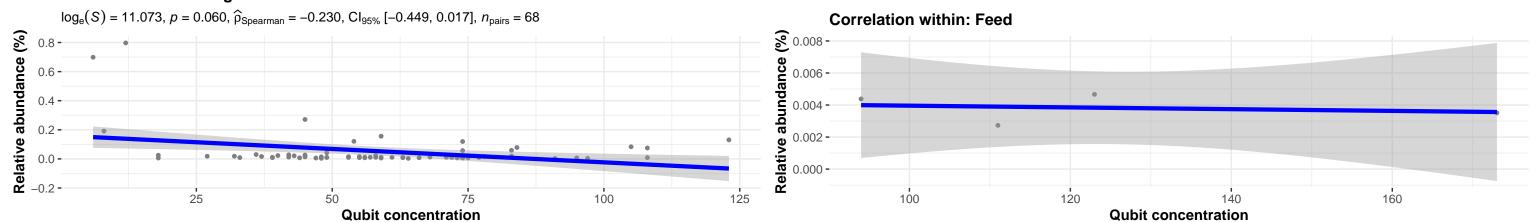


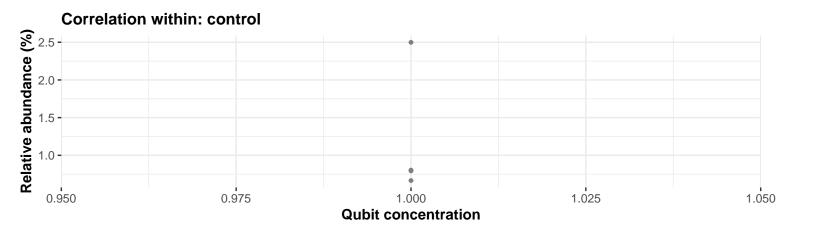
### Bacteria; Proteobacteria; Gammaproteobacteria; Pseudomonadales; Halomonadaceae; Halomonas; NA

#### **Correlation with all samples**

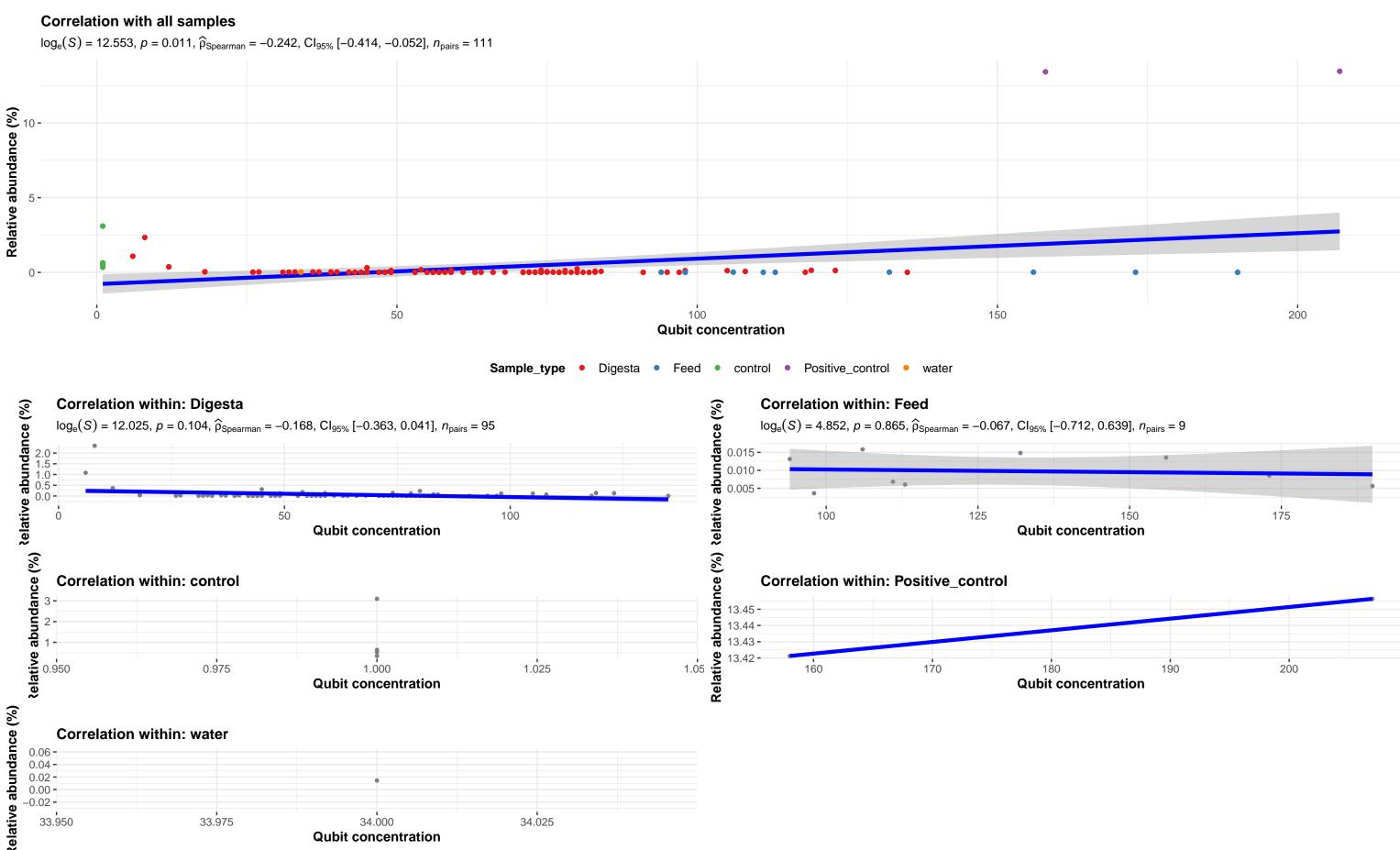






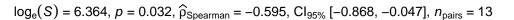


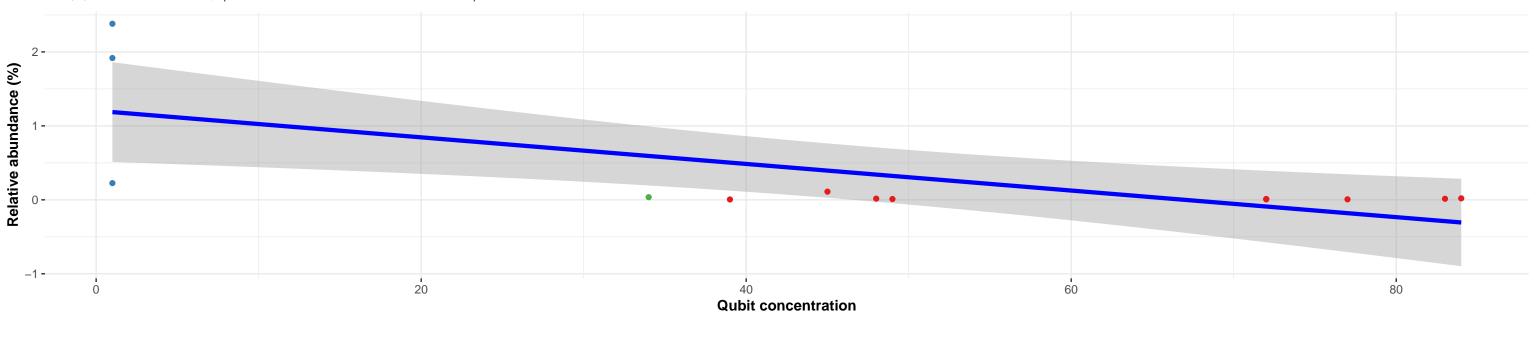
# Bacteria; Proteobacteria; Gammaproteobacteria; Enterobacterales; Enterobacteriaceae; Escherichia-Shigella; NA



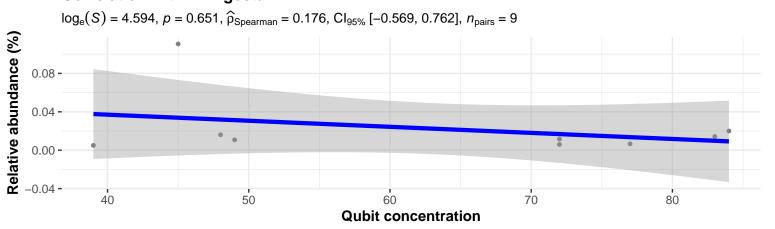
# Bacteria; Actinobacteriota; Actinobacteria; Micrococcales; Micrococcaceae; Citricoccus; NA

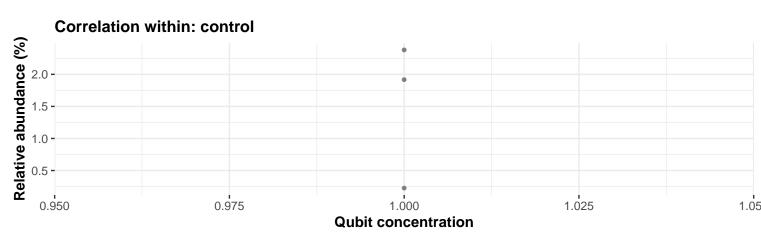


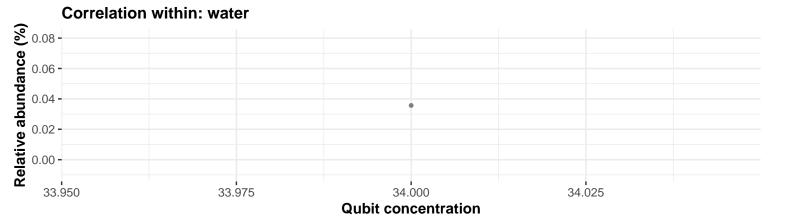


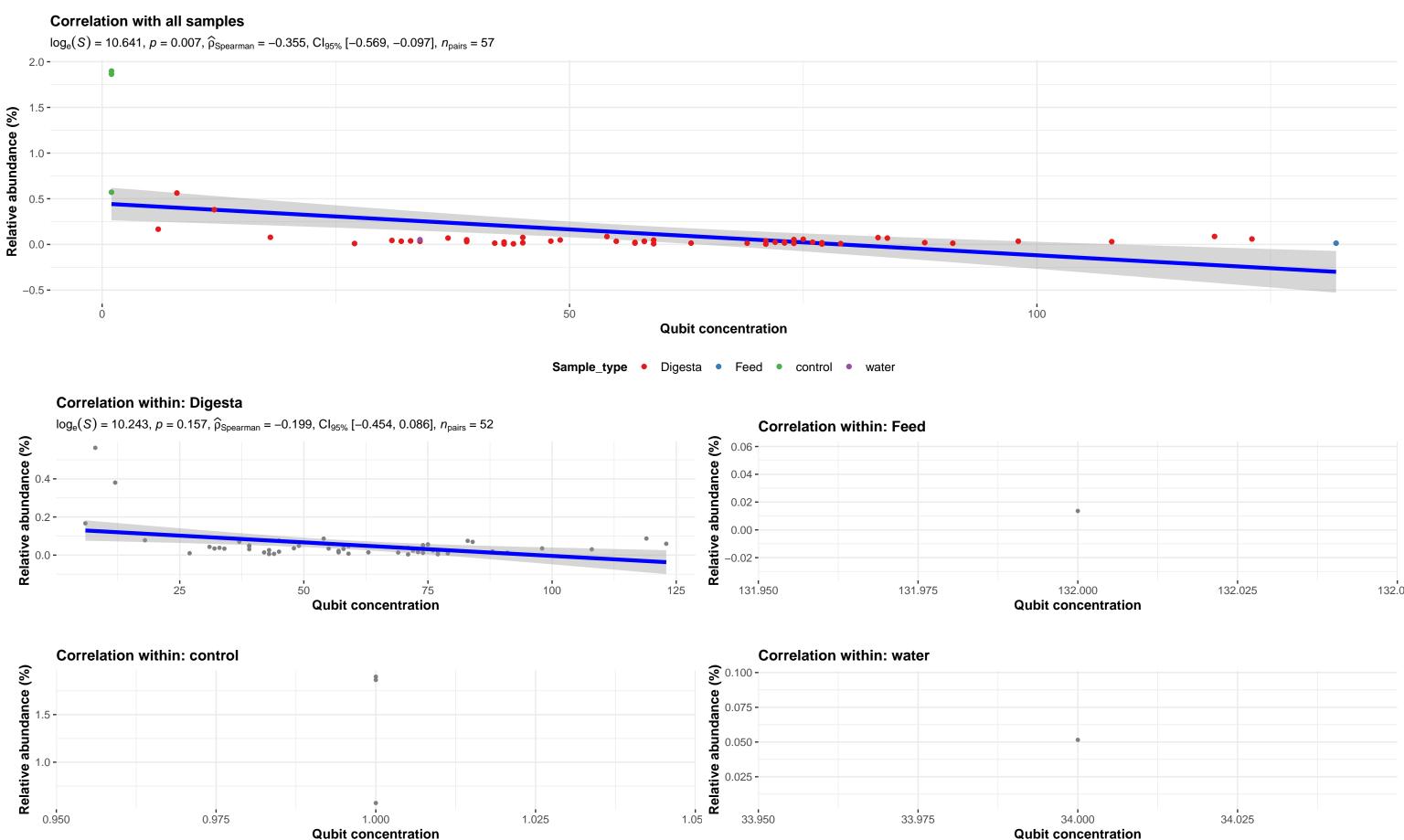


Sample\_type • Digesta • control • water



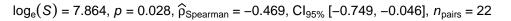


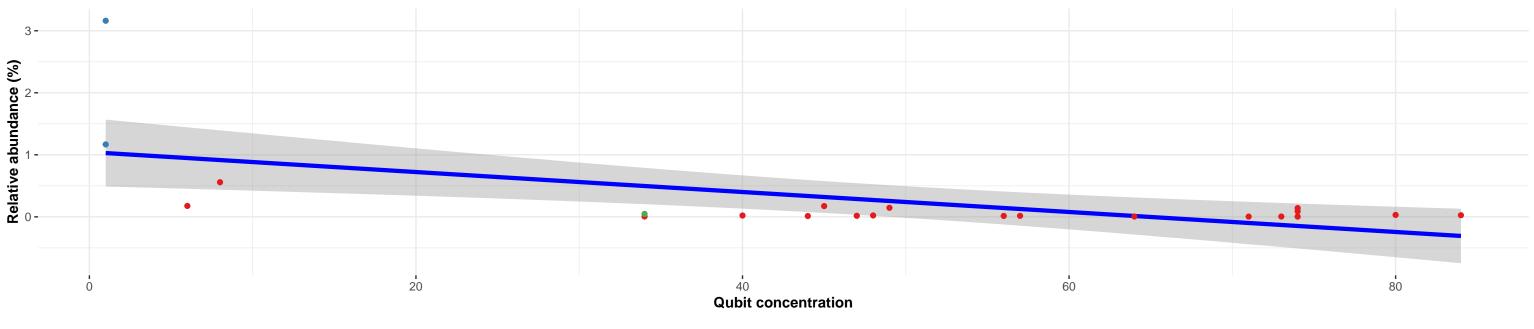




### Bacteria; Actinobacteriota; Actinobacteria; Micrococcales; Micrococcaceae; Micrococcus; NA

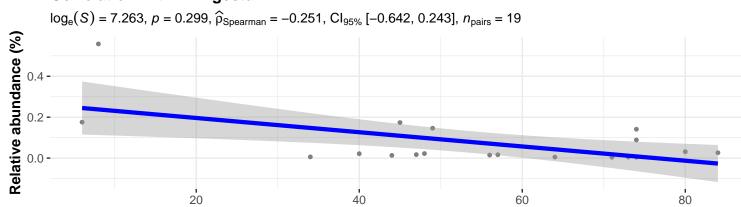




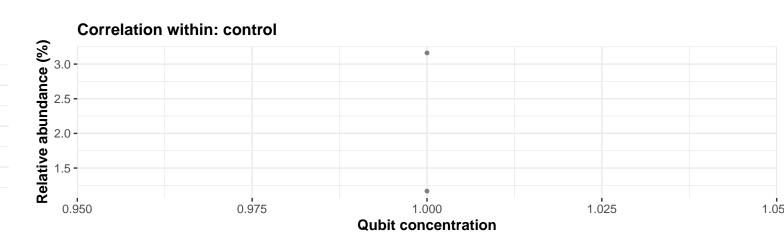


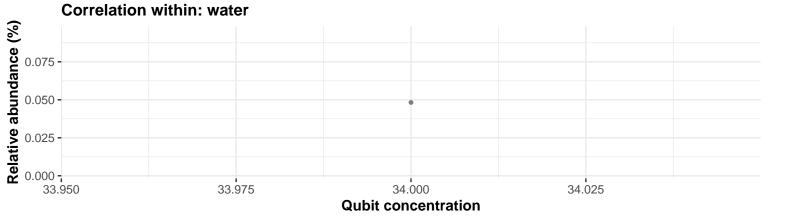
Sample\_type • Digesta • control • water

### **Correlation within: Digesta**



**Qubit concentration** 

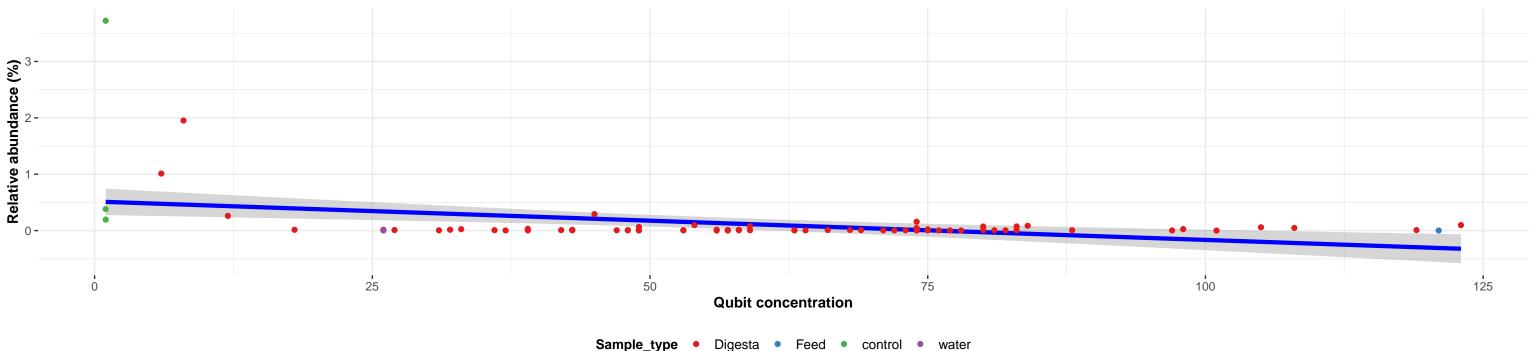


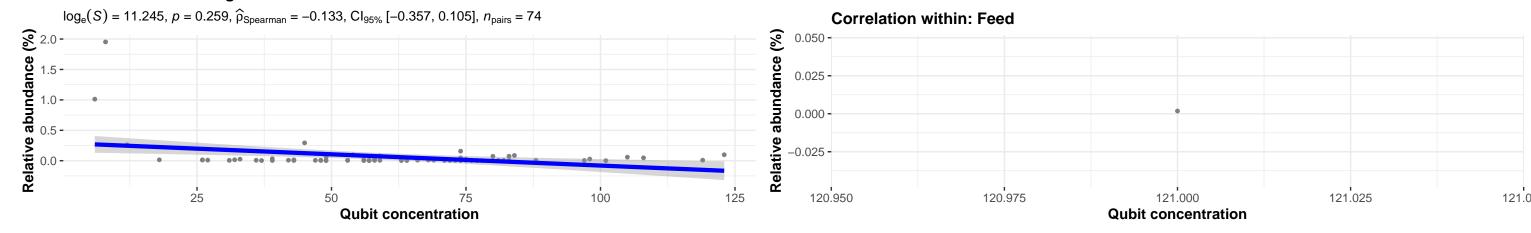


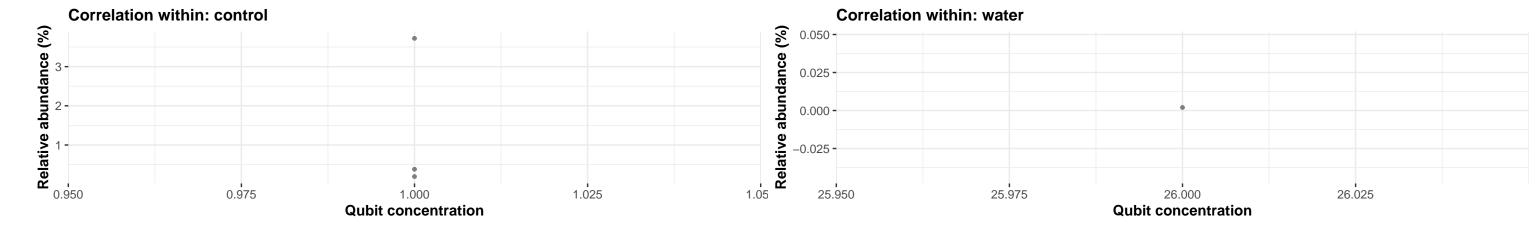
# Bacteria; Firmicutes; Bacilli; Erysipelotrichales; Erysipelotrichaceae; Erysipelothrix; NA

#### **Correlation with all samples**

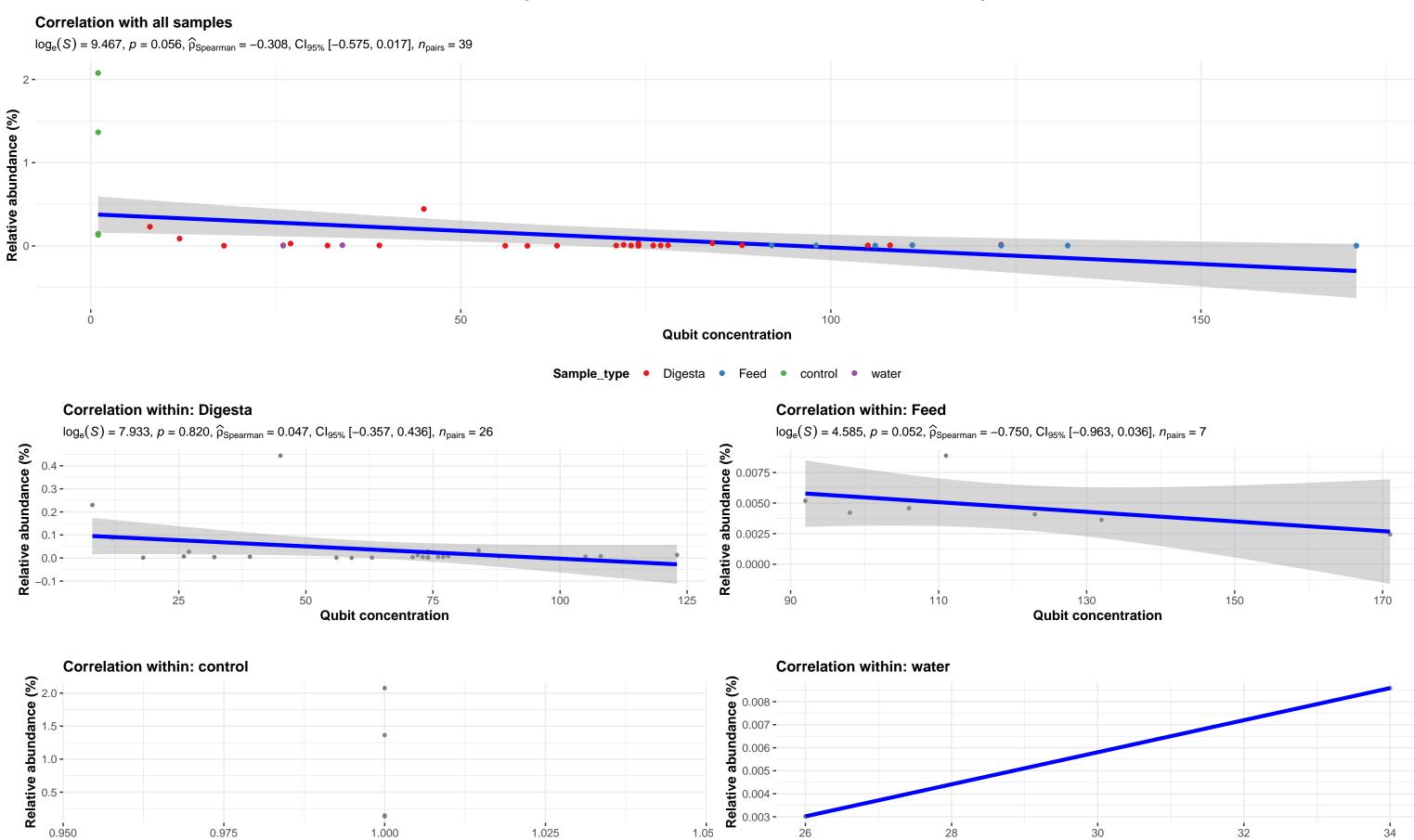








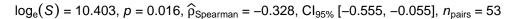
# Bacteria; Proteobacteria; Gammaproteobacteria; Pseudomonadales; Moraxellaceae; Enhydrobacter; aerosaccus

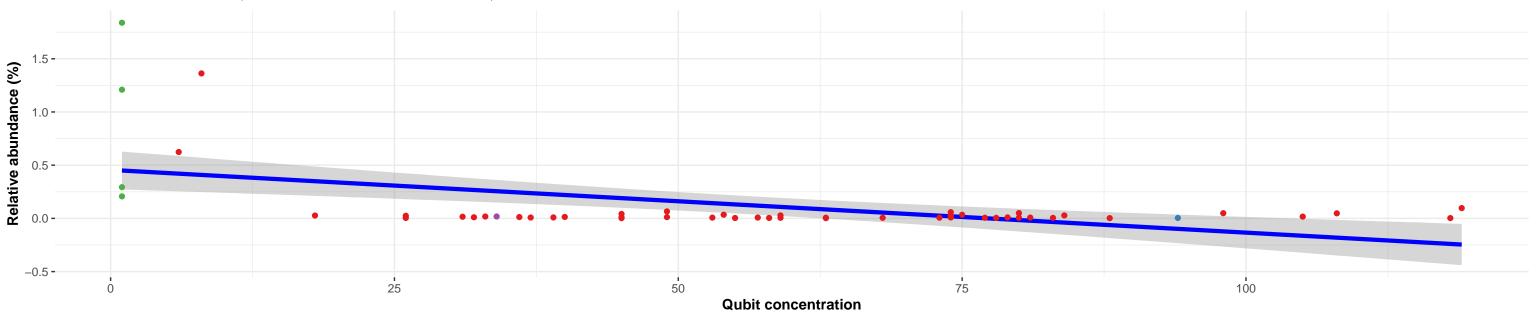


**Qubit concentration** 

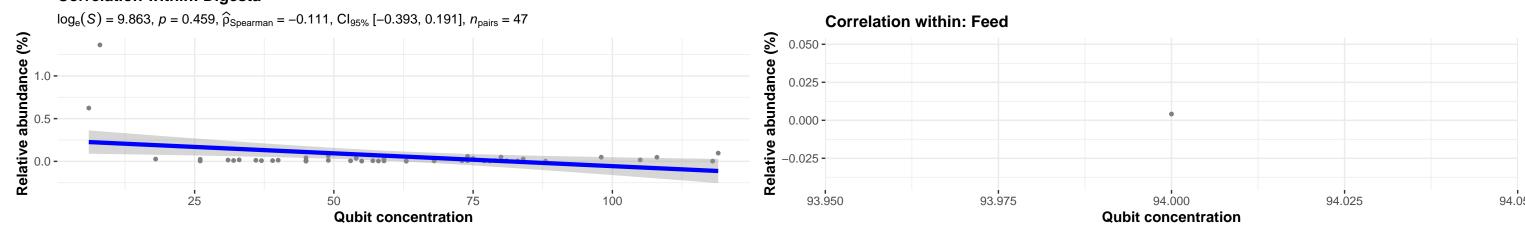
**Qubit concentration** 

### Correlation with all samples

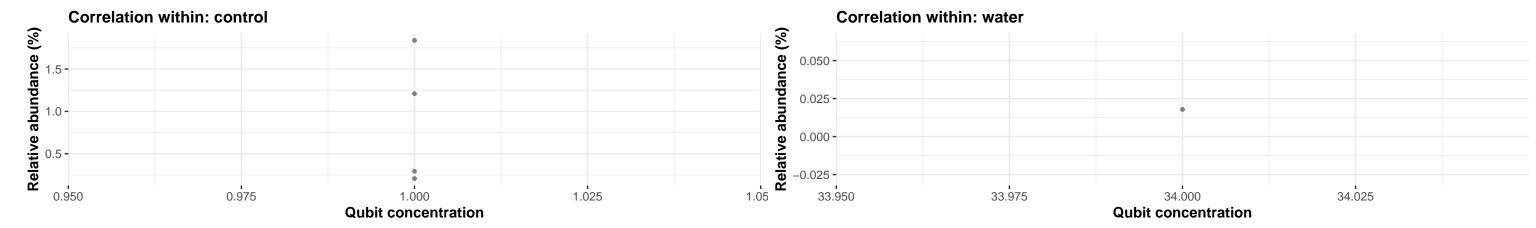




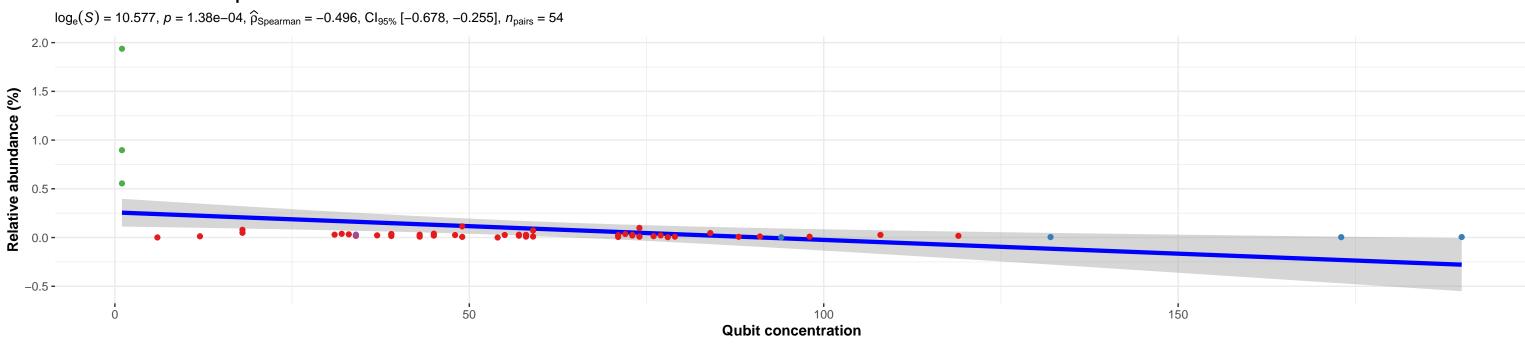
### Correlation within: Digesta



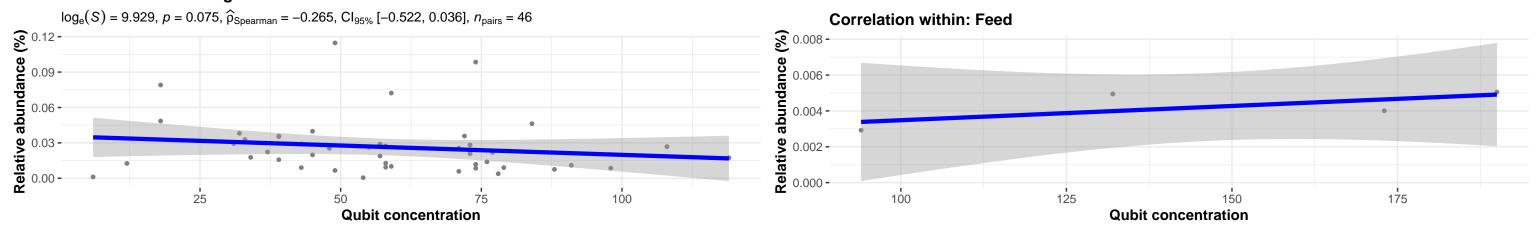
Sample\_type • Digesta • Feed • control • water



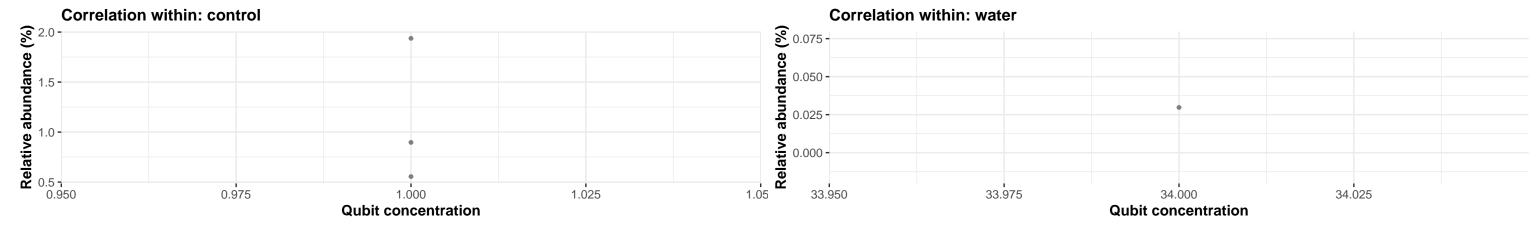
#### **Correlation with all samples**



#### **Correlation within: Digesta**

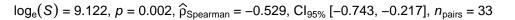


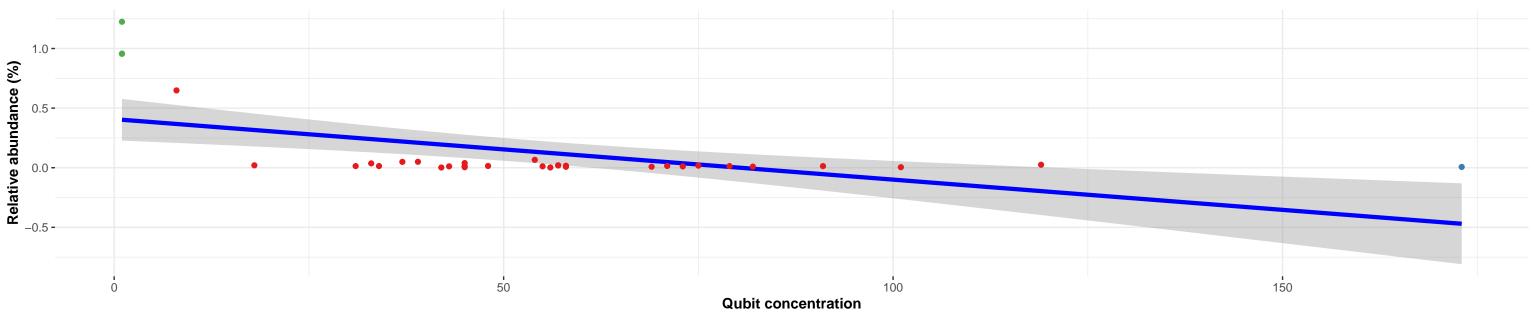
Sample\_type • Digesta • Feed • control • water



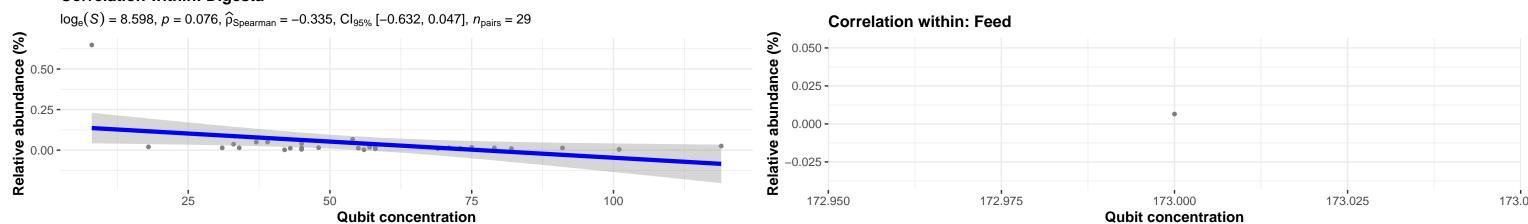
# Bacteria; Actinobacteriota; Actinobacteria; Micrococcales; Brevibacteriaceae; Brevibacterium; ravenspurgense



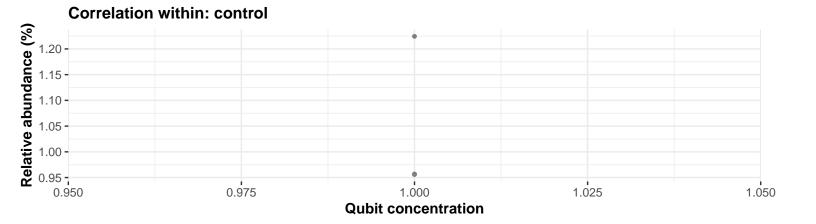




### Correlation within: Digesta

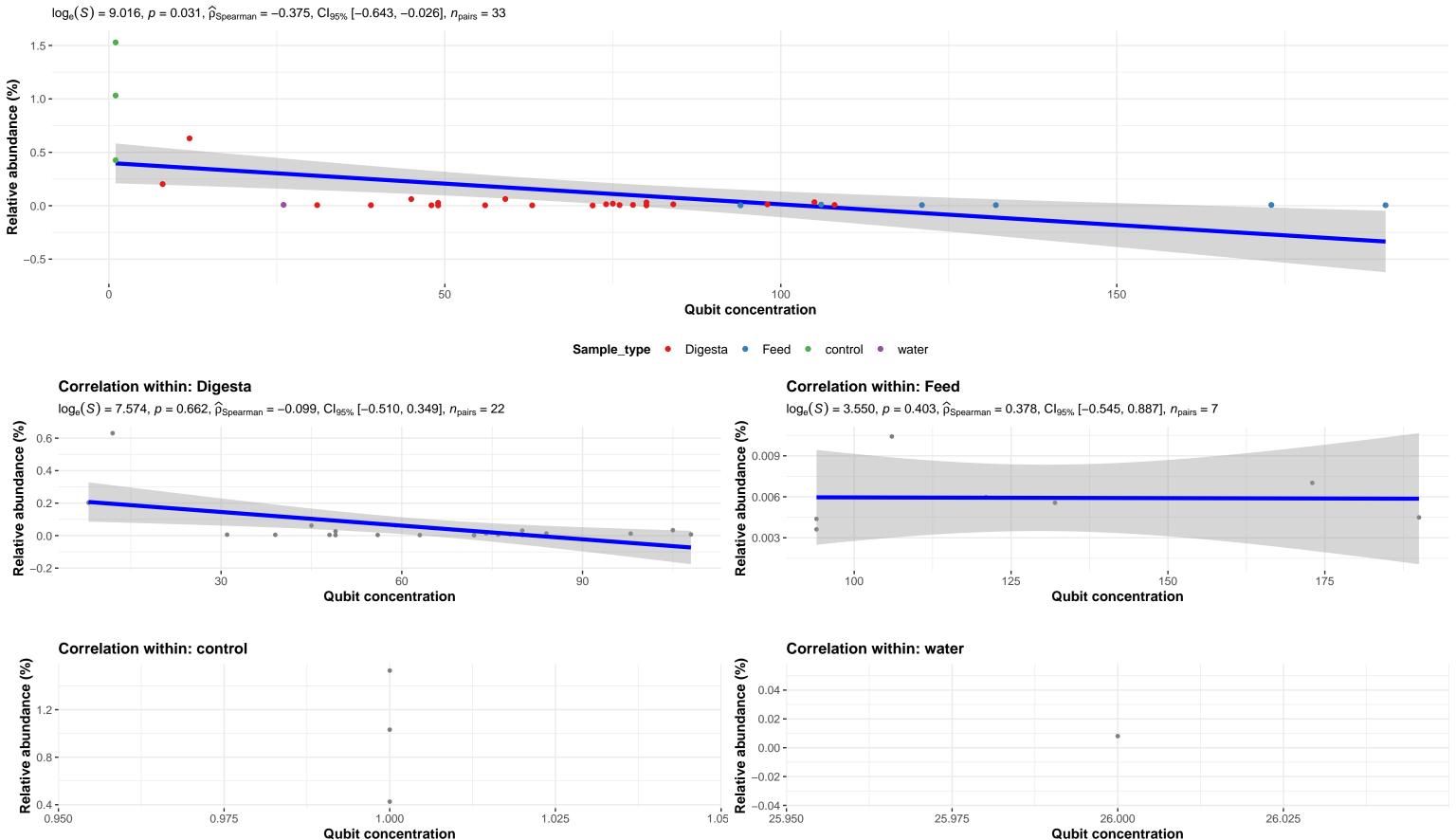


Sample\_type • Digesta • Feed • control

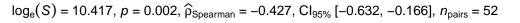


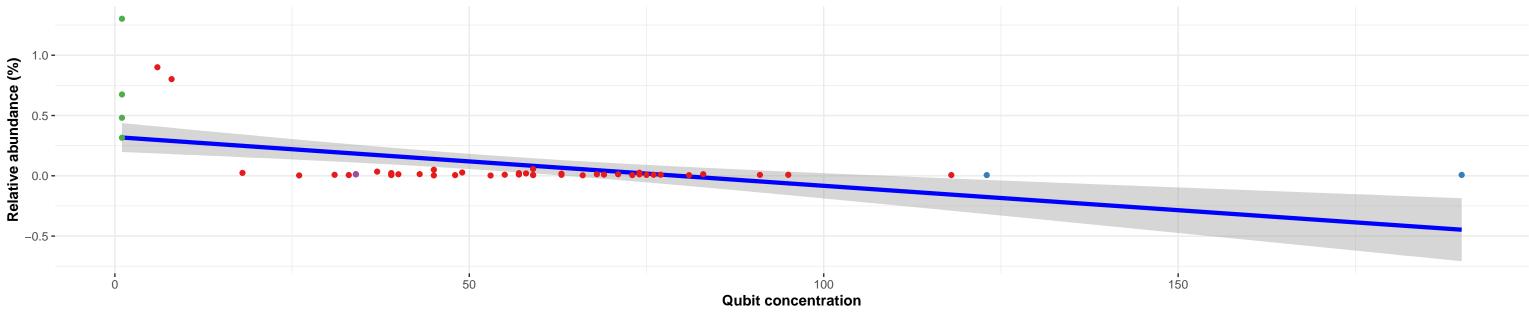
### Bacteria; Firmicutes; Bacilli; Lactobacillales; Streptococcaceae; Lactococcus; NA



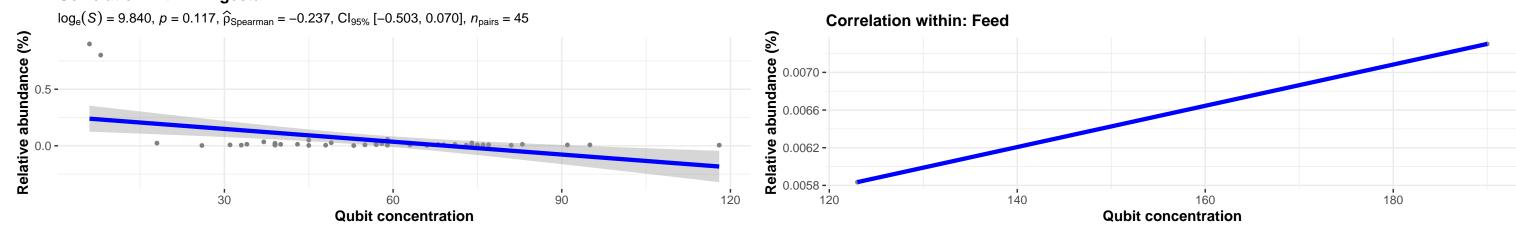




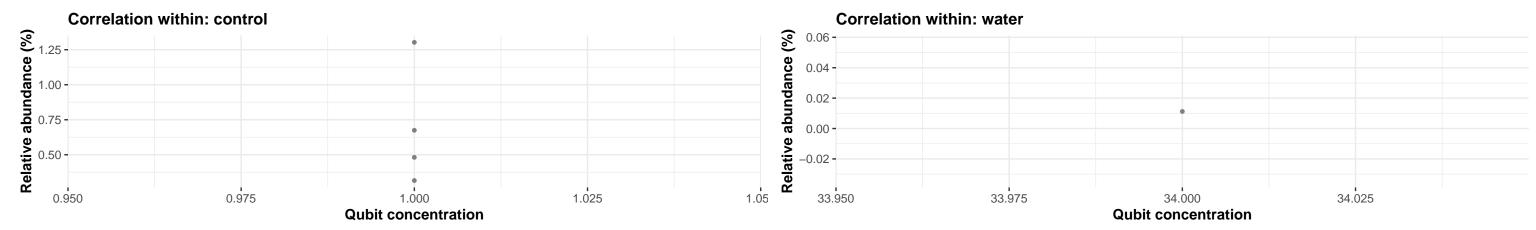




### Correlation within: Digesta

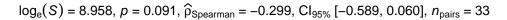


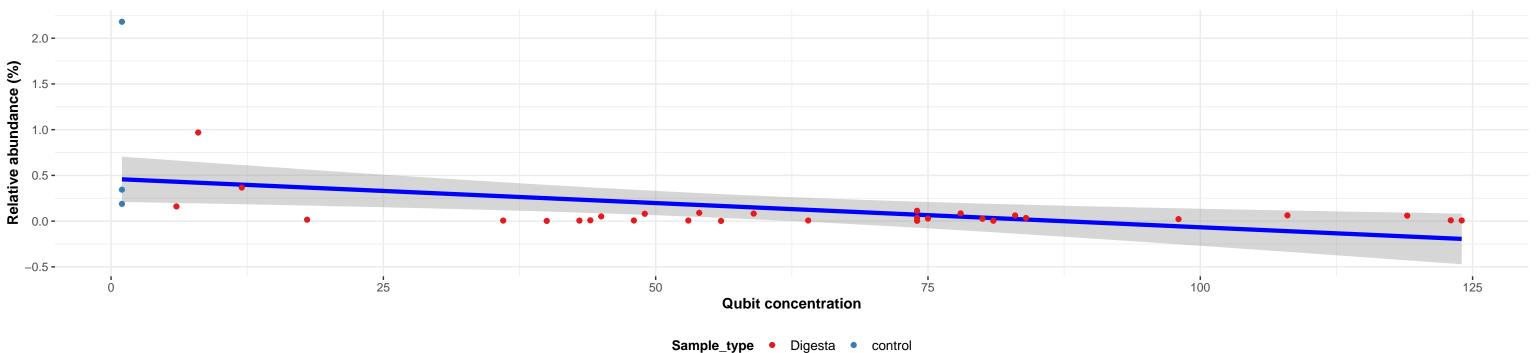
Sample\_type • Digesta • Feed • control • water

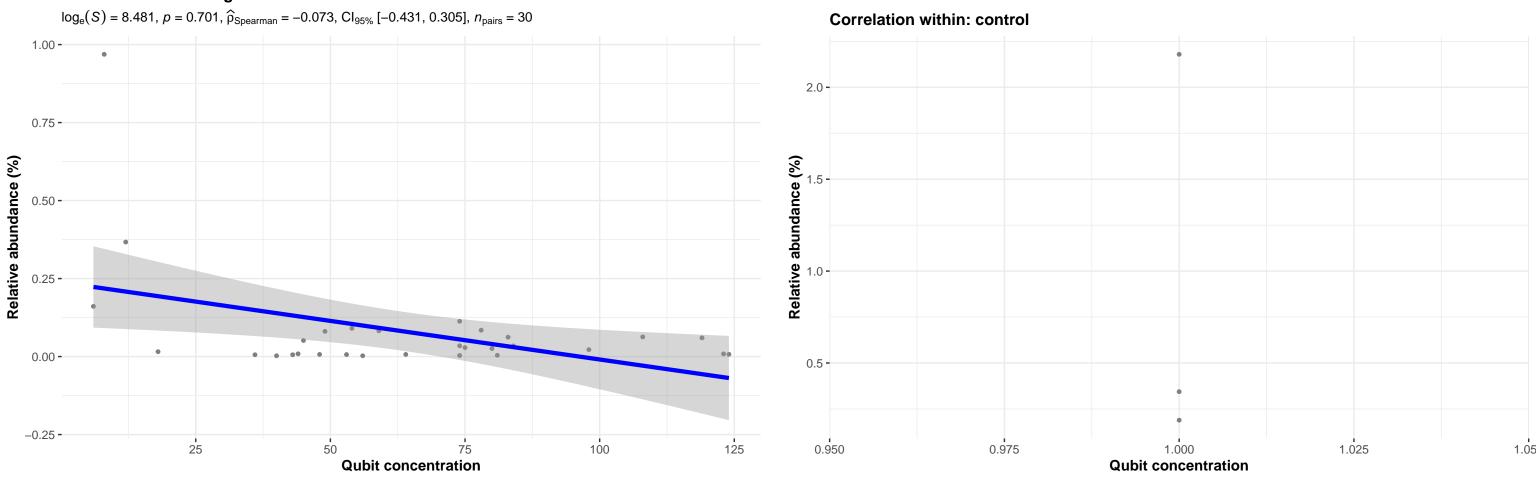


### Bacteria; Proteobacteria; Gammaproteobacteria; Pseudomonadales; Pseudomonadaceae; Pseudomonas; NA

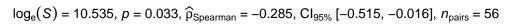
### Correlation with all samples

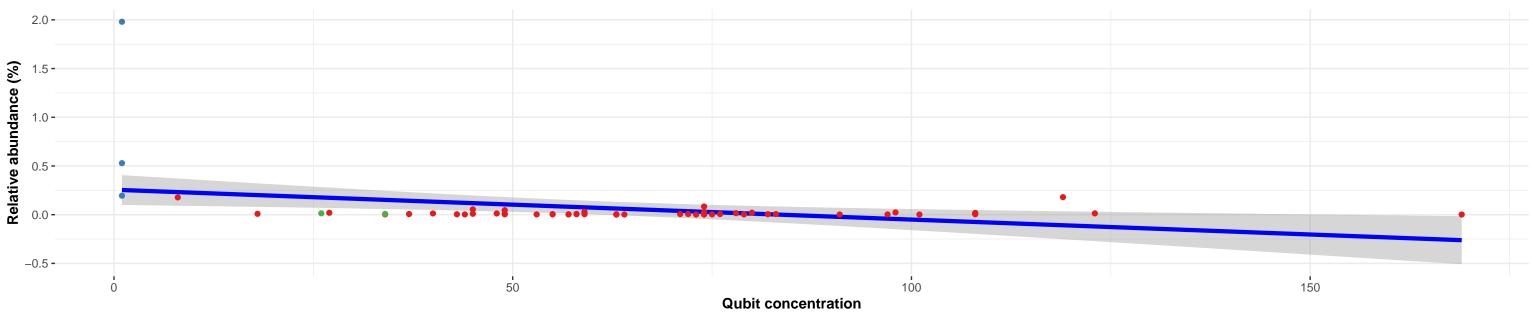




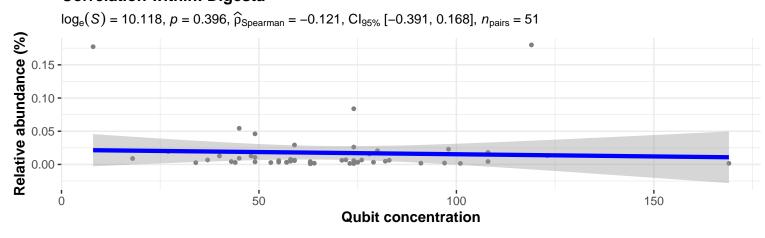


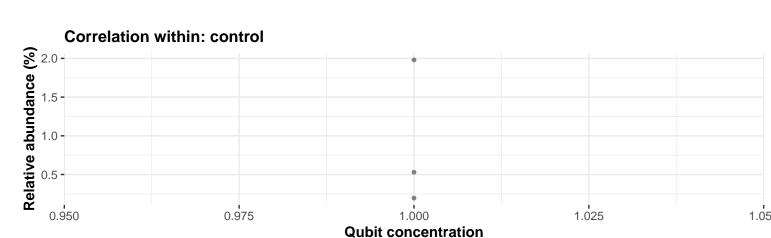


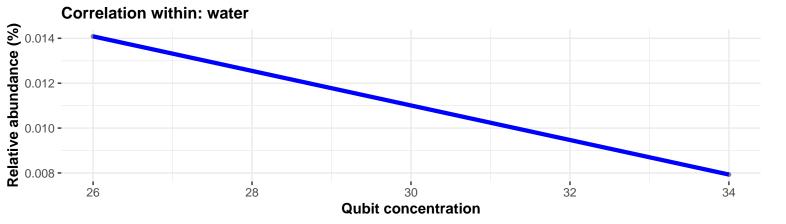




Sample\_type • Digesta • control • water





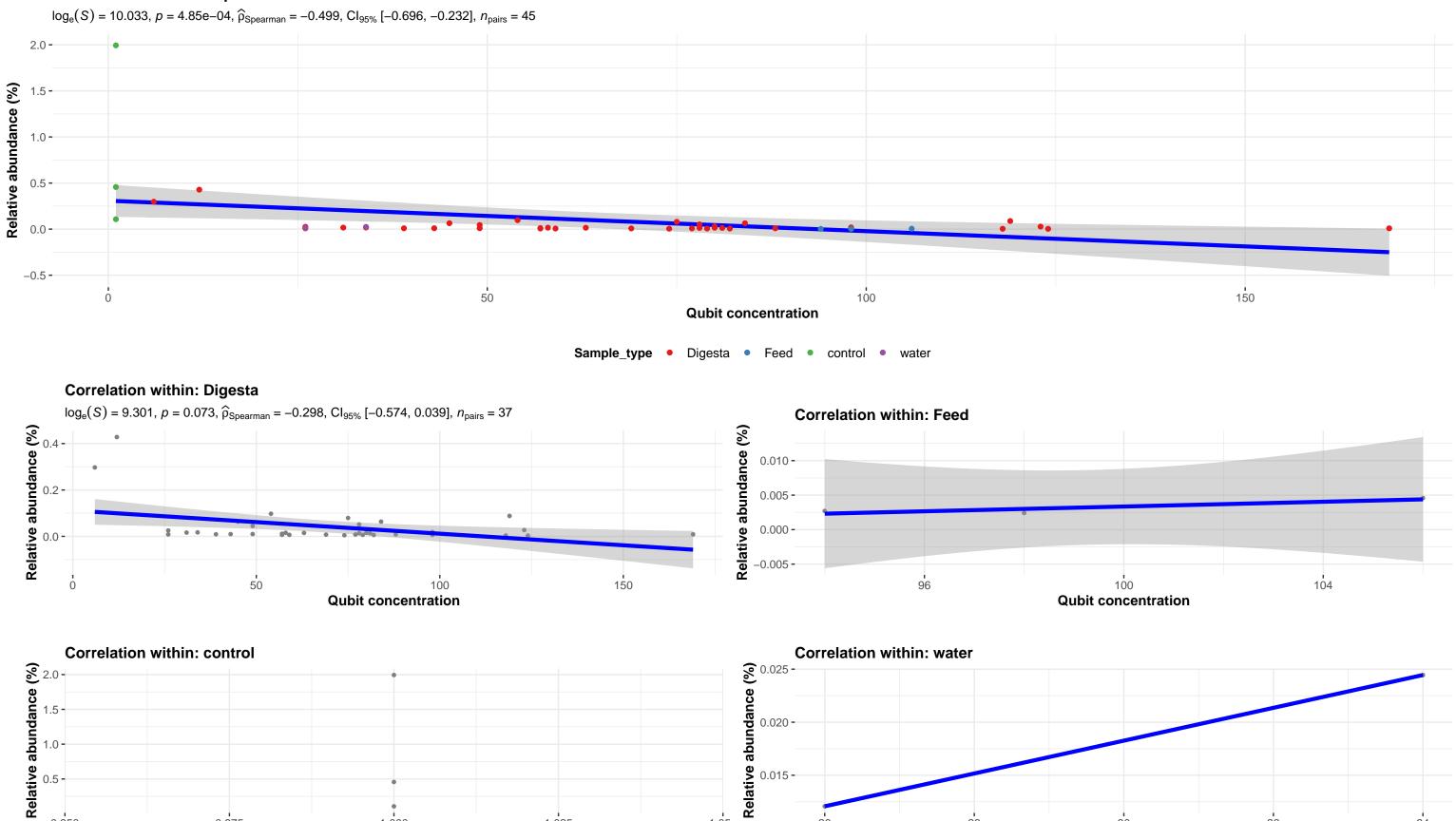


### Bacteria; Proteobacteria; Gammaproteobacteria; Pseudomonadales; Halomonadaceae; Halomonas; NA



0.950

0.975



1.05

1.025

1.000

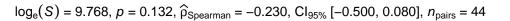
**Qubit concentration** 

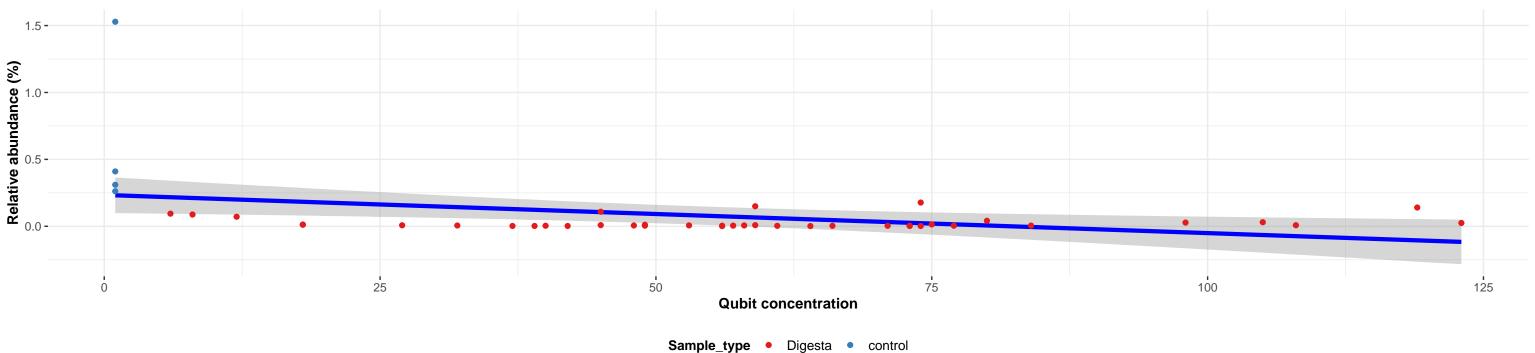
28

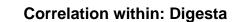
**Qubit concentration** 

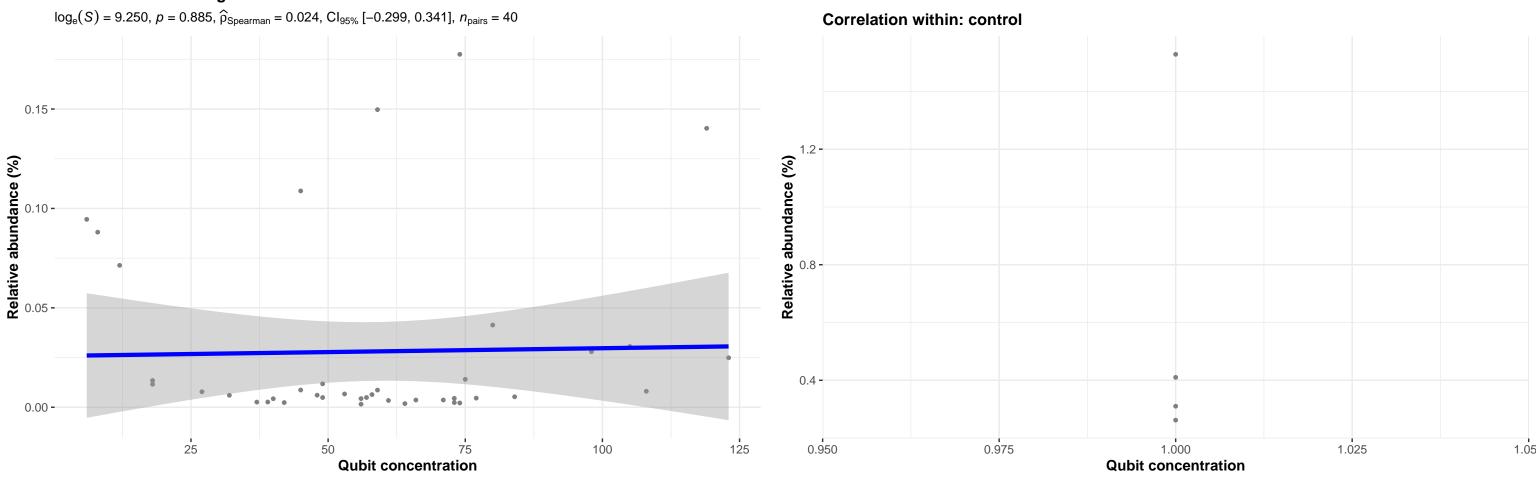
32

### **Correlation with all samples**









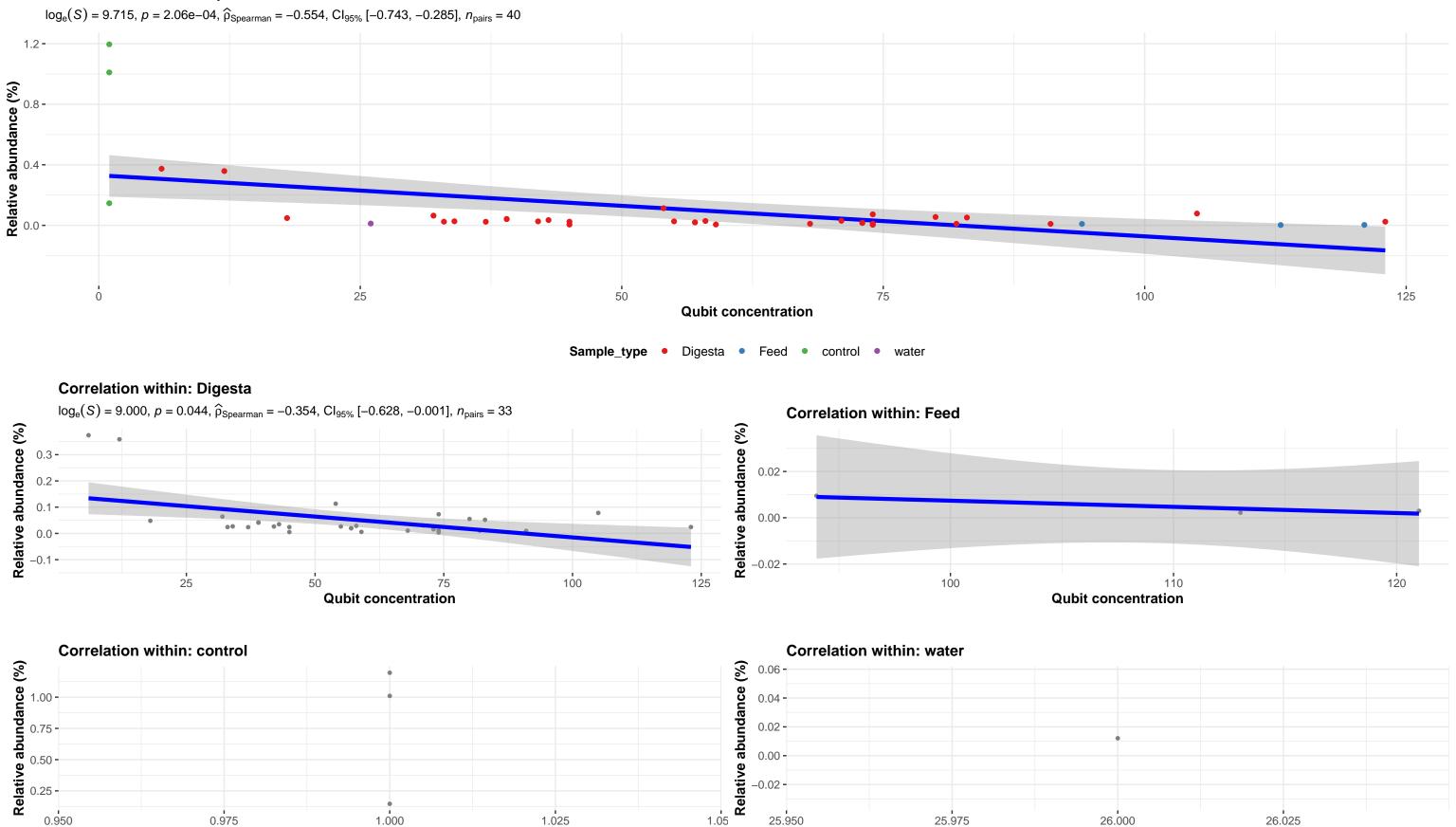


0.950

0.975

1.000

**Qubit concentration** 



25.950

25.975

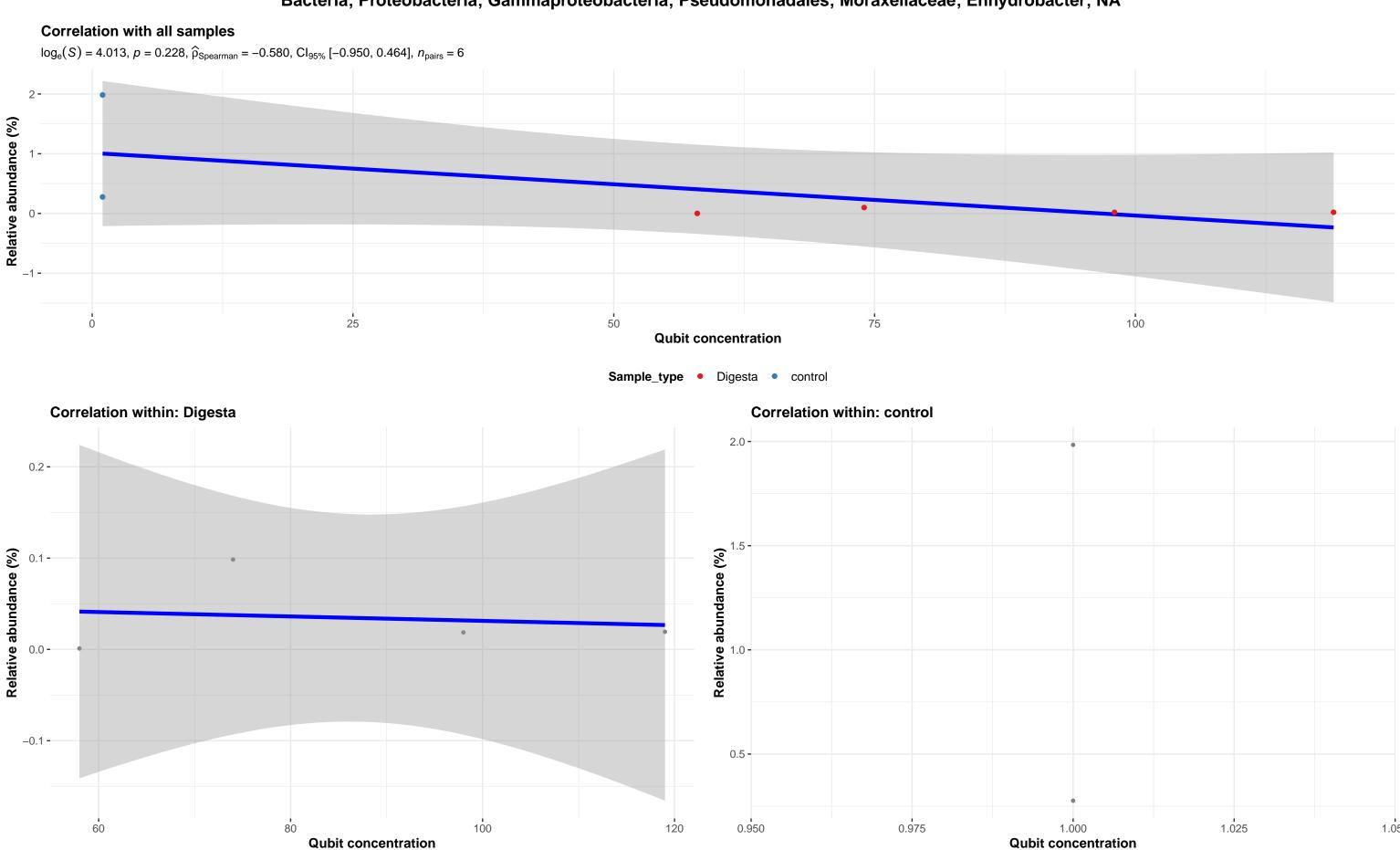
26.000

**Qubit concentration** 

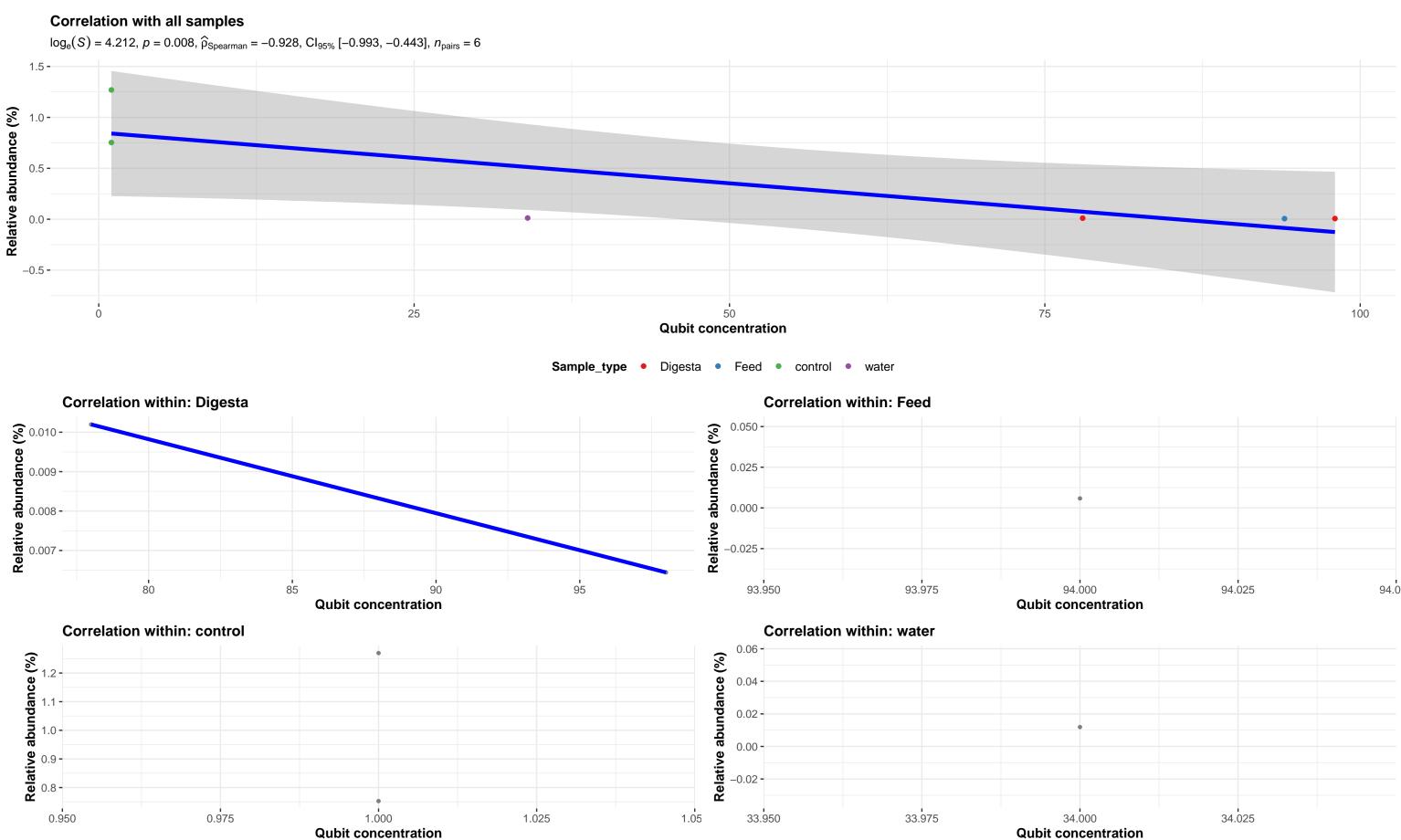
26.025

1.05

1.025

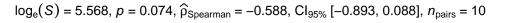


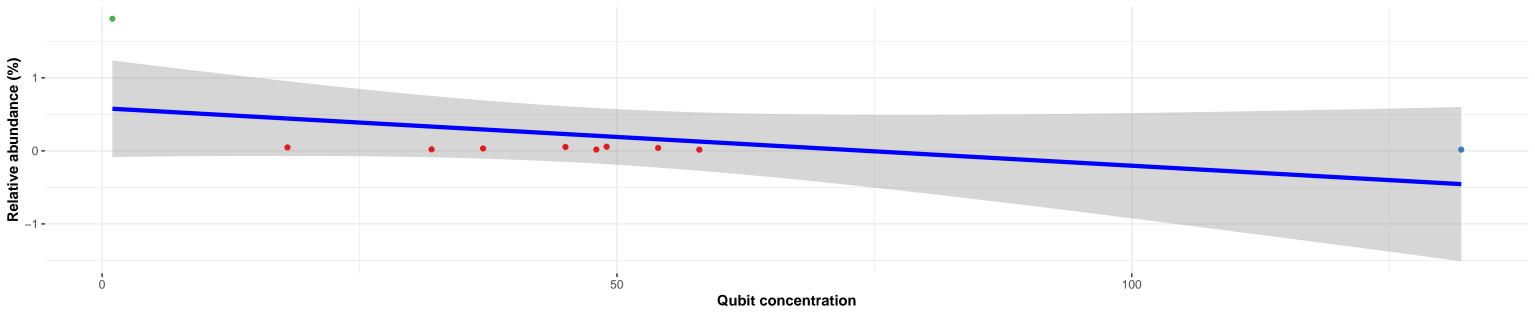
# Bacteria; Proteobacteria; Gammaproteobacteria; Burkholderiales; Comamonadaceae; Acidovorax; NA



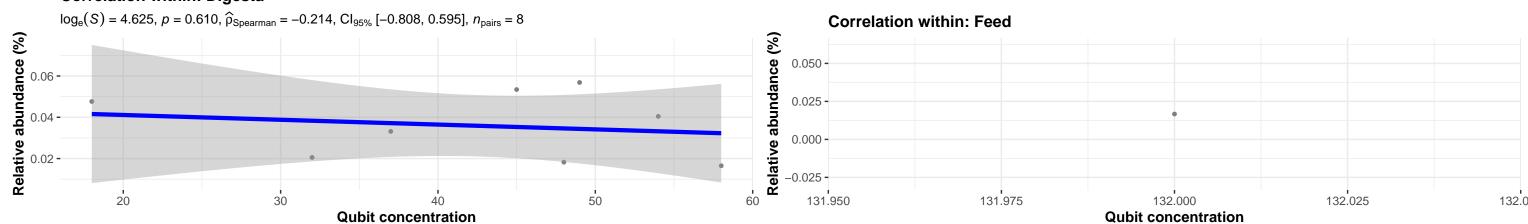
### Bacteria; Actinobacteriota; Actinobacteria; Actinomycetales; Actinomycetaceae; Actinomyces; NA



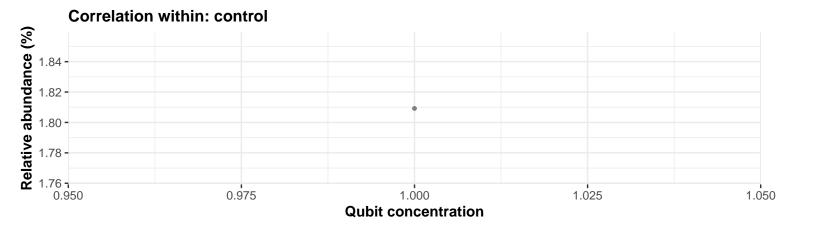




### Correlation within: Digesta

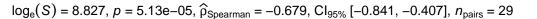


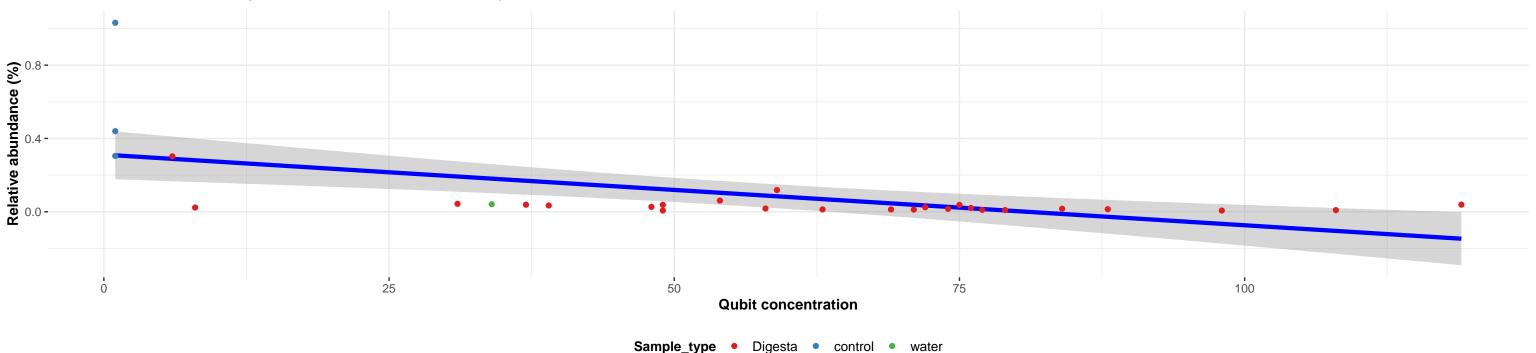
Sample\_type • Digesta • Feed • control

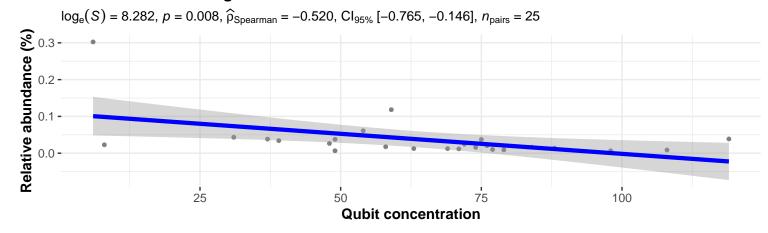


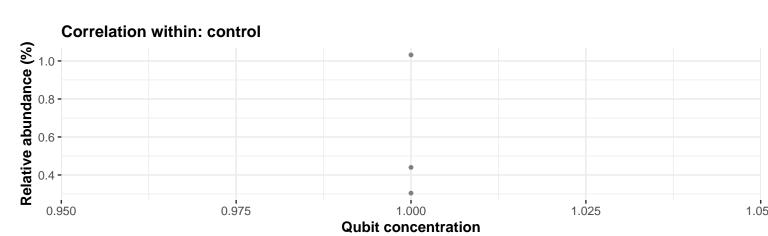
### Bacteria; Firmicutes; Bacilli; Bacillales; Bacillaceae; NA; NA

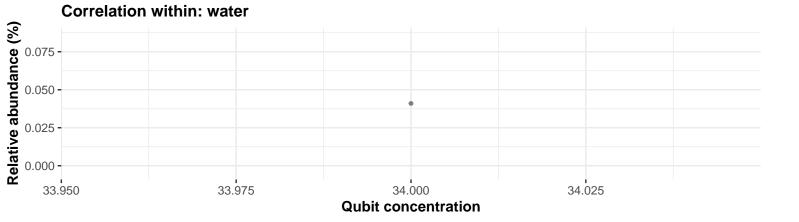
### **Correlation with all samples**





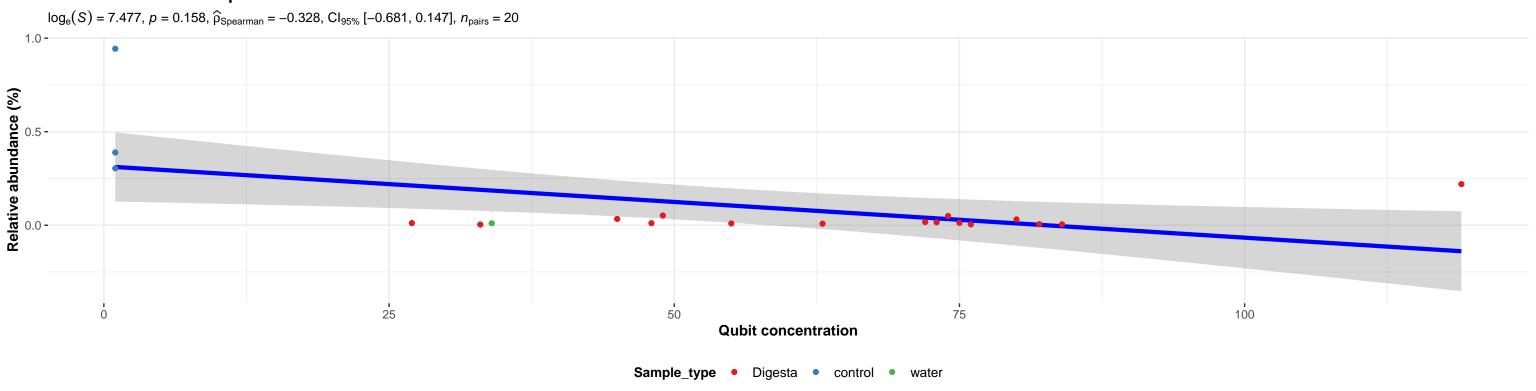


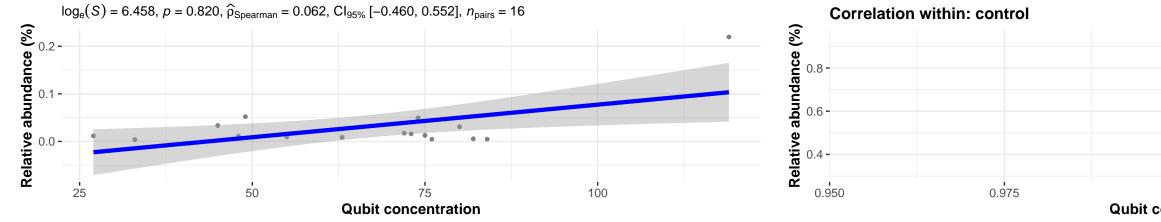


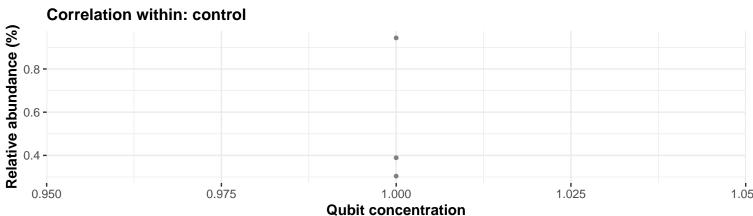


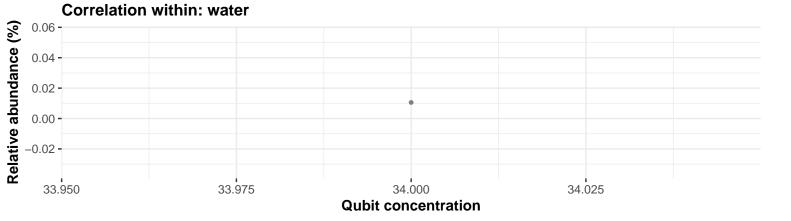
# Bacteria; Proteobacteria; Gammaproteobacteria; Pseudomonadales; Moraxellaceae; Acinetobacter; NA





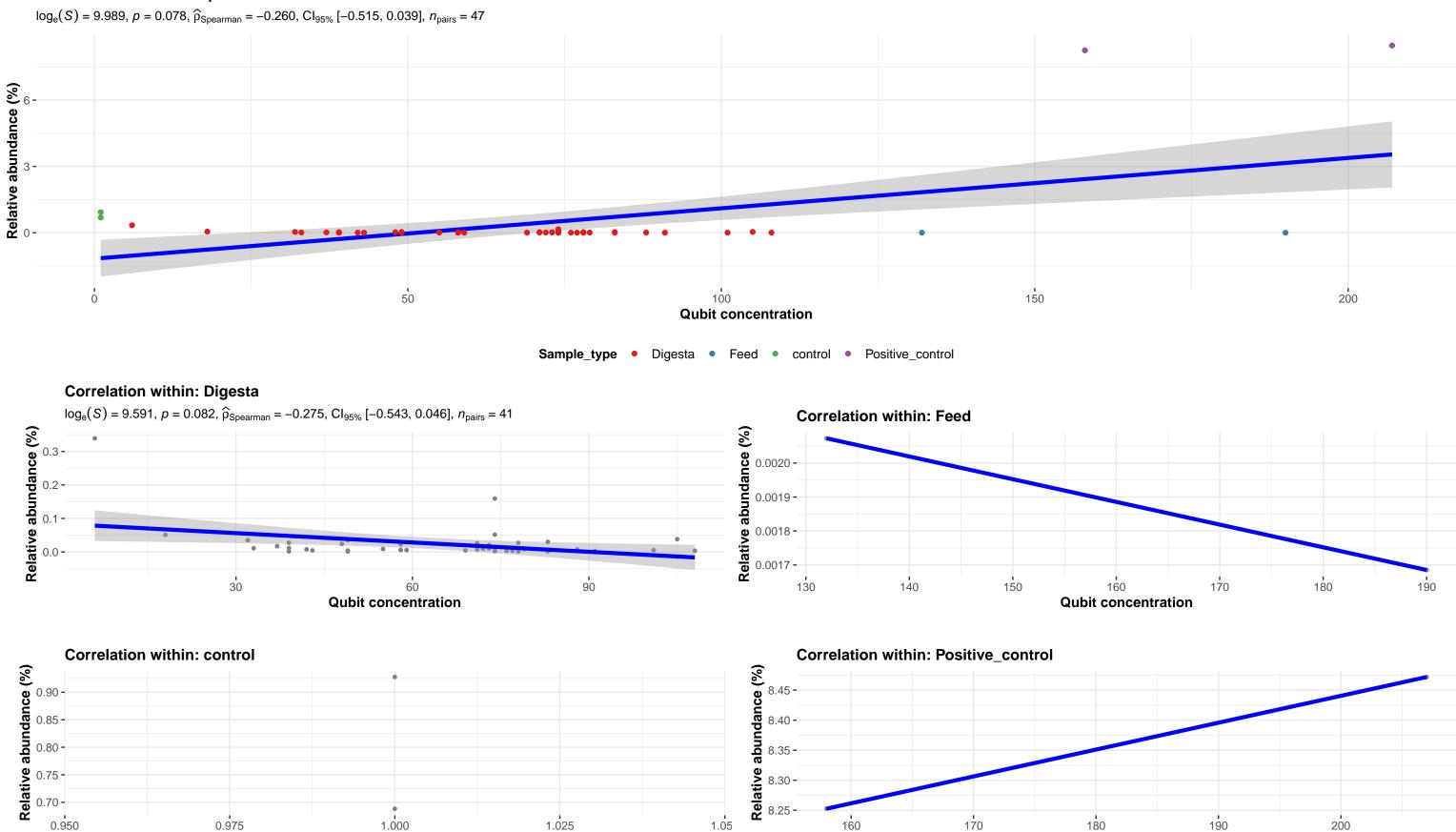






### Bacteria; Firmicutes; Bacilli; Lactobacillales; Enterococcaceae; Enterococcus; NA



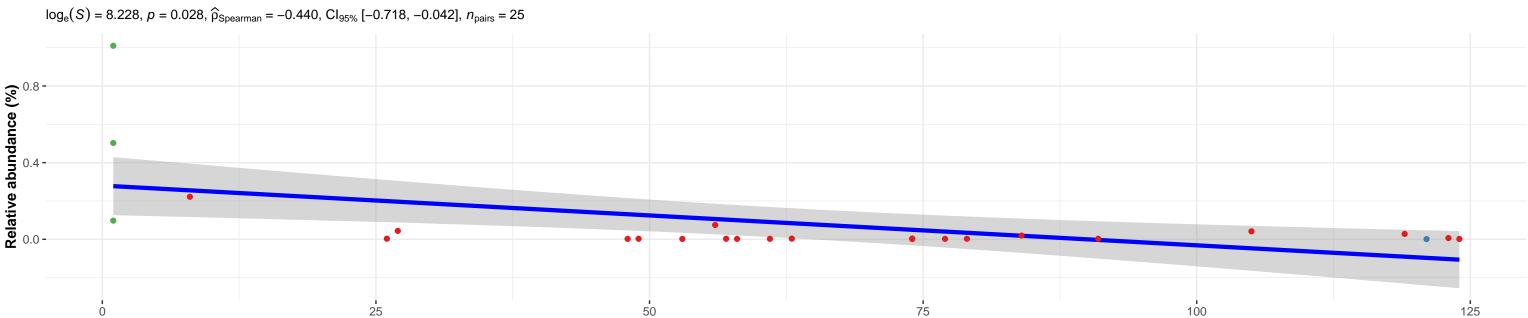


**Qubit concentration** 

1.000 **Qubit concentration** 

### Bacteria; Actinobacteriota; Actinobacteria; Corynebacteriales; Corynebacteriaceae; Lawsonella; NA

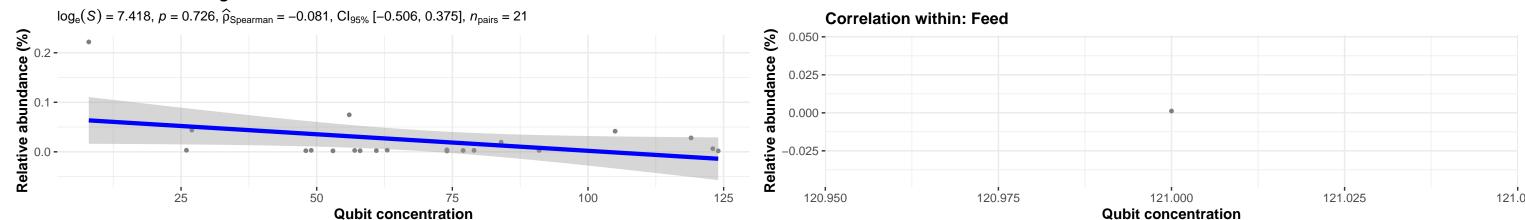


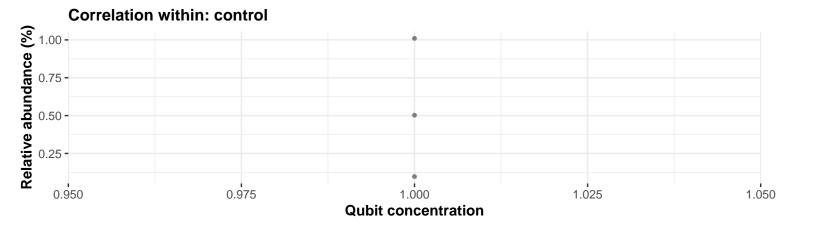




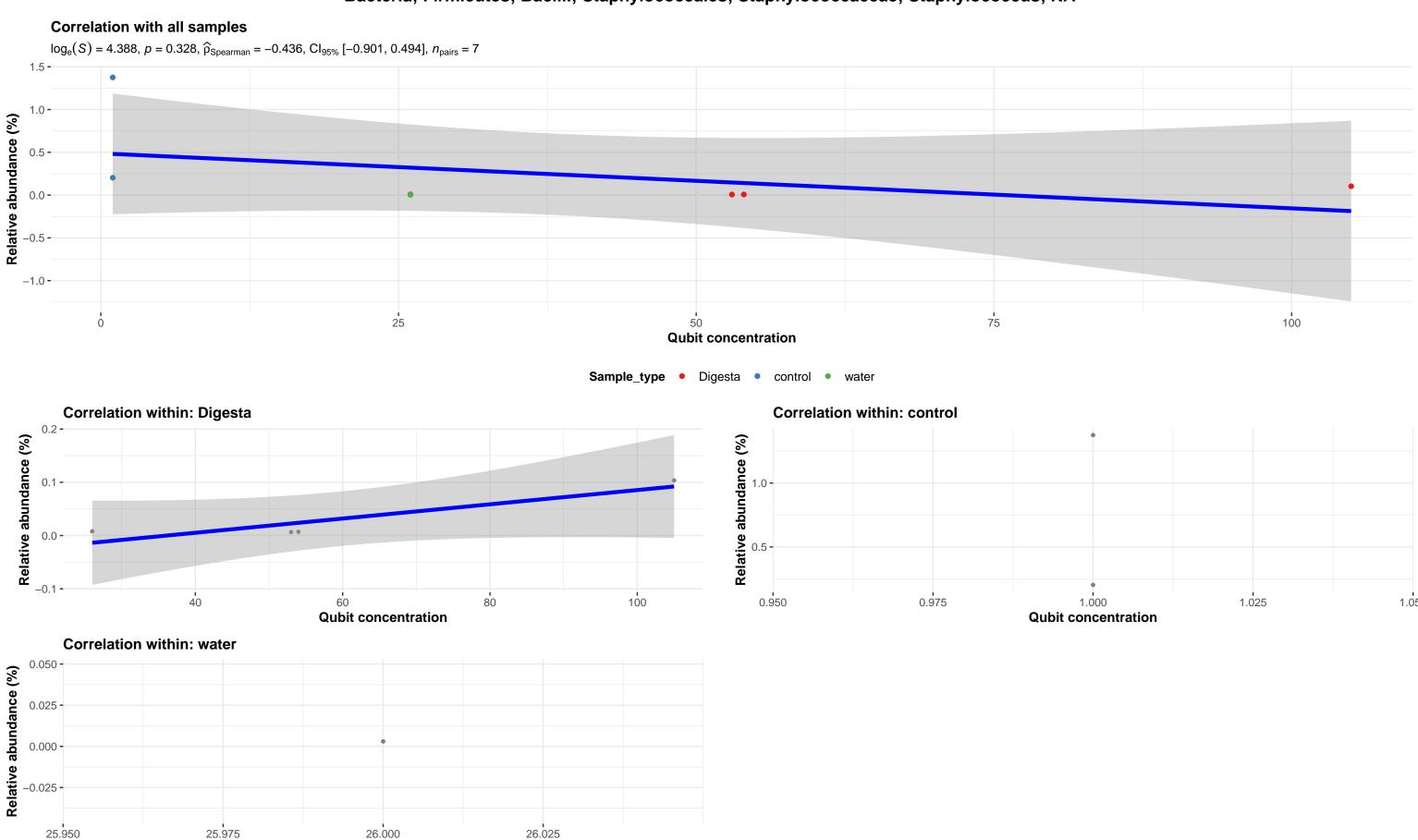
**Qubit concentration** 

125





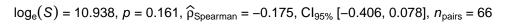
# Bacteria; Firmicutes; Bacilli; Staphylococcales; Staphylococcaceae; Staphylococcus; NA

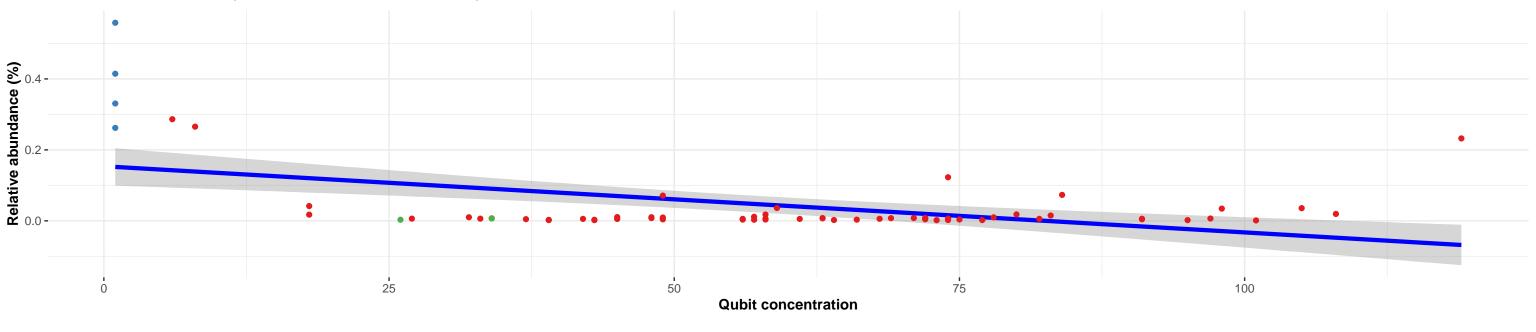


**Qubit concentration** 

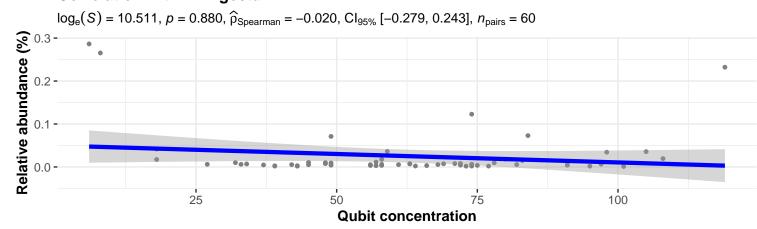
# Bacteria; Patescibacteria; Parcubacteria; Candidatus Nomurabacteria; NA; NA; NA

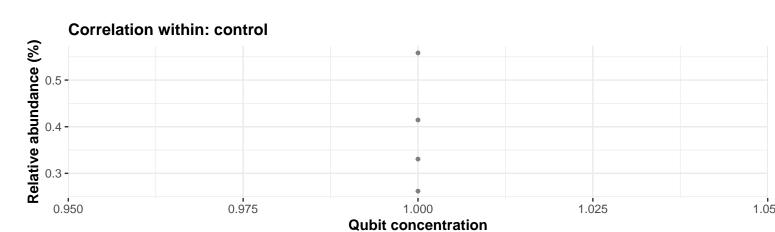


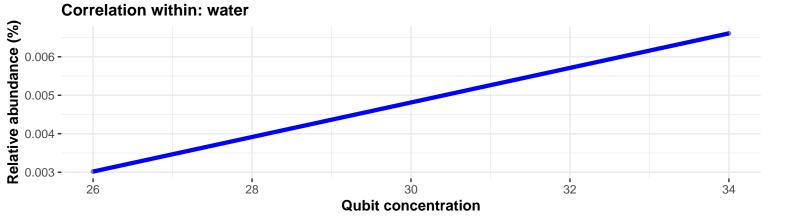




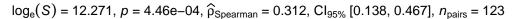
Sample\_type • Digesta • control • water

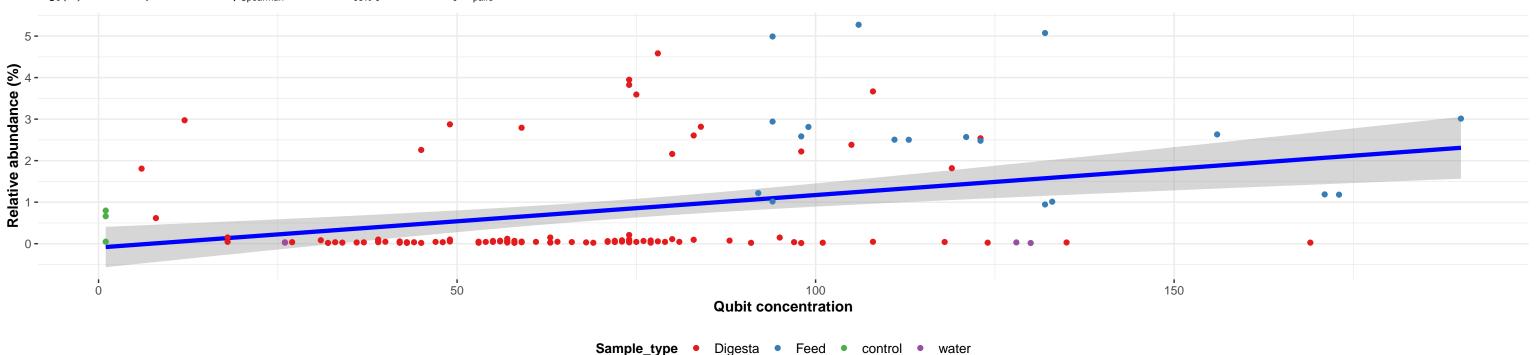




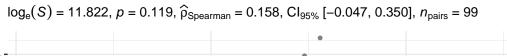


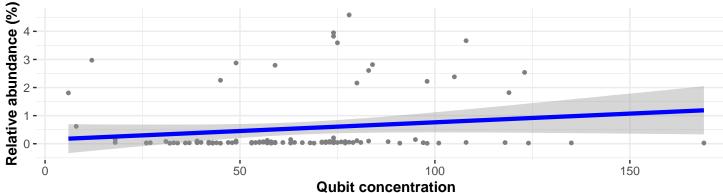
#### **Correlation with all samples**



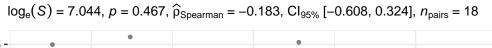


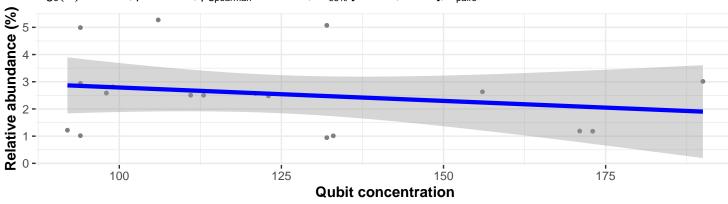
## **Correlation within: Digesta**

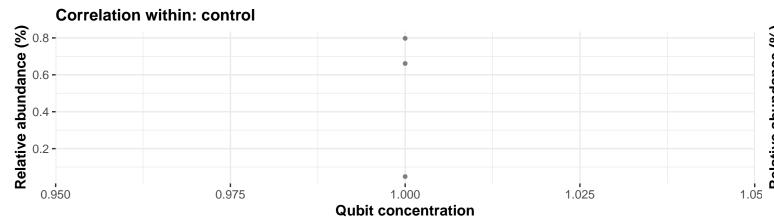


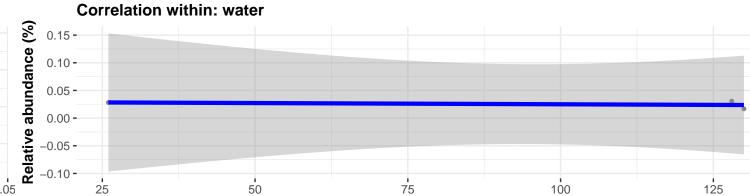


#### **Correlation within: Feed**







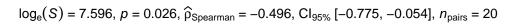


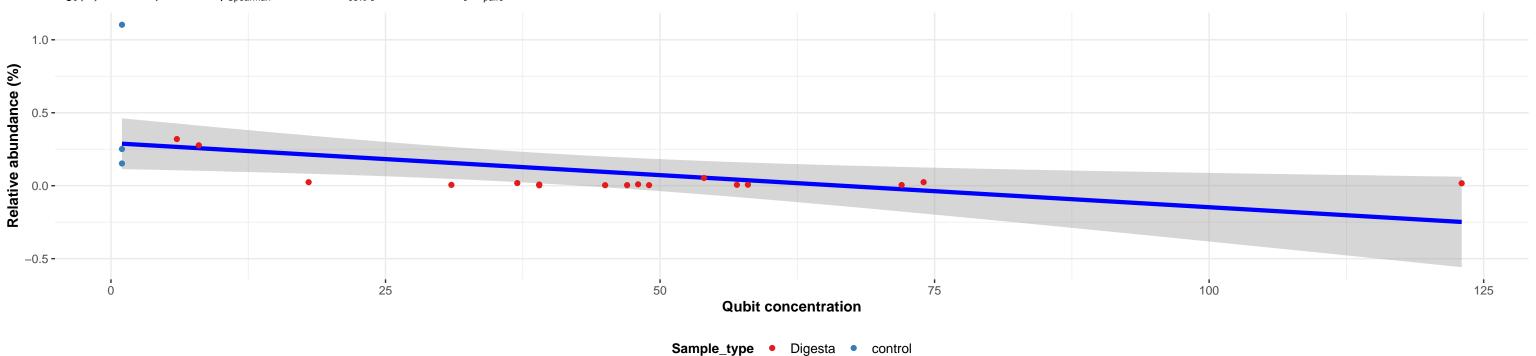
**Qubit concentration** 

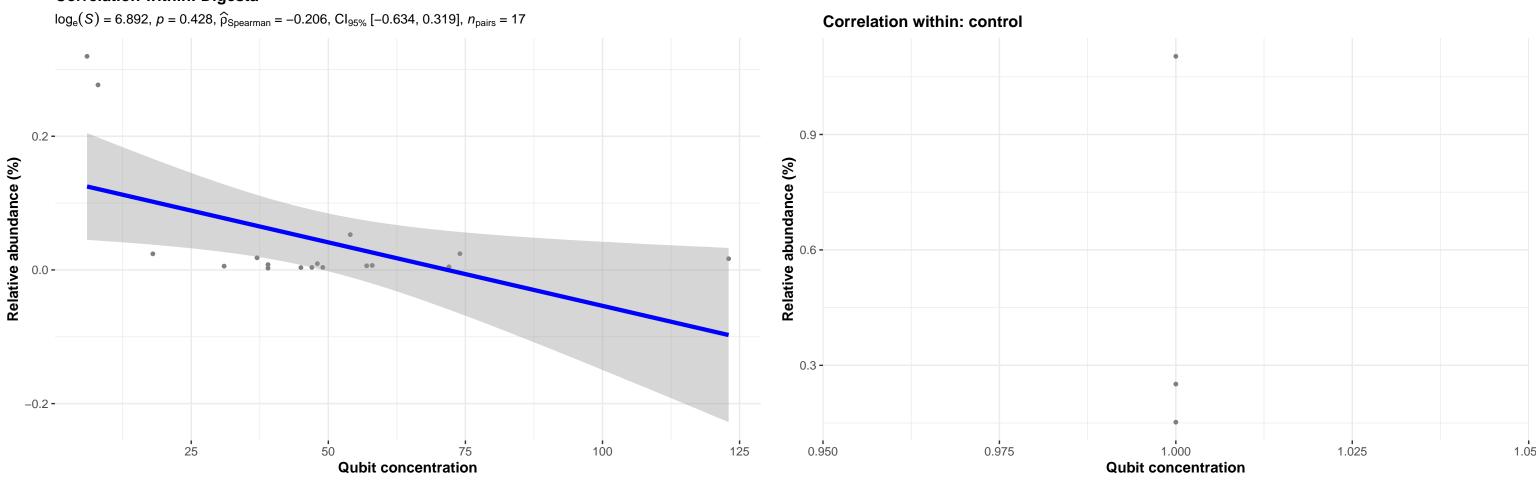
100

## Bacteria; Actinobacteriota; Actinobacteria; Micrococcales; Brevibacteriaceae; Brevibacterium; senegalense

#### **Correlation with all samples**

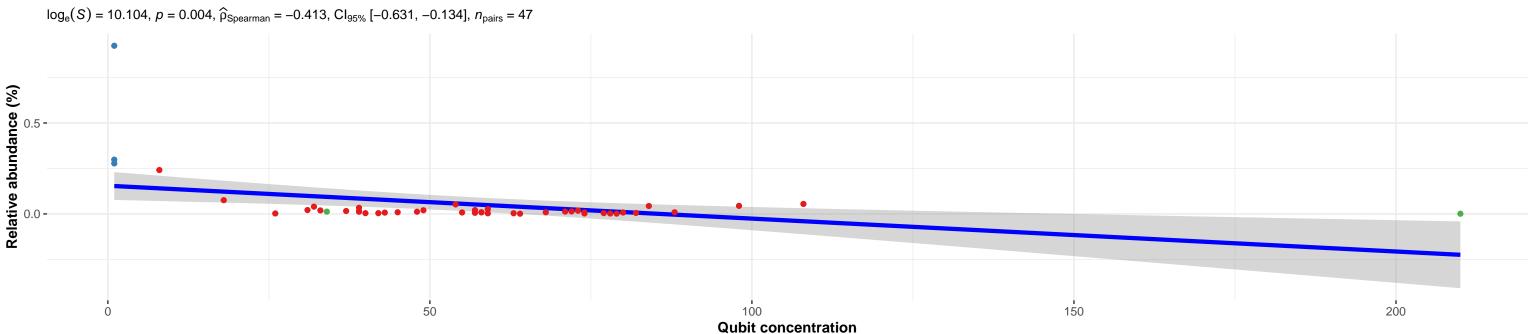






# Bacteria; Firmicutes; Bacilli; Bacillales; Bacillaceae; Pseudogracilibacillus; NA

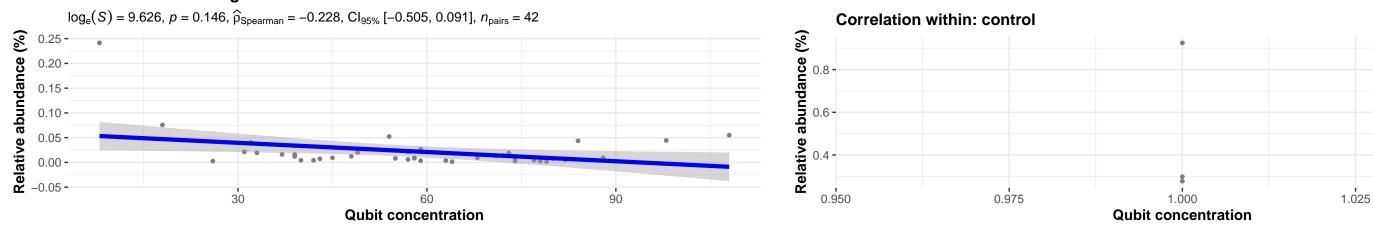


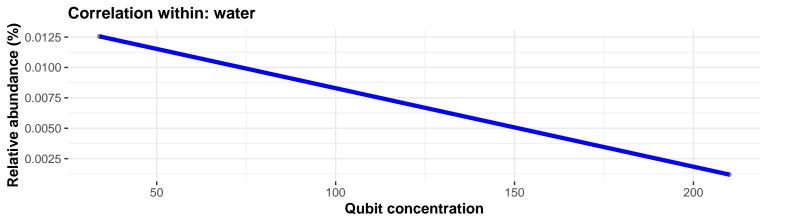


Sample\_type • Digesta • control • water

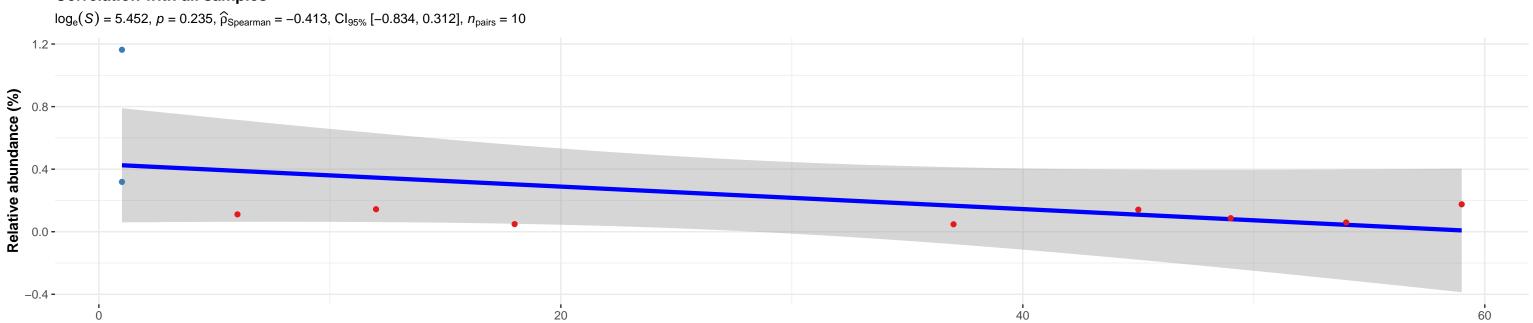
1.05







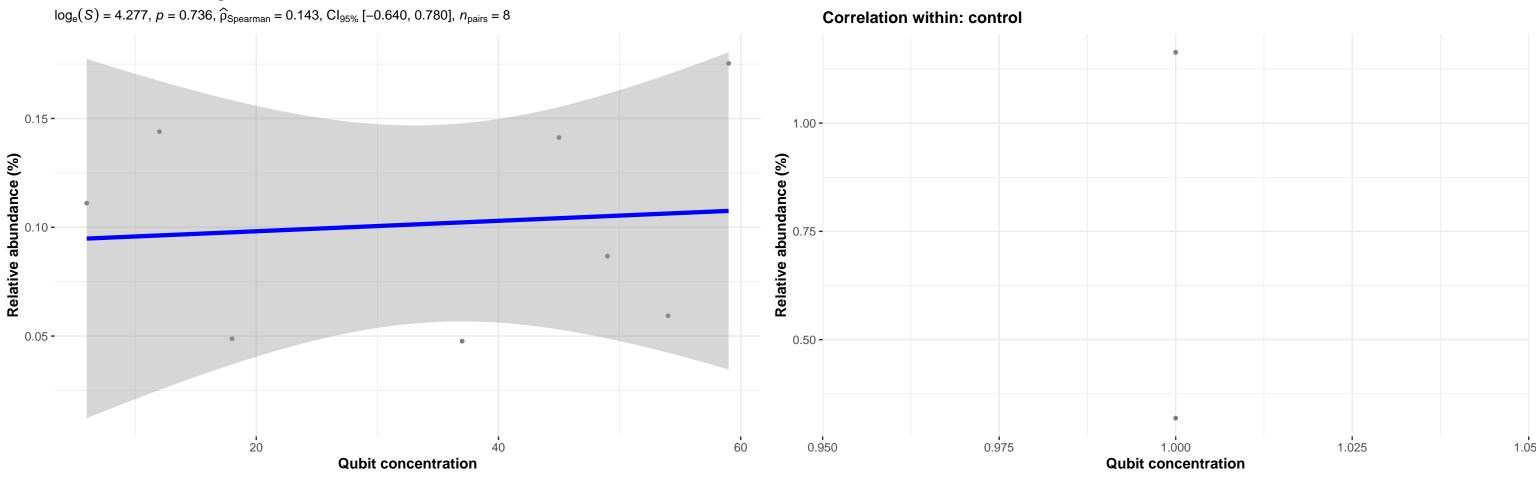




**Qubit concentration** 

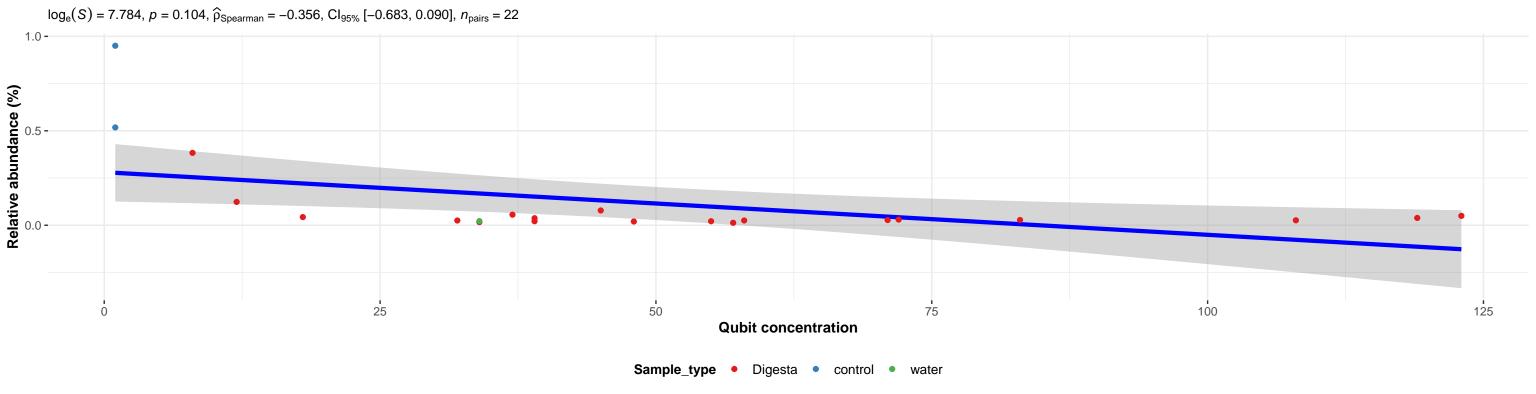




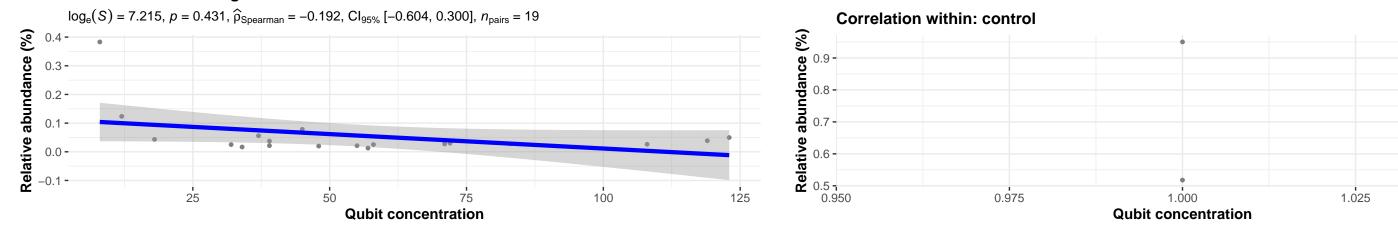


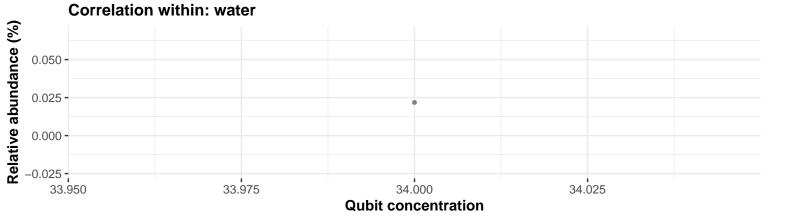
## Bacteria; Firmicutes; Bacilli; Lactobacillales; Enterococcaceae; Enterococcus; NA





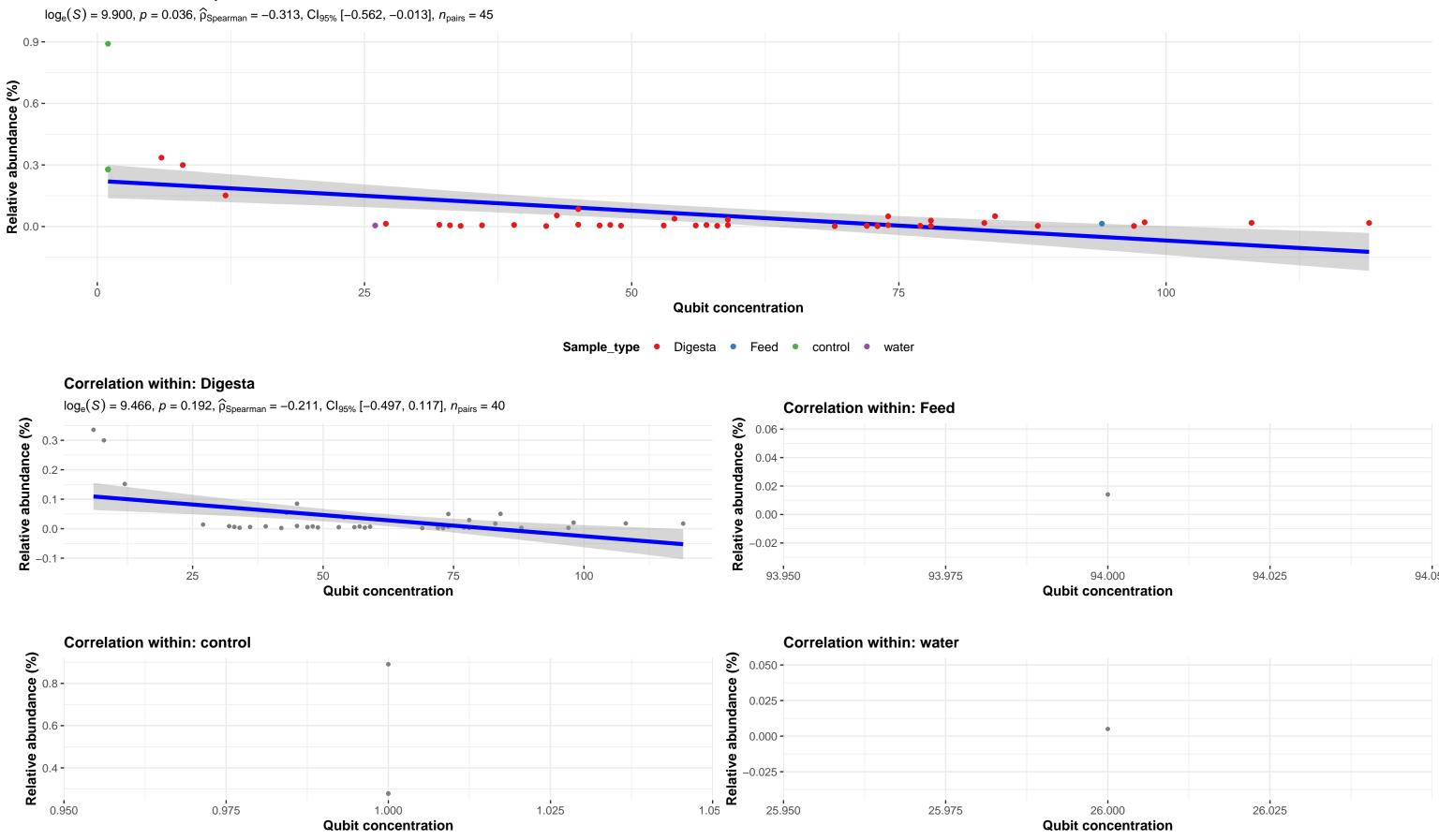
1.05



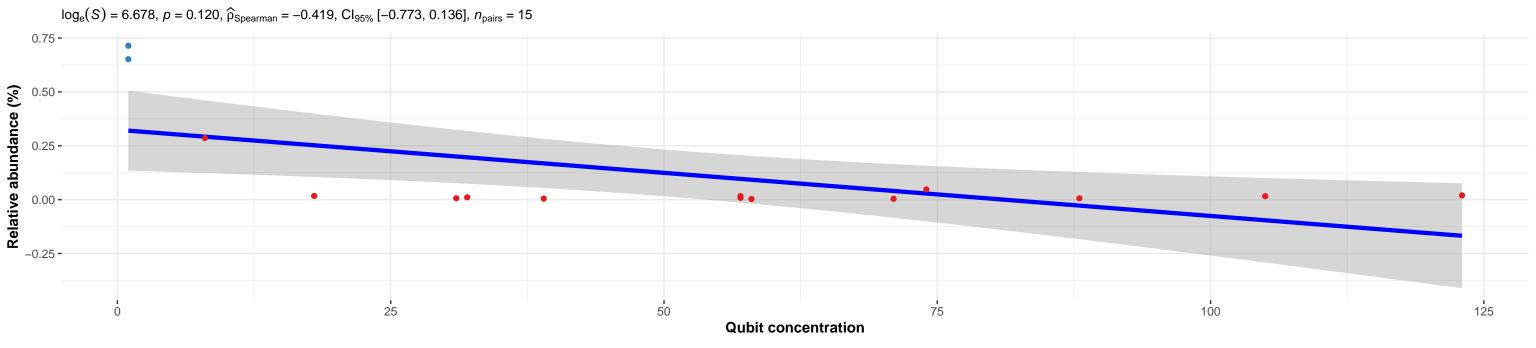


## Bacteria; Proteobacteria; Gammaproteobacteria; Xanthomonadales; Xanthomonadaceae; Stenotrophomonas; NA



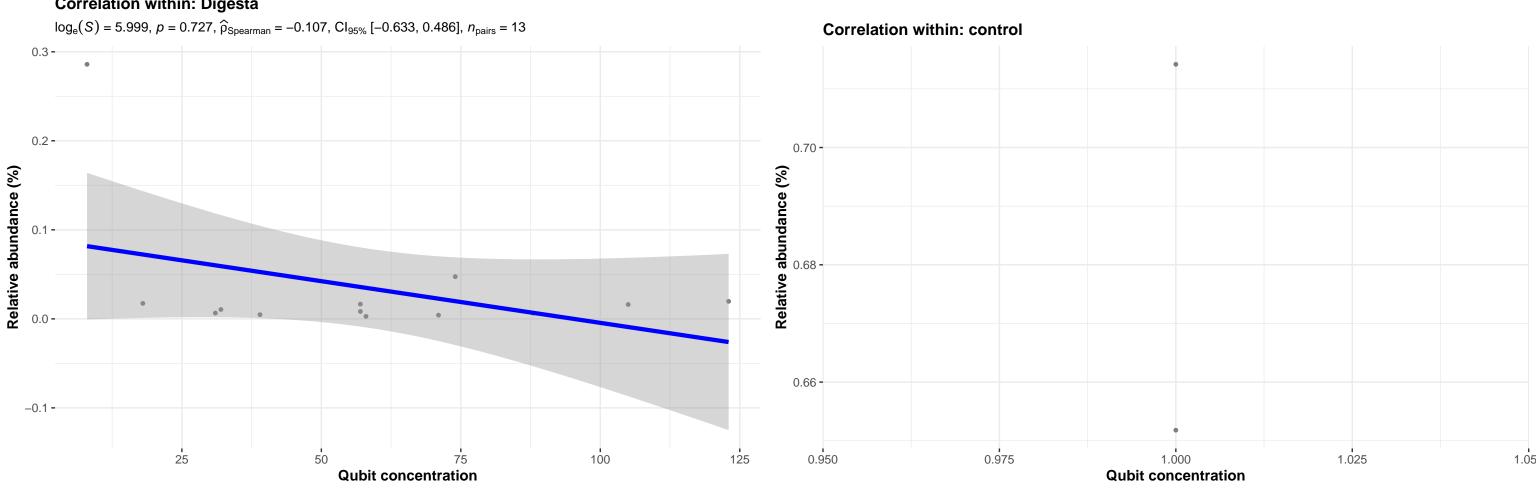






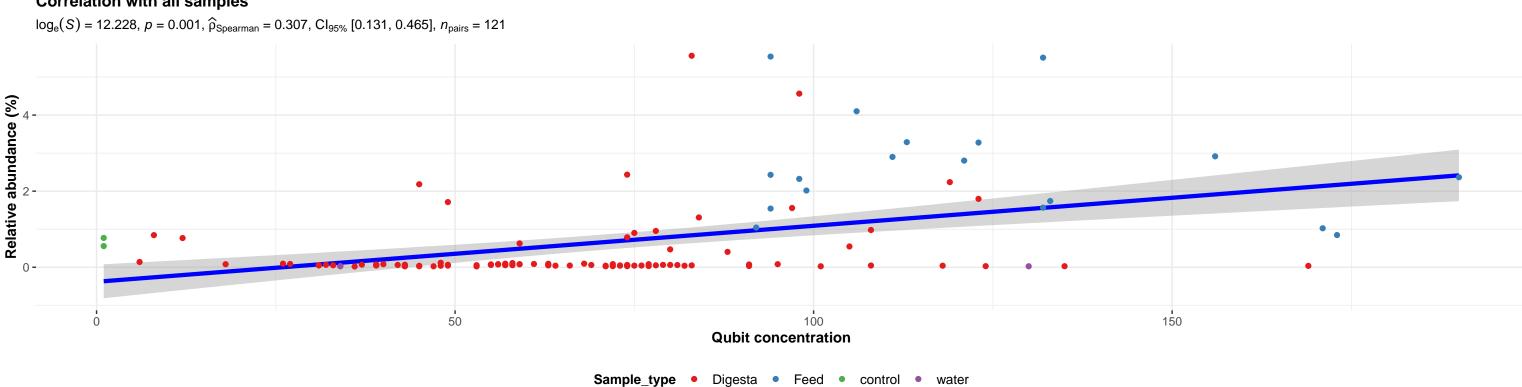
Sample\_type • Digesta • control





# Bacteria; Proteobacteria; Gammaproteobacteria; Enterobacterales; Vibrionaceae; Photobacterium; phosphoreum

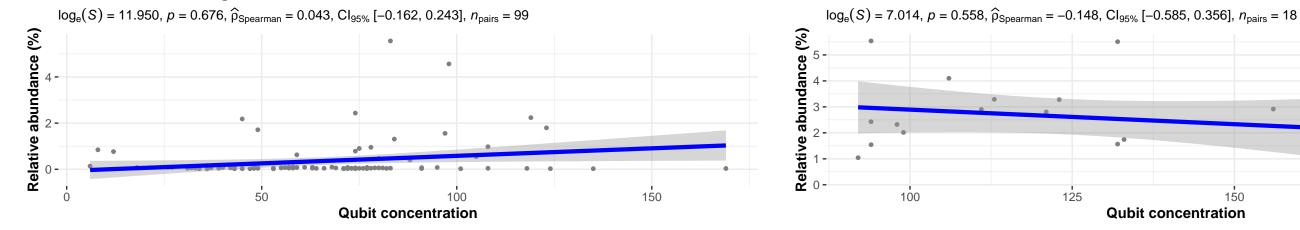


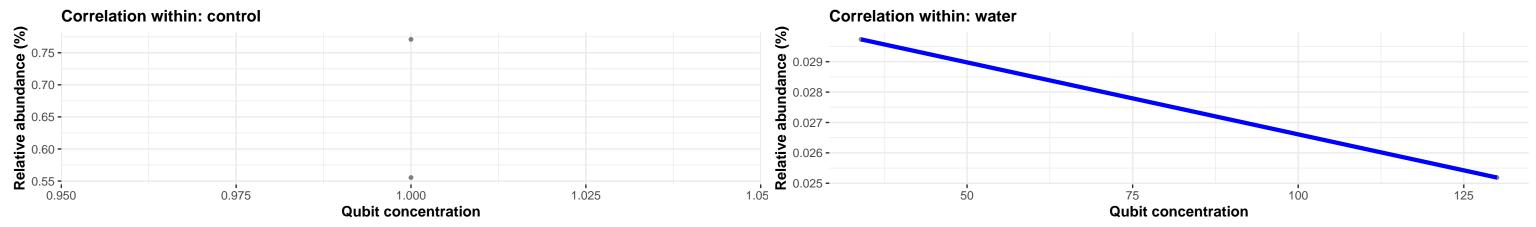


**Correlation within: Feed** 

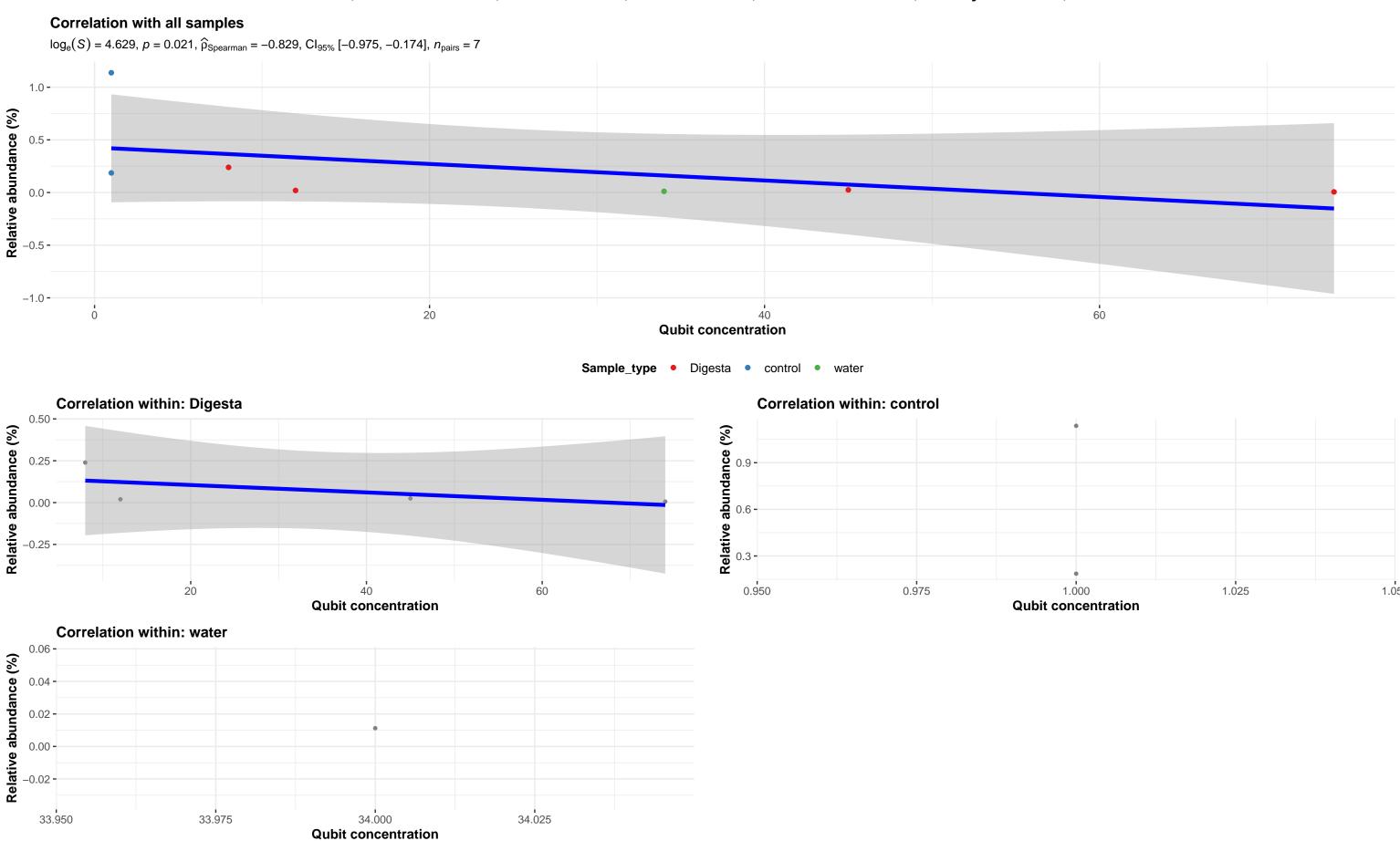
175



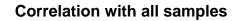


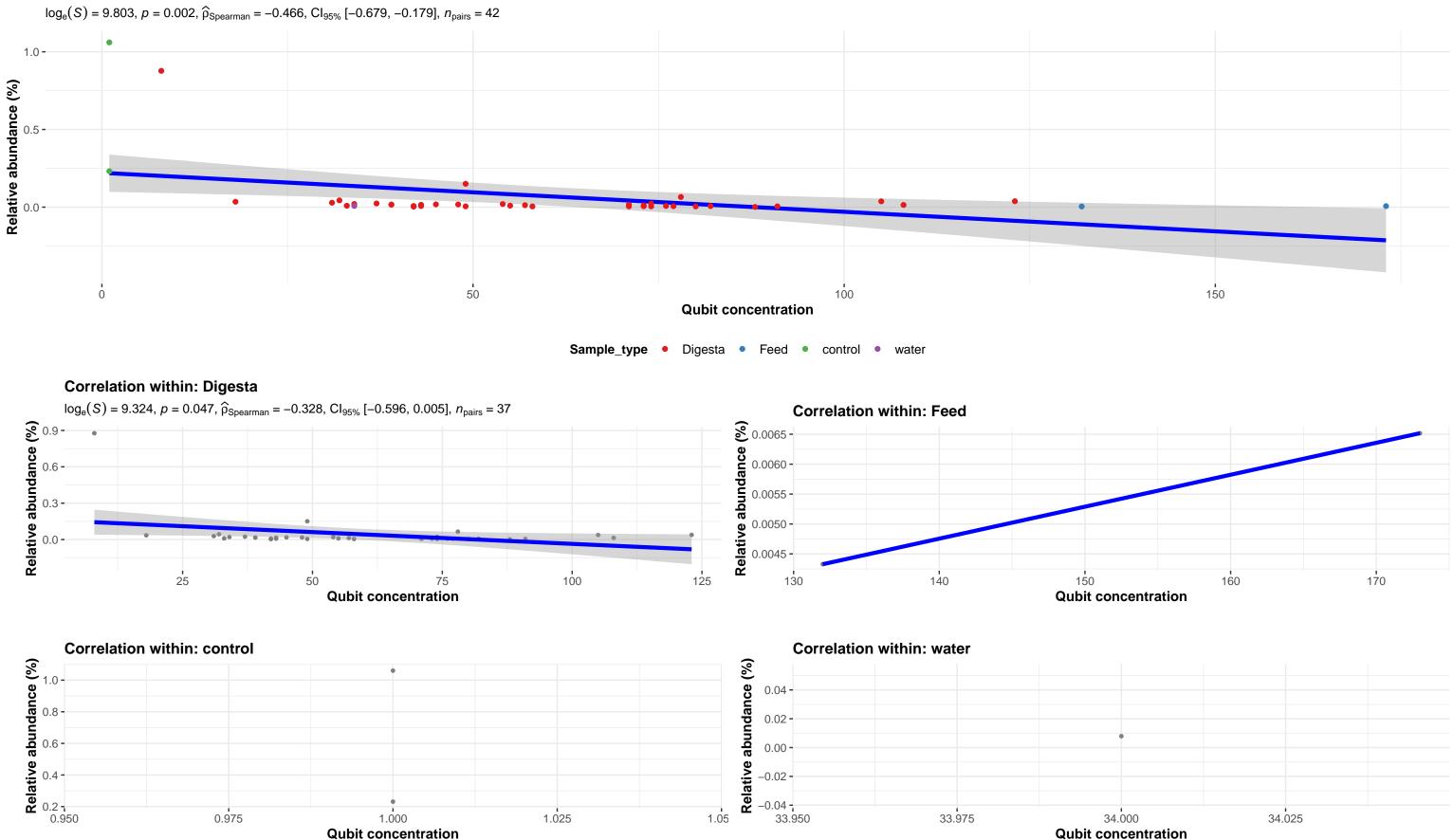


# Bacteria; Actinobacteriota; Actinobacteria; Micrococcales; Dermabacteraceae; Brachybacterium; muris

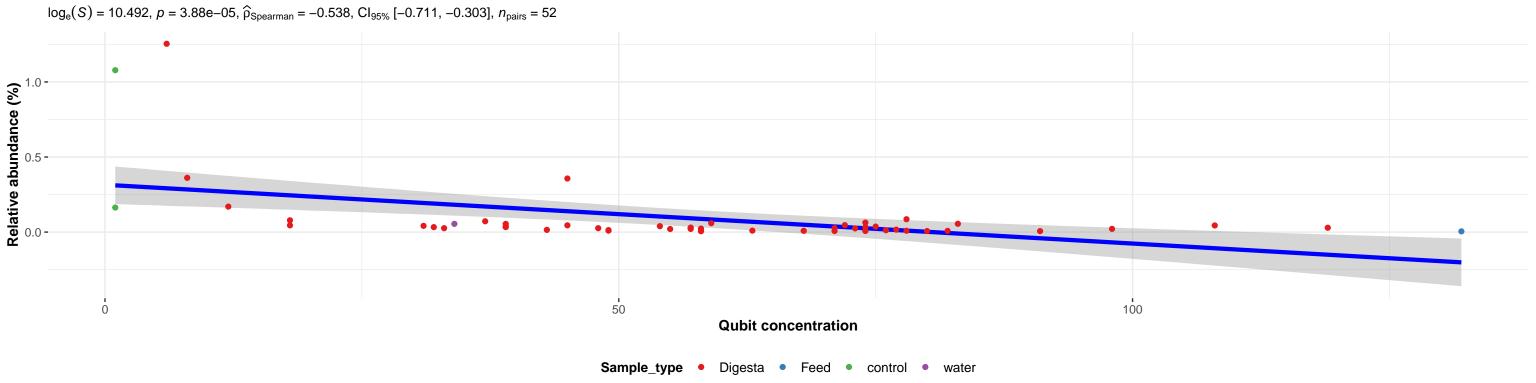


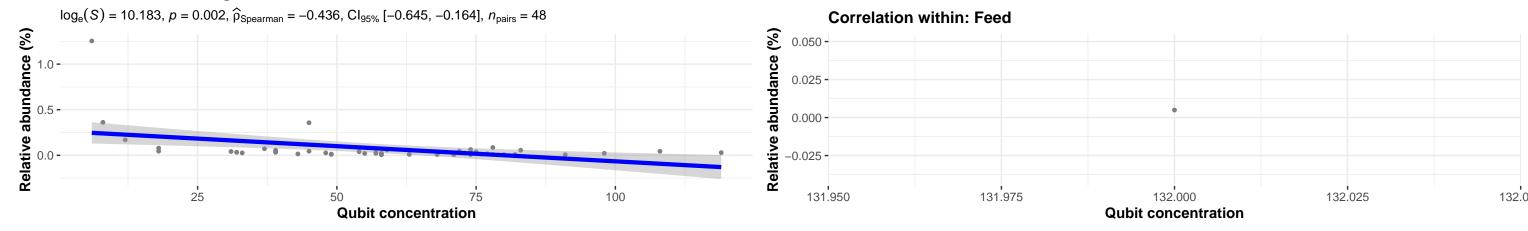
## Bacteria; Actinobacteriota; Actinobacteria; Micrococcales; Micrococcaceae; Pseudoglutamicibacter; NA

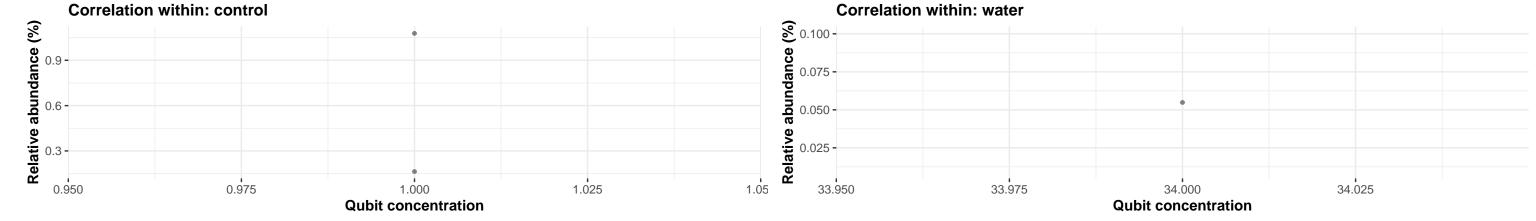




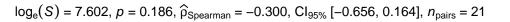


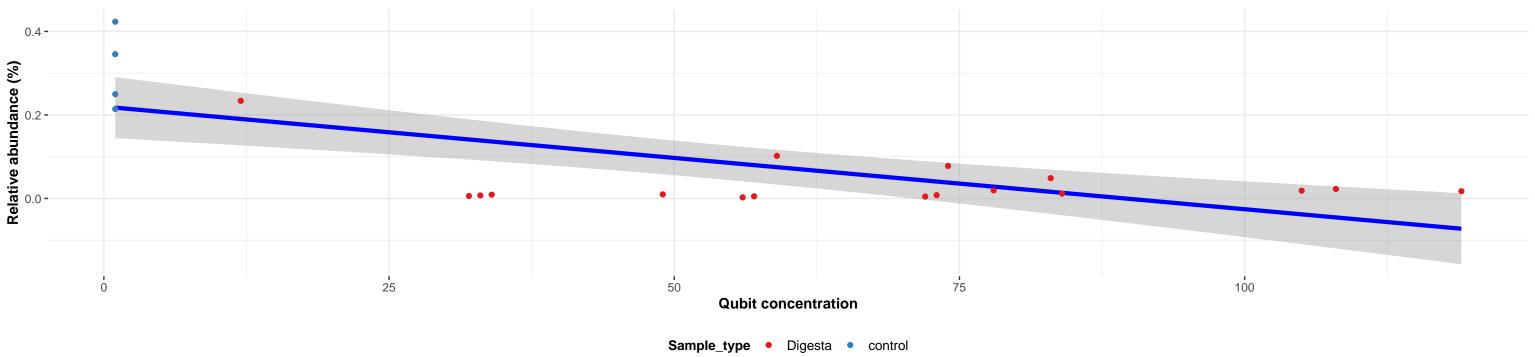


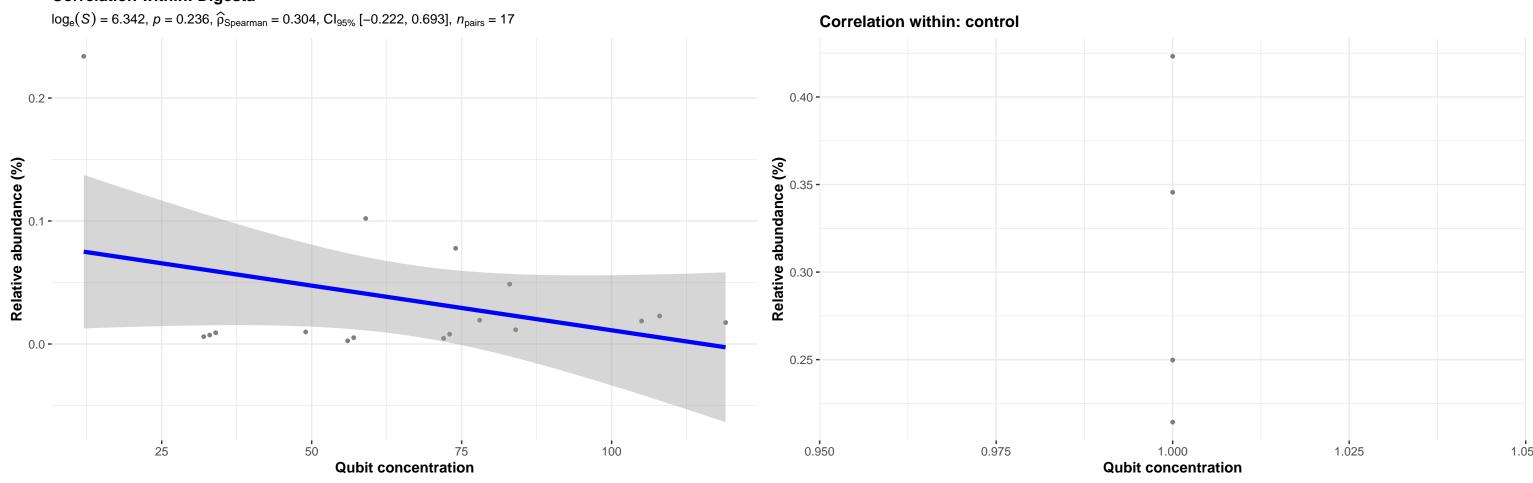




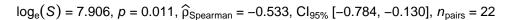
## **Correlation with all samples**

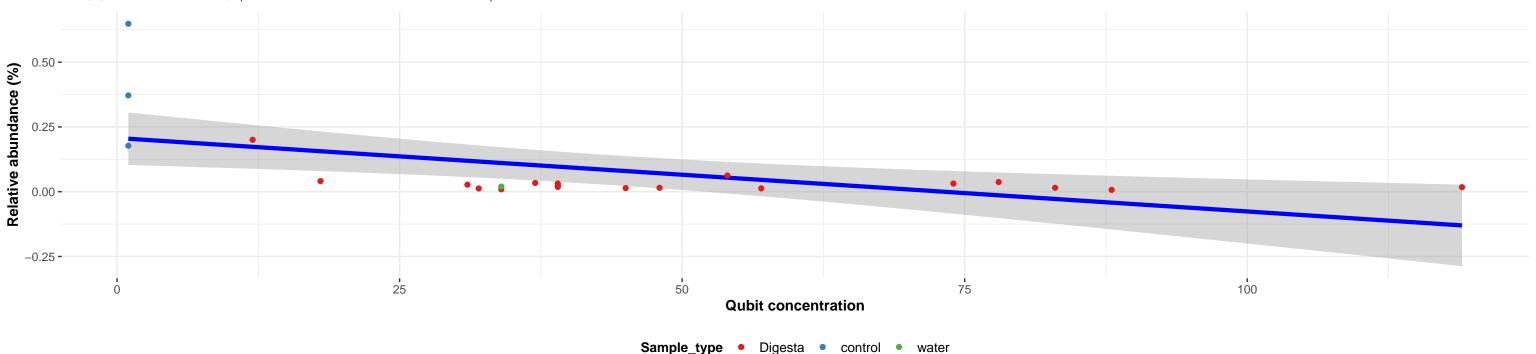


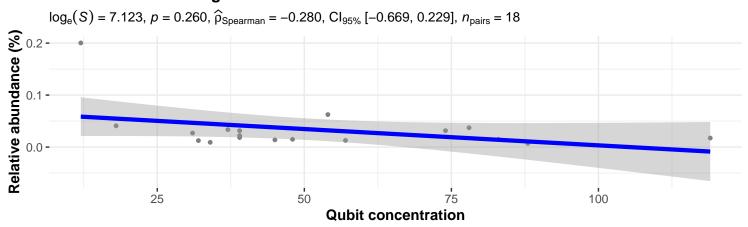


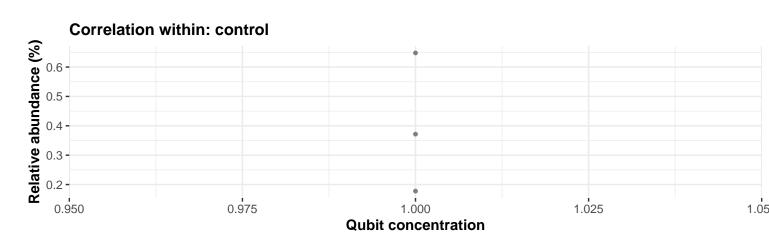


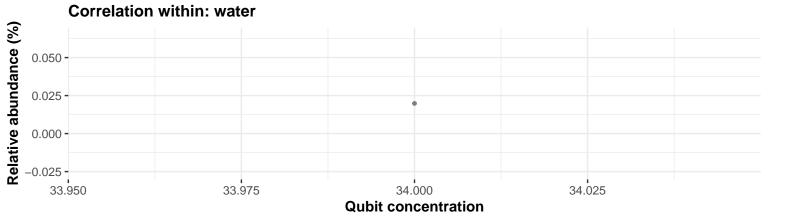






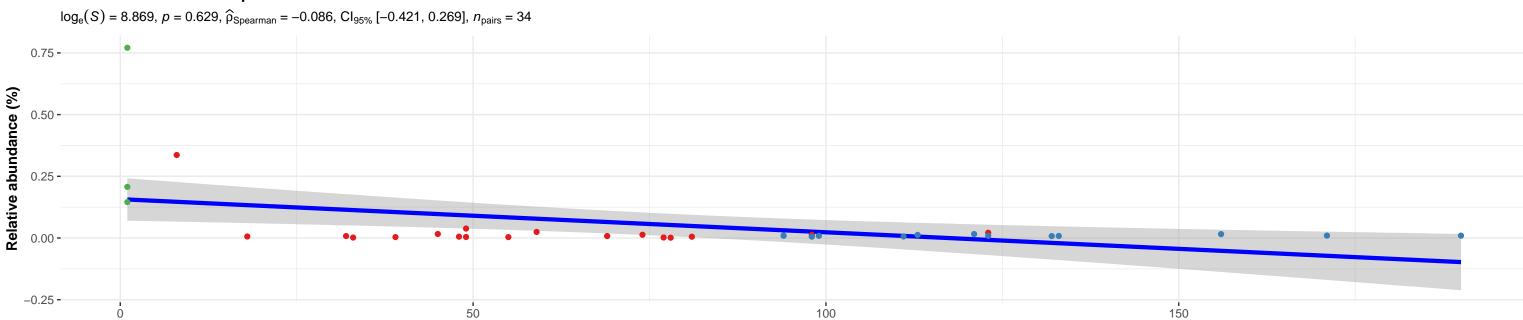




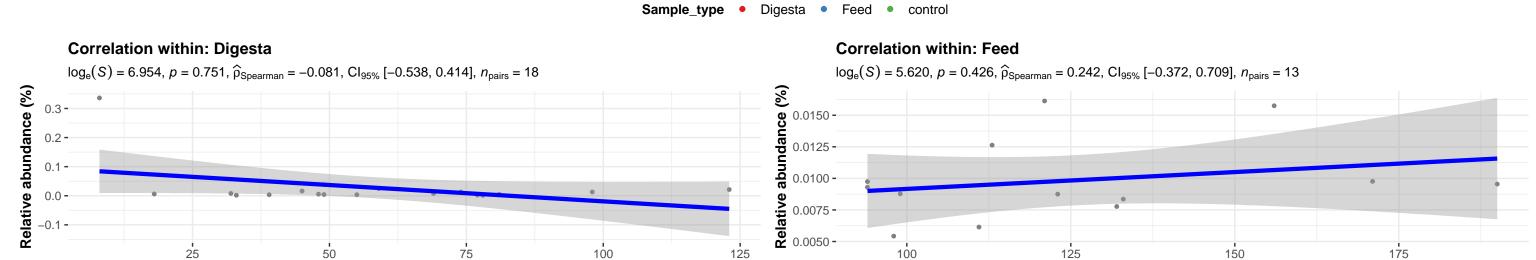


## Bacteria; Proteobacteria; Gammaproteobacteria; Pseudomonadales; Pseudomonadaceae; Pseudomonas; NA

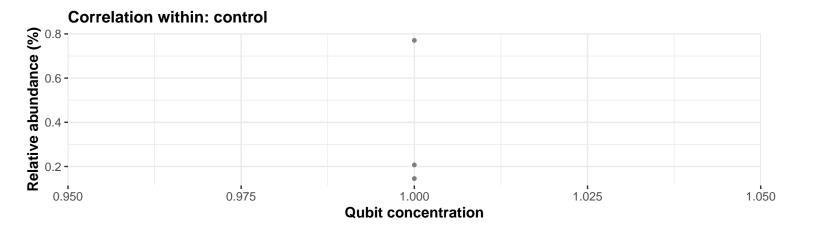




**Qubit concentration** 

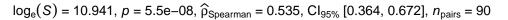


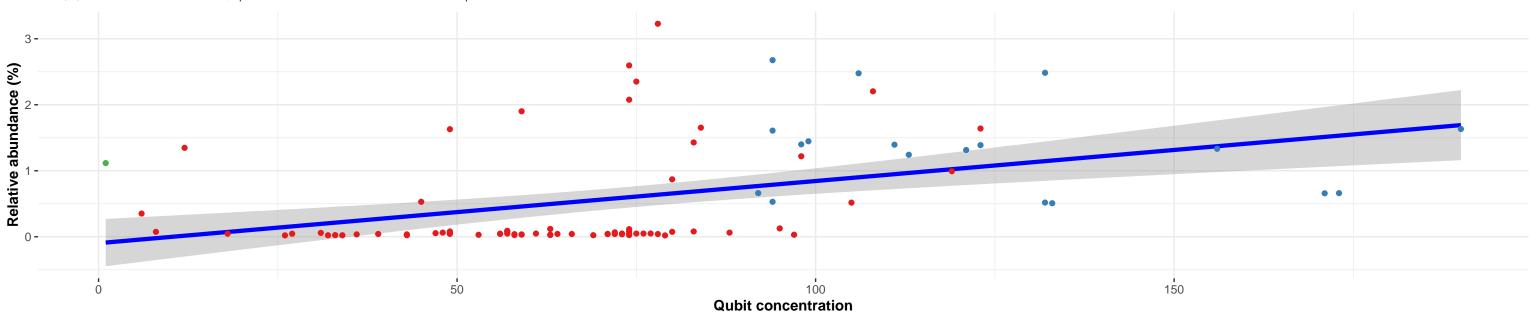
**Qubit concentration** 



**Qubit concentration** 



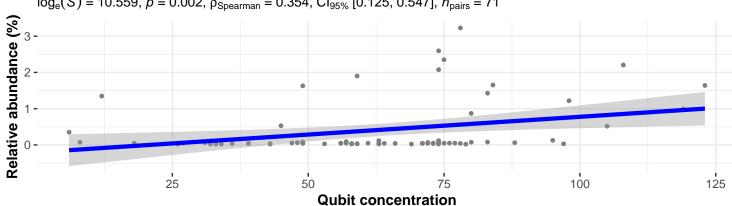




Sample\_type • Digesta • Feed • control

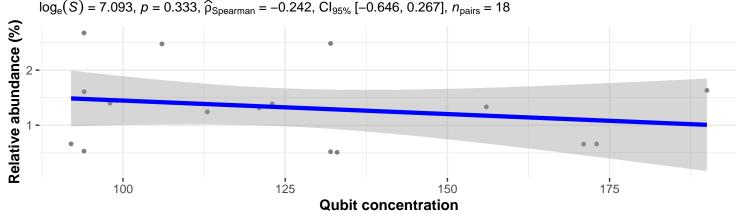
## **Correlation within: Digesta**

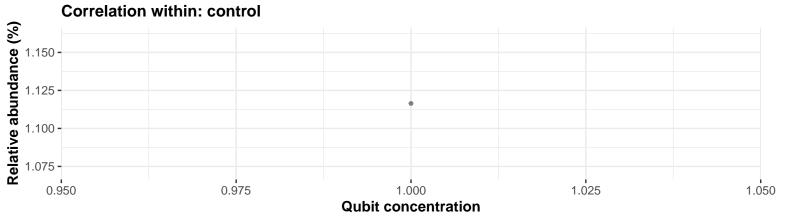
 $log_e(S) = 10.559$ , p = 0.002,  $\hat{\rho}_{Spearman} = 0.354$ ,  $Cl_{95\%}$  [0.125, 0.547],  $n_{pairs} = 71$ 



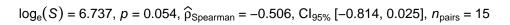
#### **Correlation within: Feed**

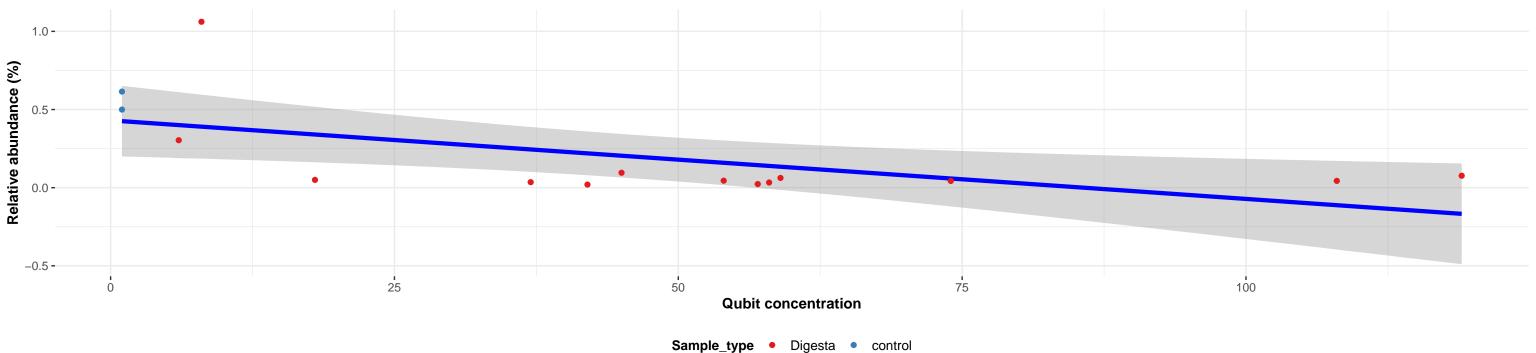
 $log_e(S) = 7.093, p = 0.333, \hat{\rho}_{Spearman} = -0.242, Cl_{95\%} [-0.646, 0.267], n_{pairs} = 18$ 

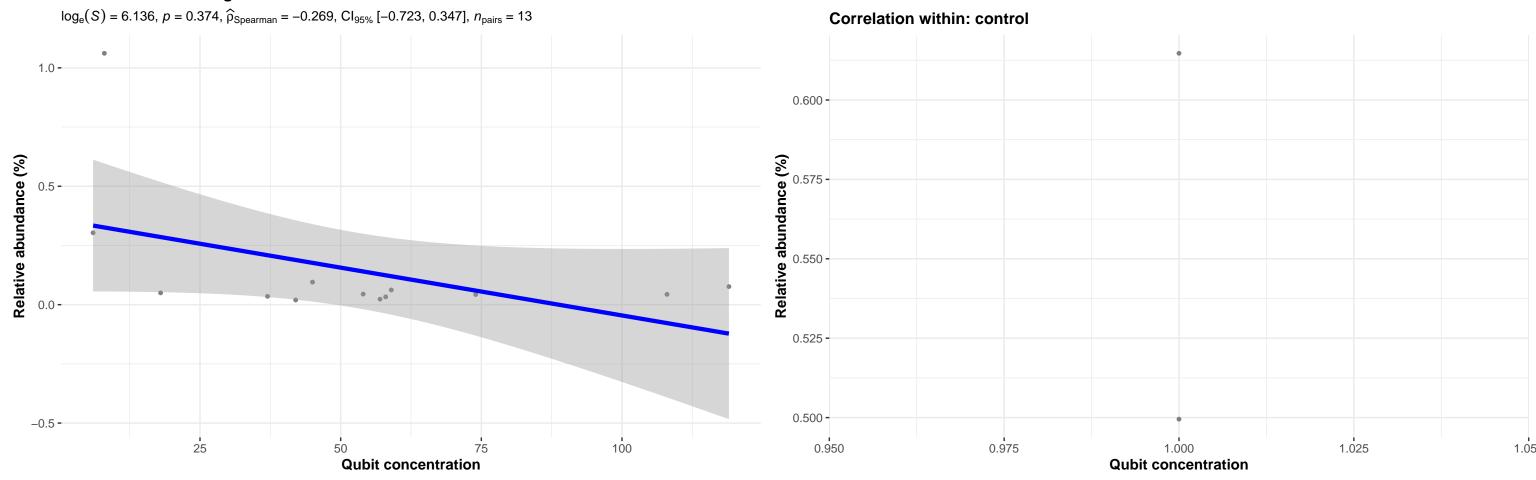




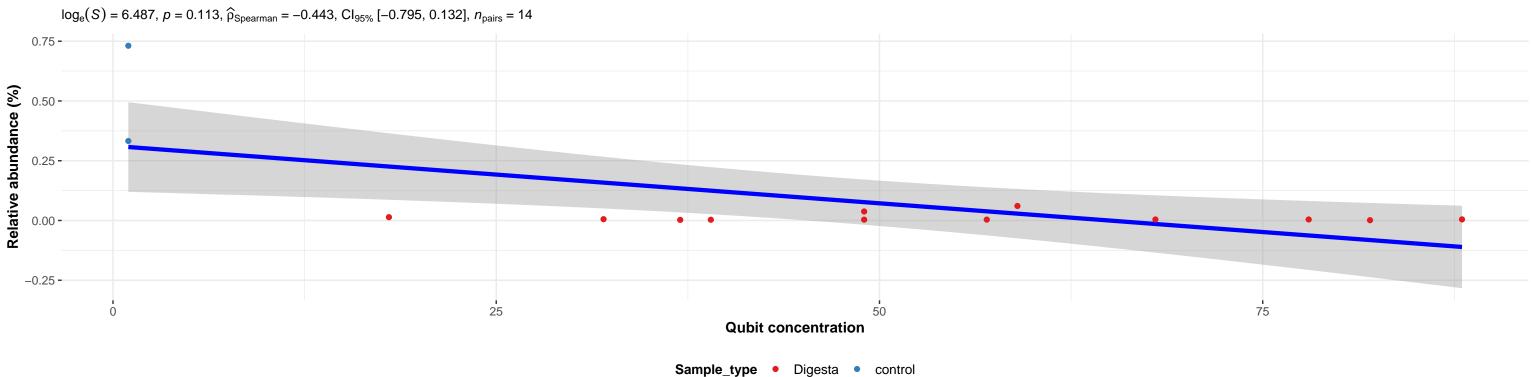
## **Correlation with all samples**



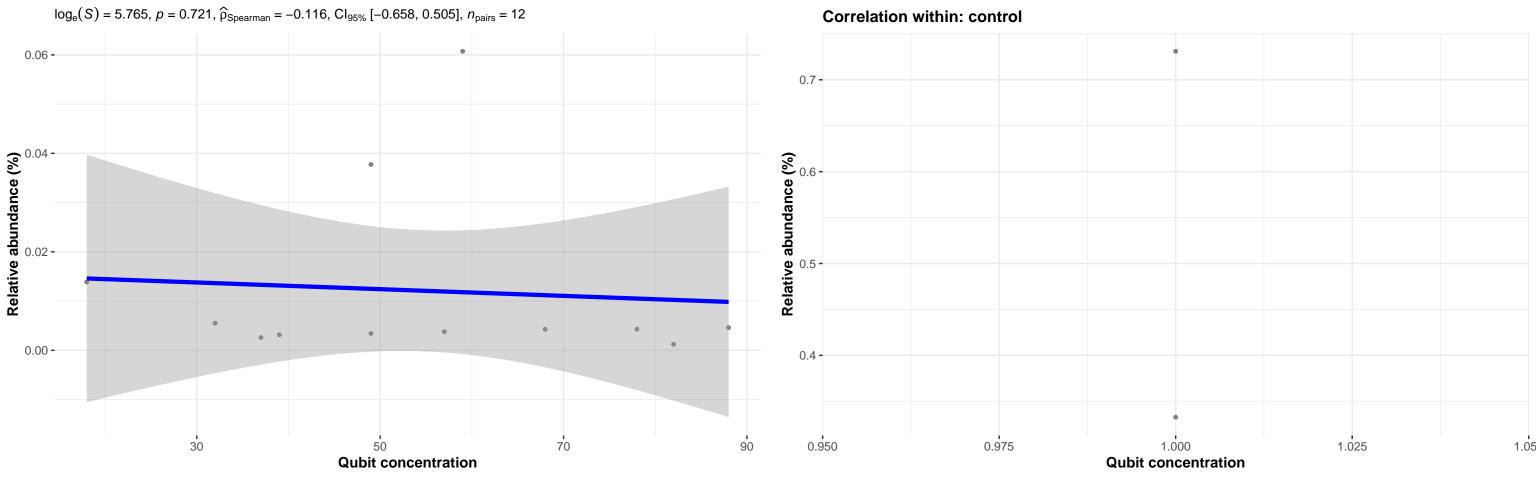






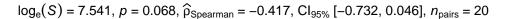


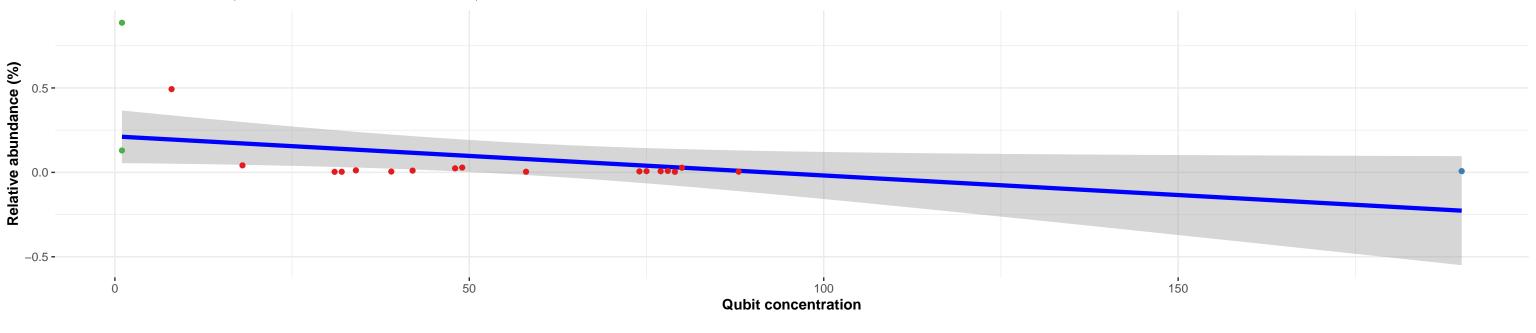




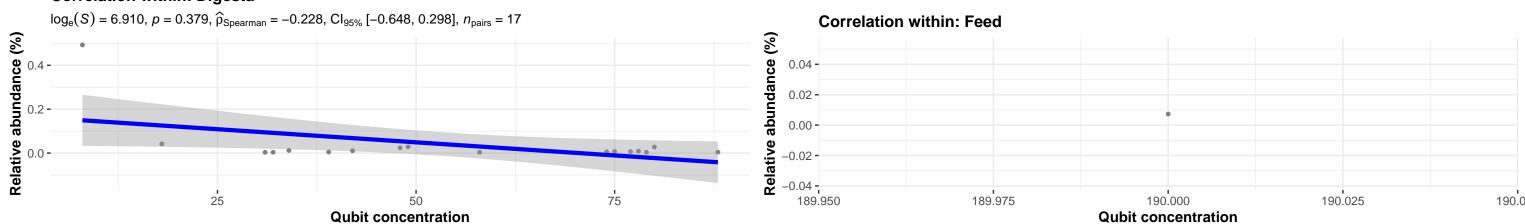
## Bacteria; Firmicutes; Bacilli; Lactobacillales; Enterococcaceae; Enterococcus; NA



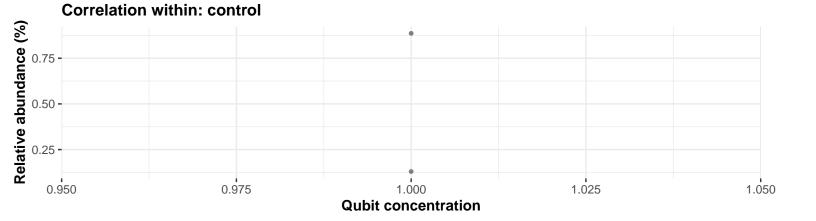




#### **Correlation within: Digesta**

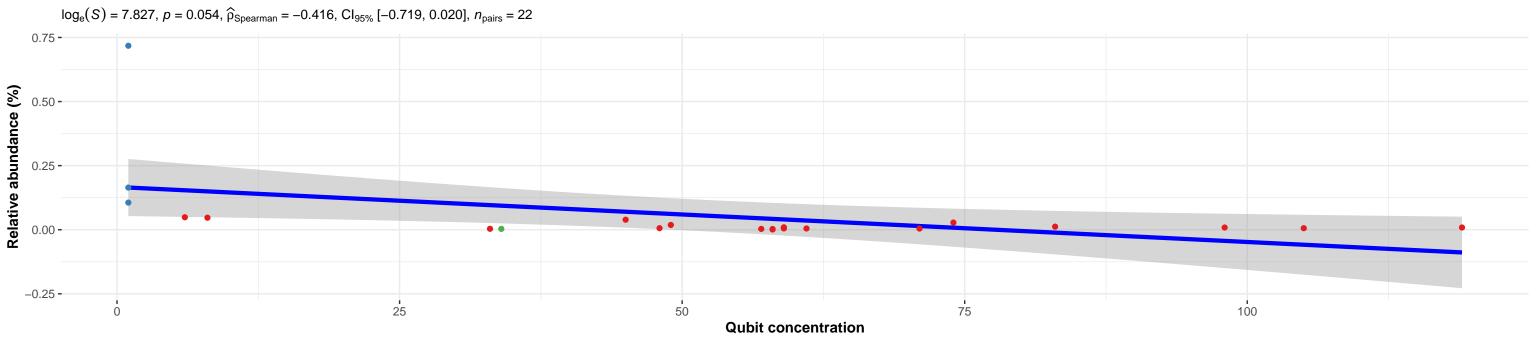


Sample\_type • Digesta • Feed • control

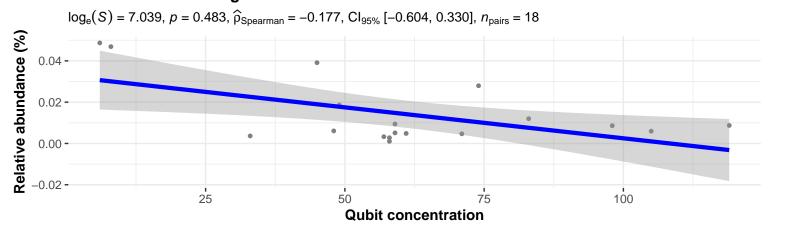


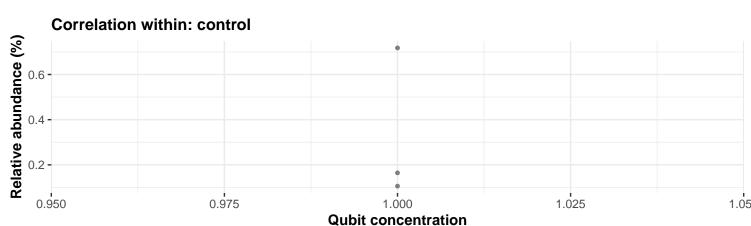
## Bacteria; Patescibacteria; Parcubacteria; Candidatus Nomurabacteria; NA; NA; NA

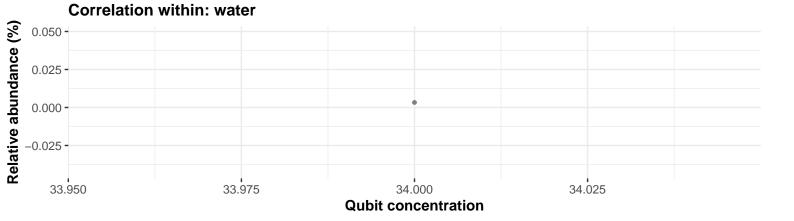




Sample\_type • Digesta • control • water

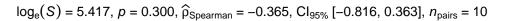


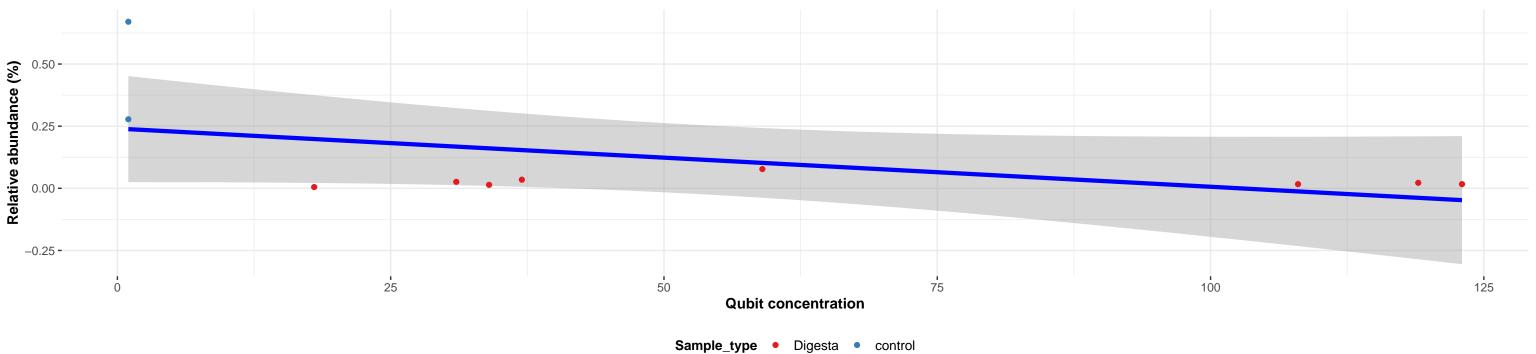


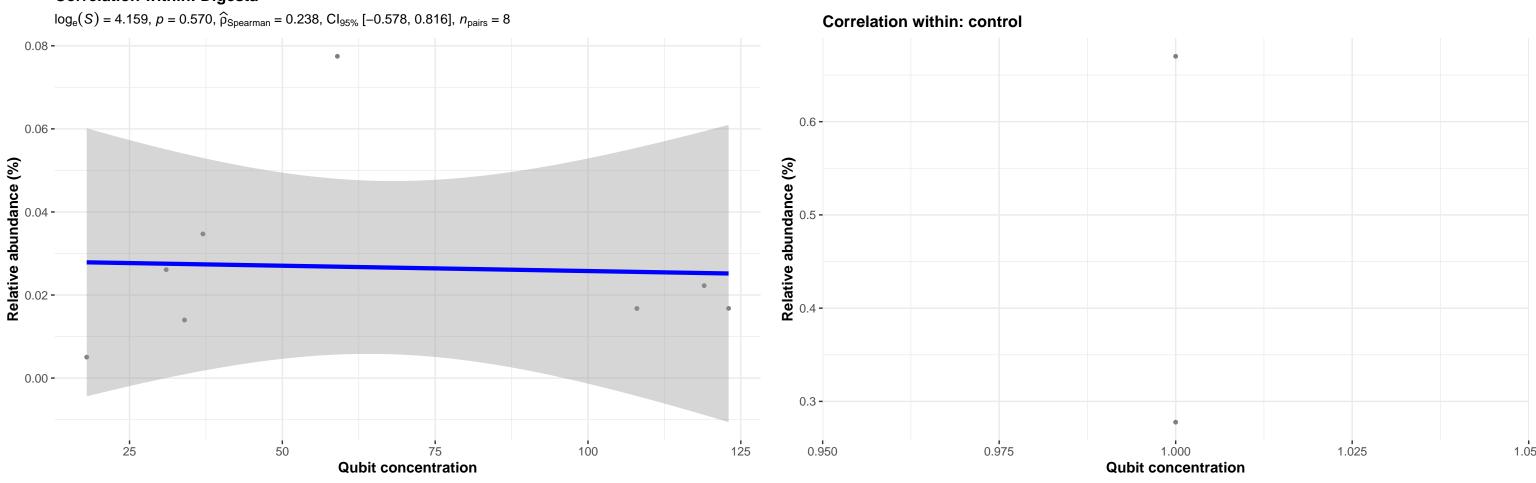


# Bacteria; Firmicutes; Bacilli; Lactobacillales; Enterococcaceae; Enterococcus; NA

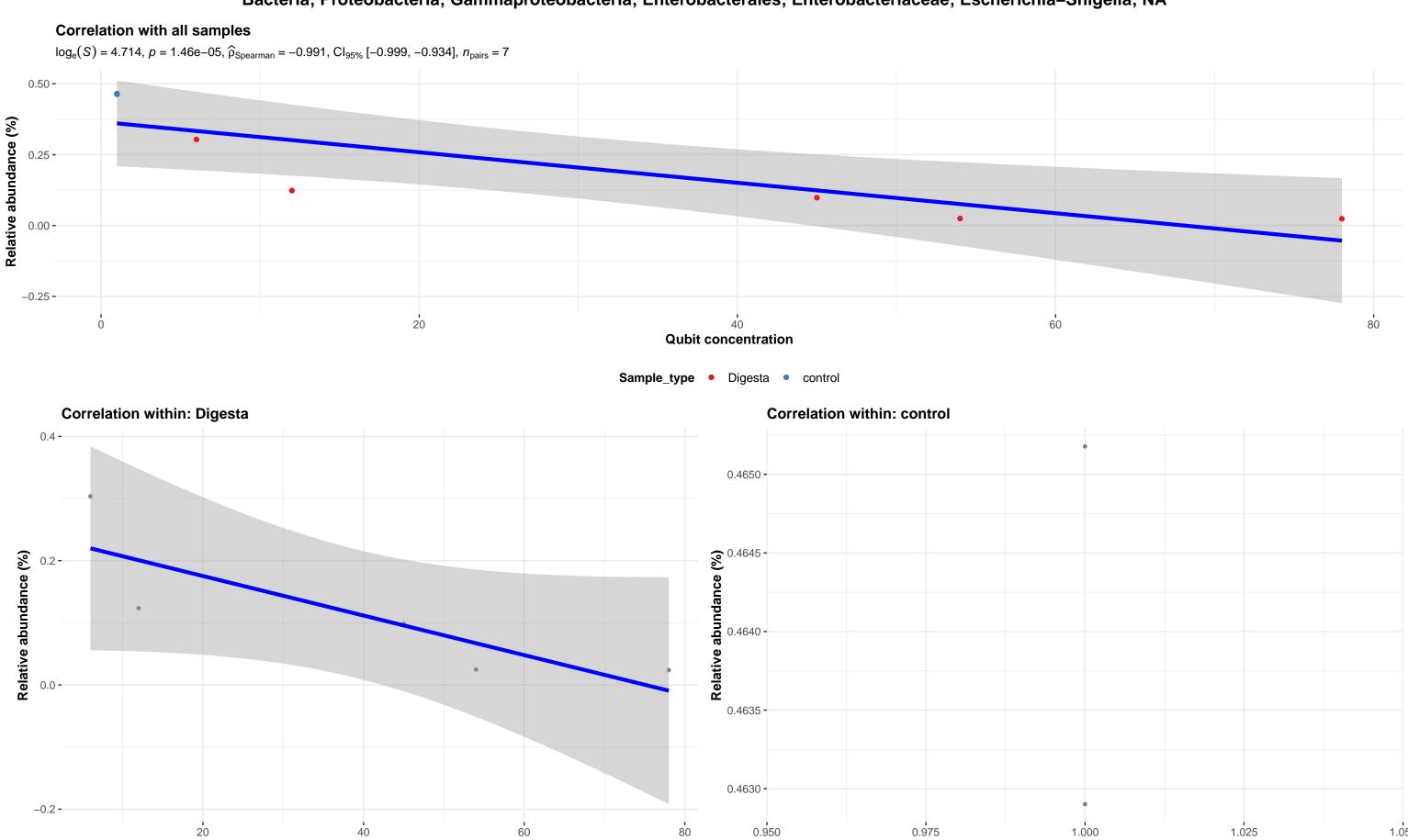
#### **Correlation with all samples**







# Bacteria; Proteobacteria; Gammaproteobacteria; Enterobacterales; Enterobacteriaceae; Escherichia-Shigella; NA

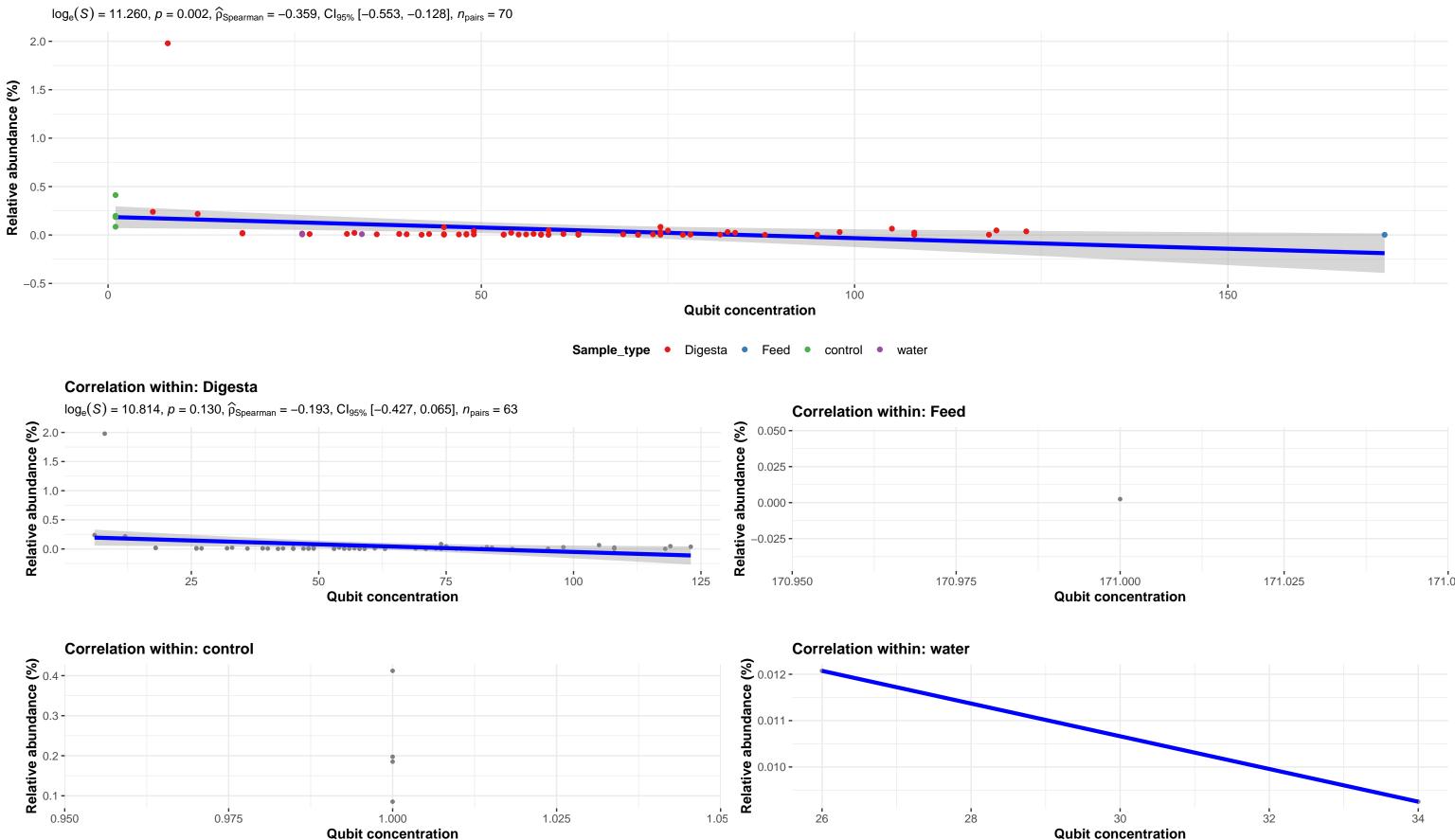


**Qubit concentration** 

**Qubit concentration** 

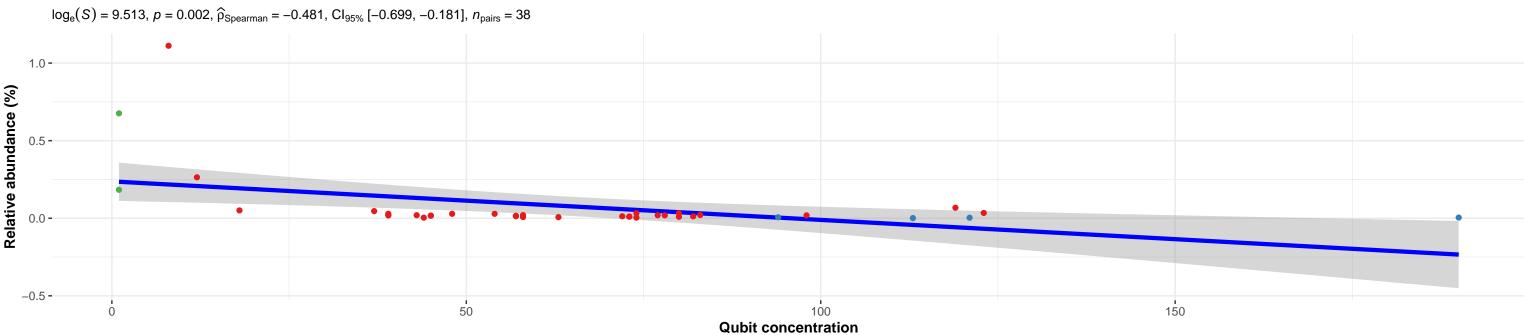
# Bacteria; Proteobacteria; Gammaproteobacteria; Pseudomonadales; Halomonadaceae; Halomonas; nitritophilus



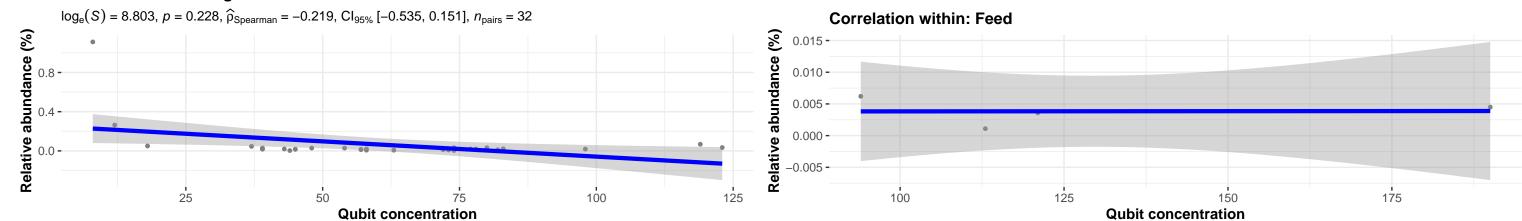


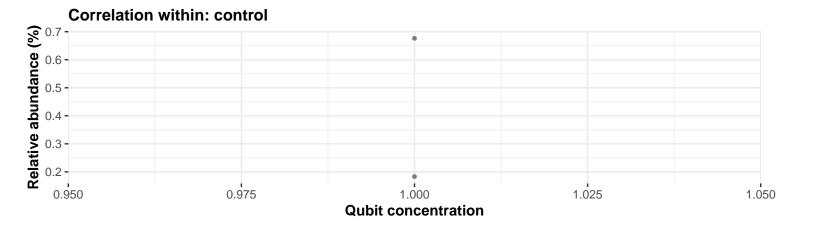
# Bacteria; Actinobacteriota; Actinobacteria; Corynebacteriales; Corynebacteriaceae; Corynebacterium; urealyticum





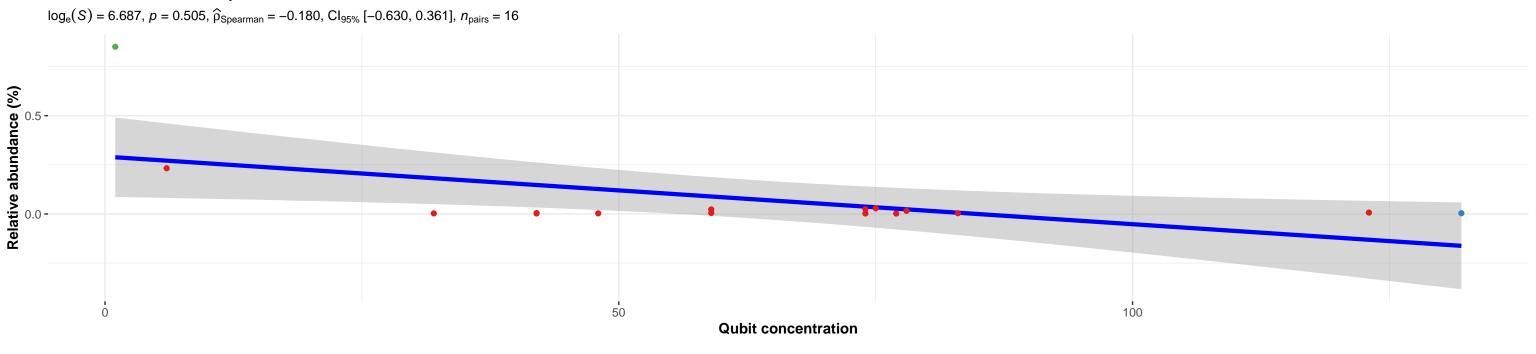




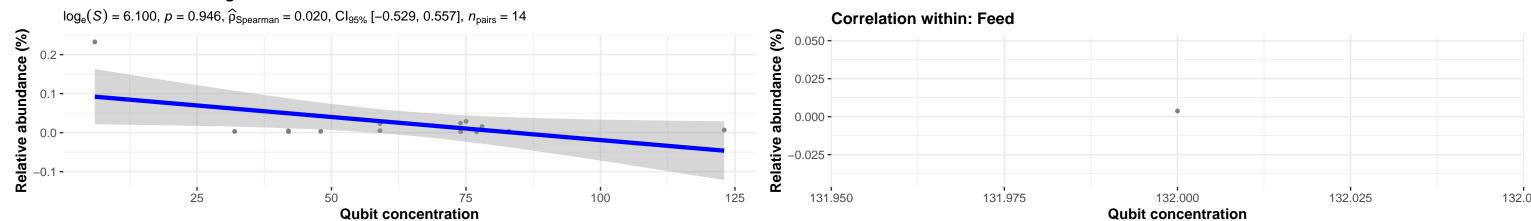


## Bacteria; Proteobacteria; Gammaproteobacteria; Enterobacterales; Morganellaceae; Providencia; NA

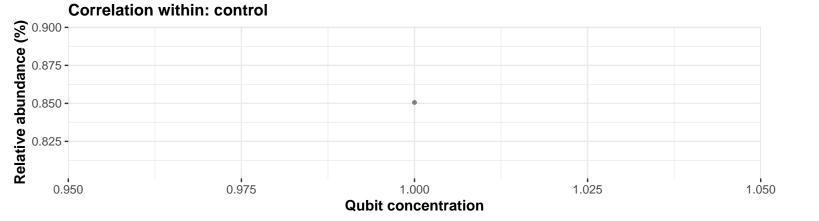






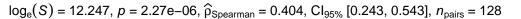


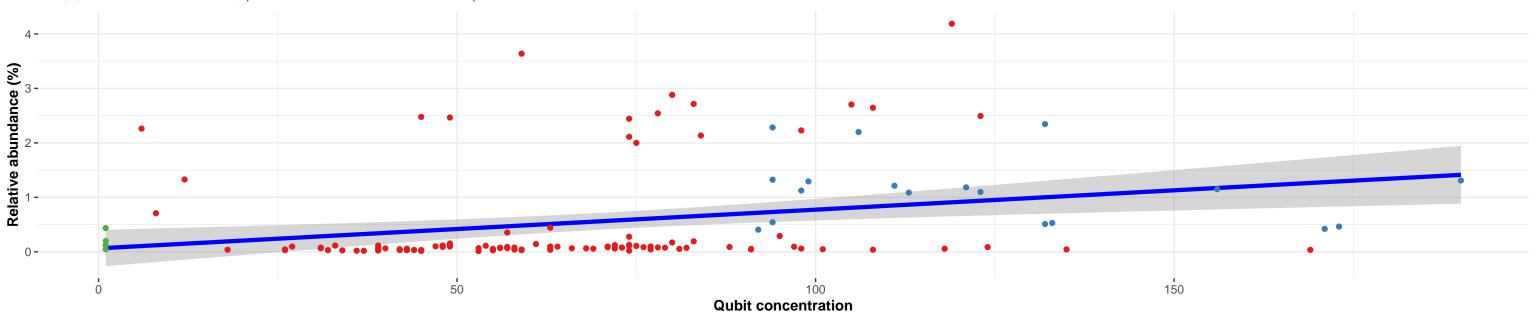
Sample\_type • Digesta • Feed • control



## Bacteria; Firmicutes; Bacilli; Lactobacillales; Lactobacillaceae; Ligilactobacillus; NA



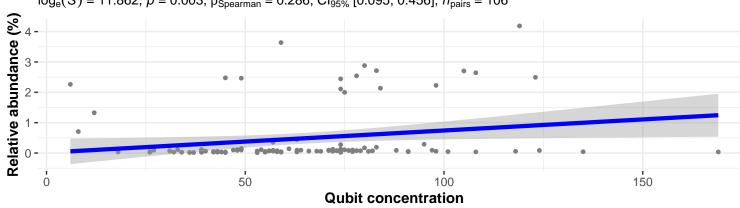




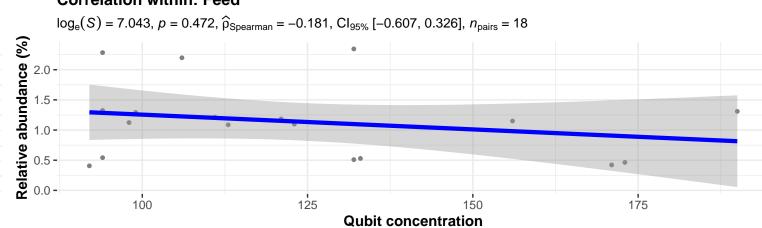
Sample\_type • Digesta • Feed • control

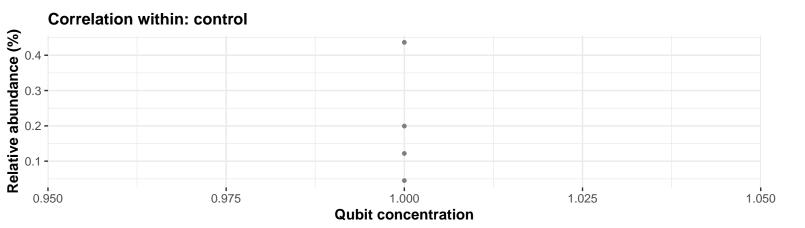
## **Correlation within: Digesta**

 $\log_{e}(S) = 11.862, p = 0.003, \widehat{\rho}_{Spearman} = 0.286, Cl_{95\%} [0.095, 0.456], n_{pairs} = 106$ 



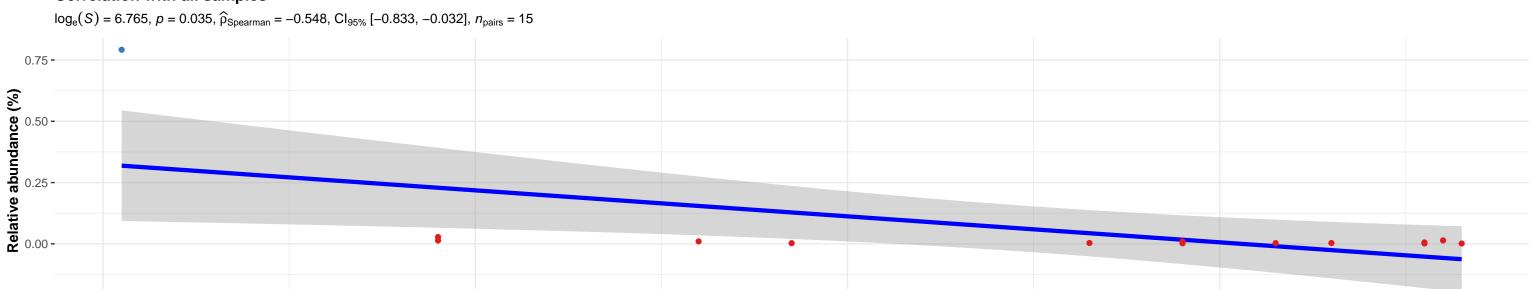
#### **Correlation within: Feed**





## Bacteria; Firmicutes; Bacilli; Lactobacillales; Carnobacteriaceae; Atopostipes; suicloacalis

#### **Correlation with all samples**

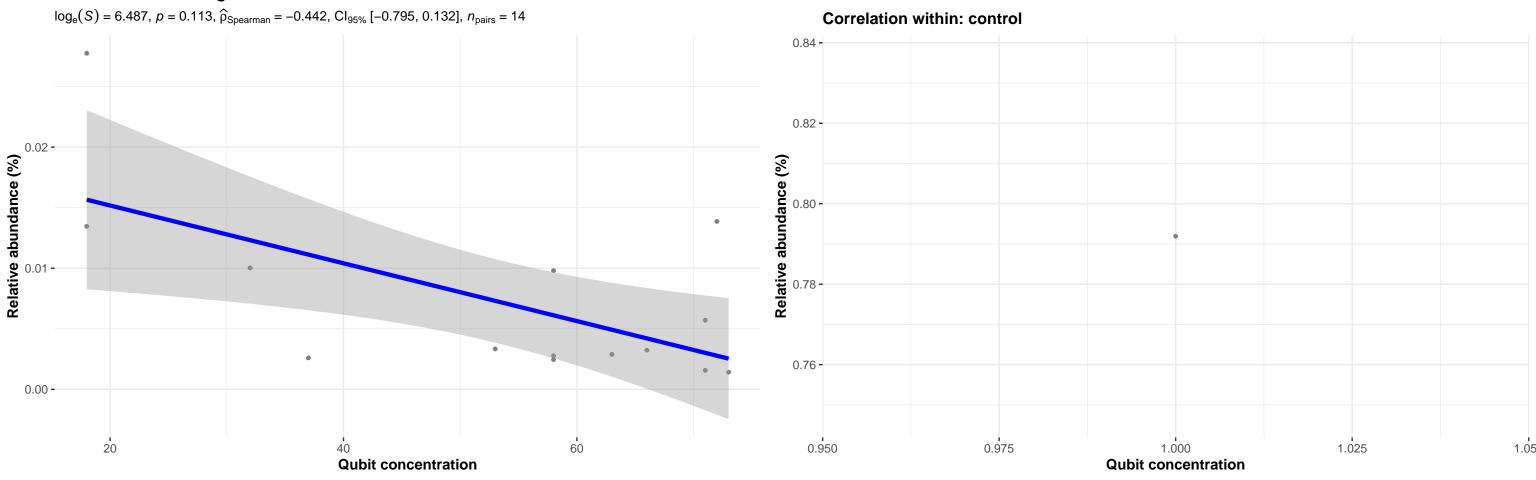




**Qubit concentration** 

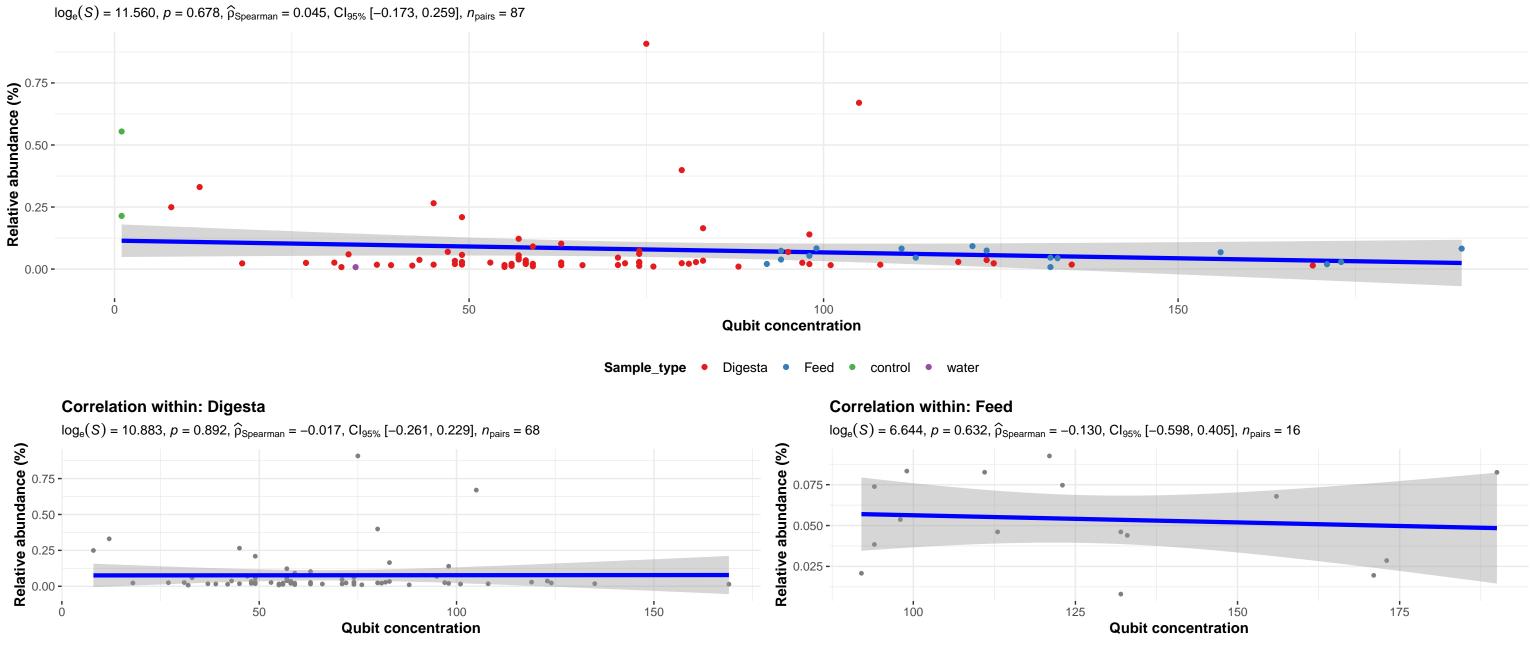
60

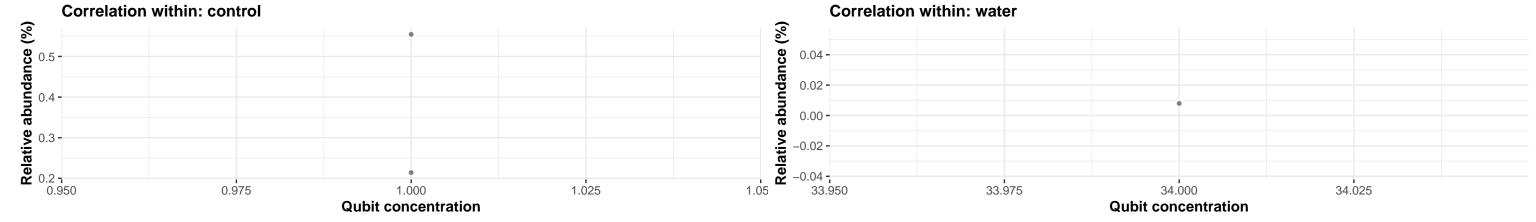
20



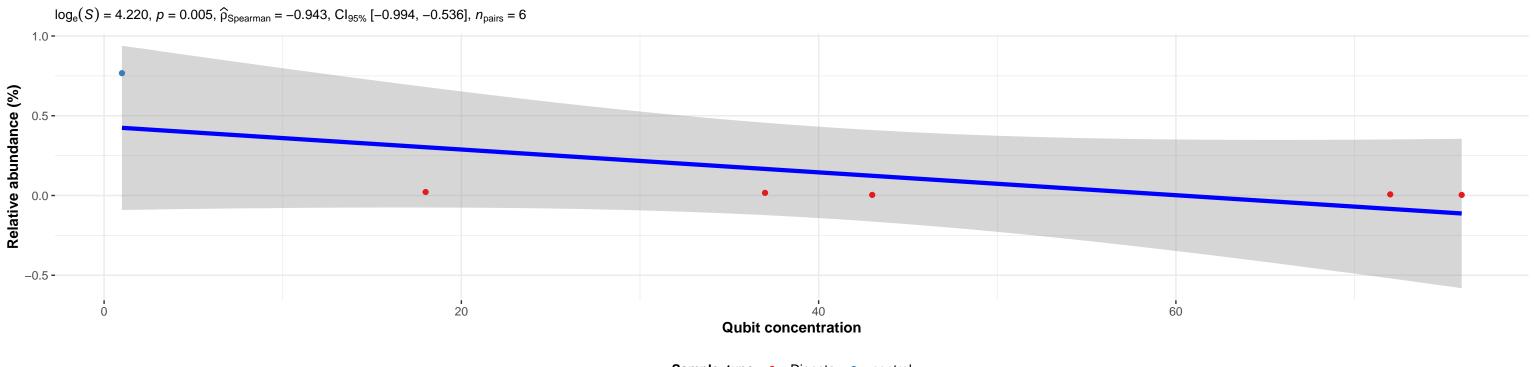
## Bacteria; Firmicutes; Bacilli; Staphylococcales; Staphylococcaceae; Staphylococcus; NA

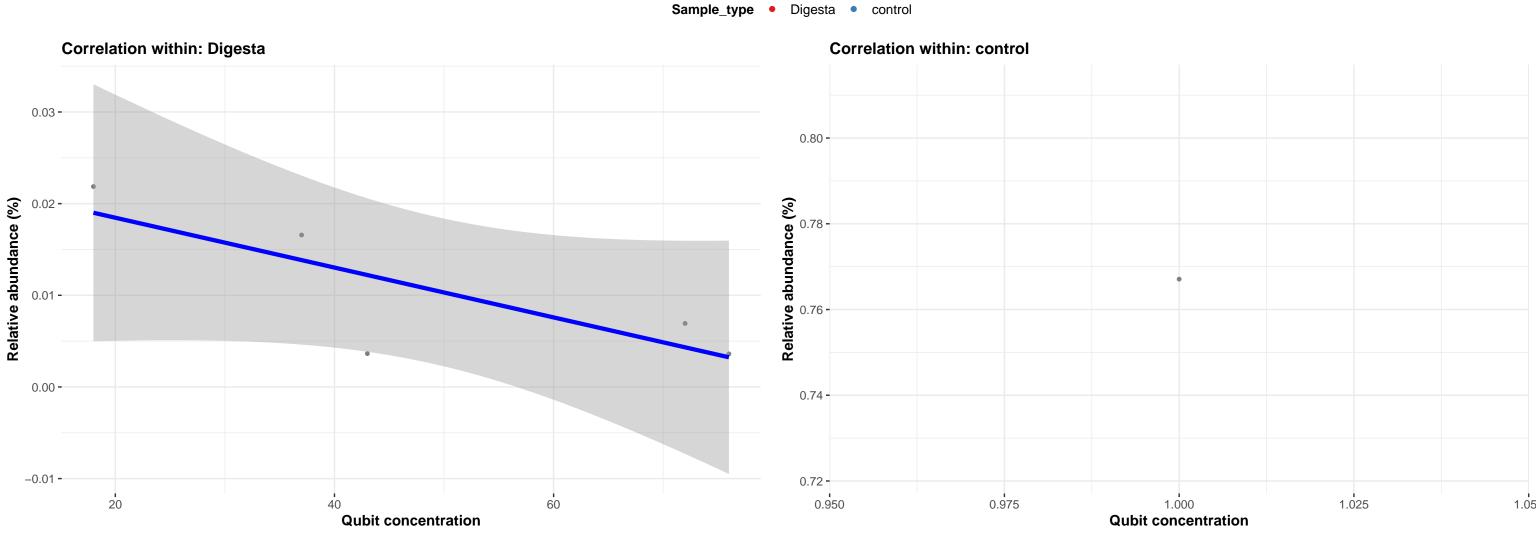






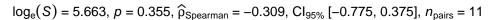


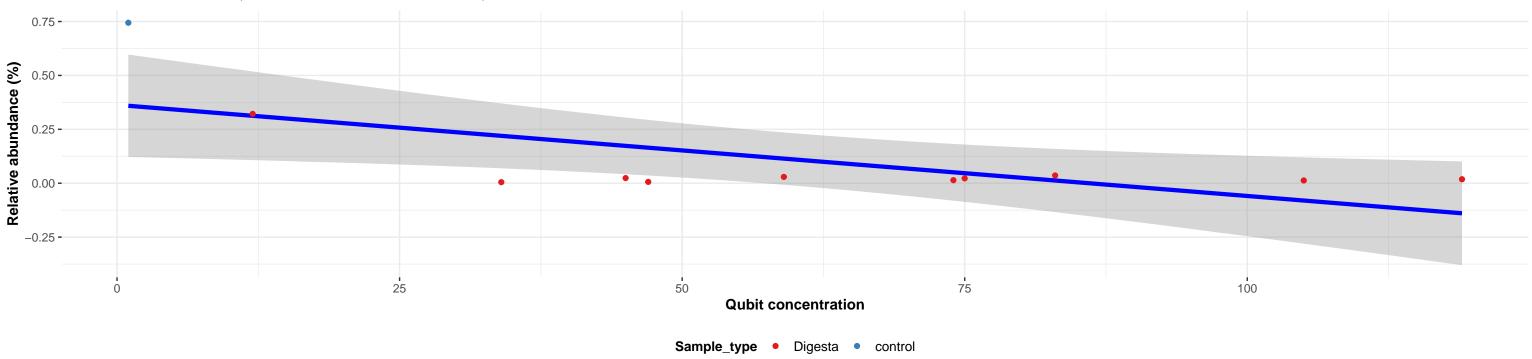


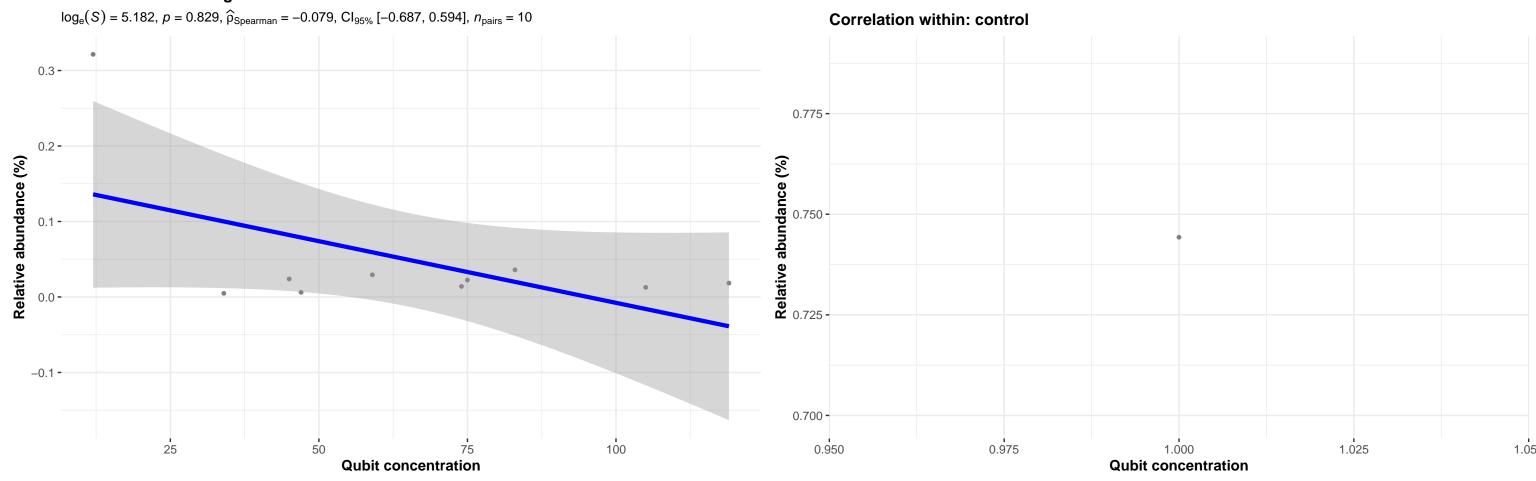


## Bacteria; Proteobacteria; Gammaproteobacteria; Pseudomonadales; Pseudomonadaceae; Pseudomonas; NA

#### **Correlation with all samples**

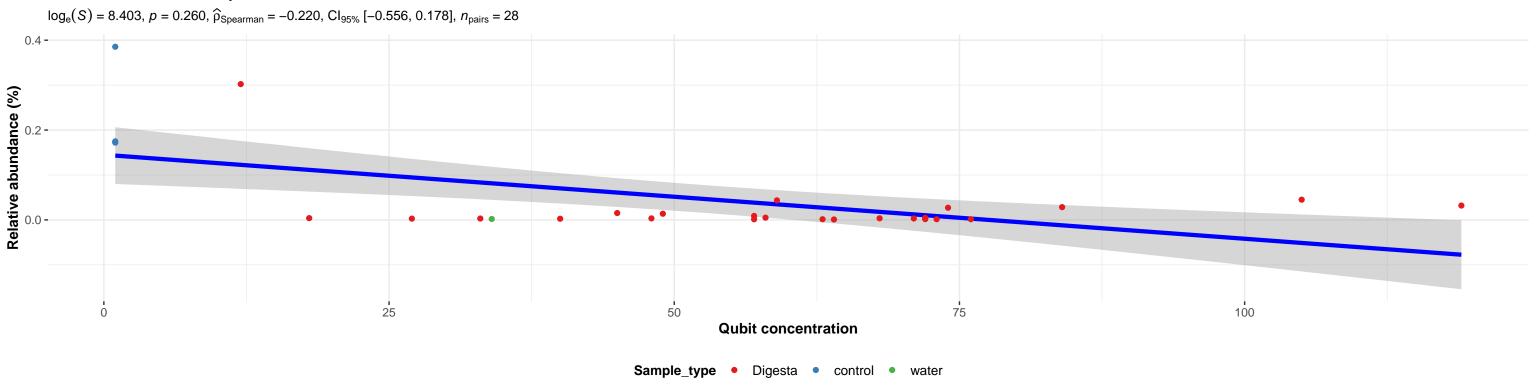


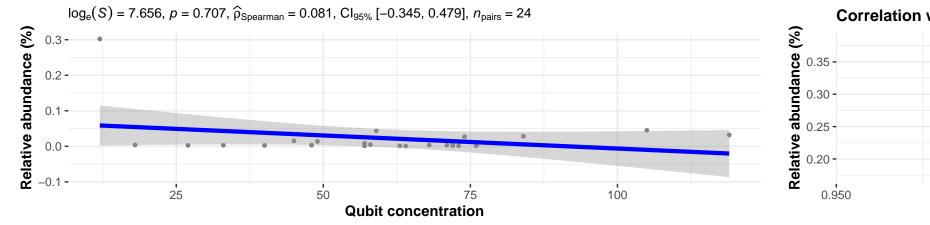


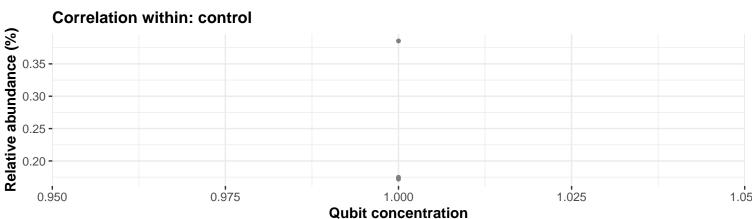


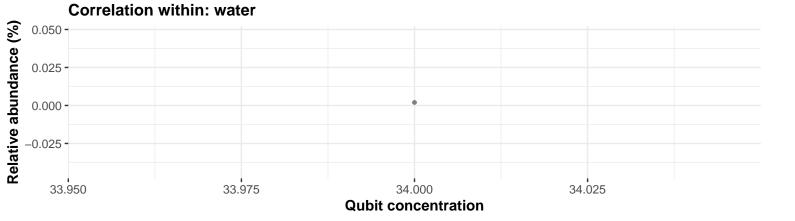
## Bacteria; Patescibacteria; Parcubacteria; Candidatus Adlerbacteria; NA; NA; NA





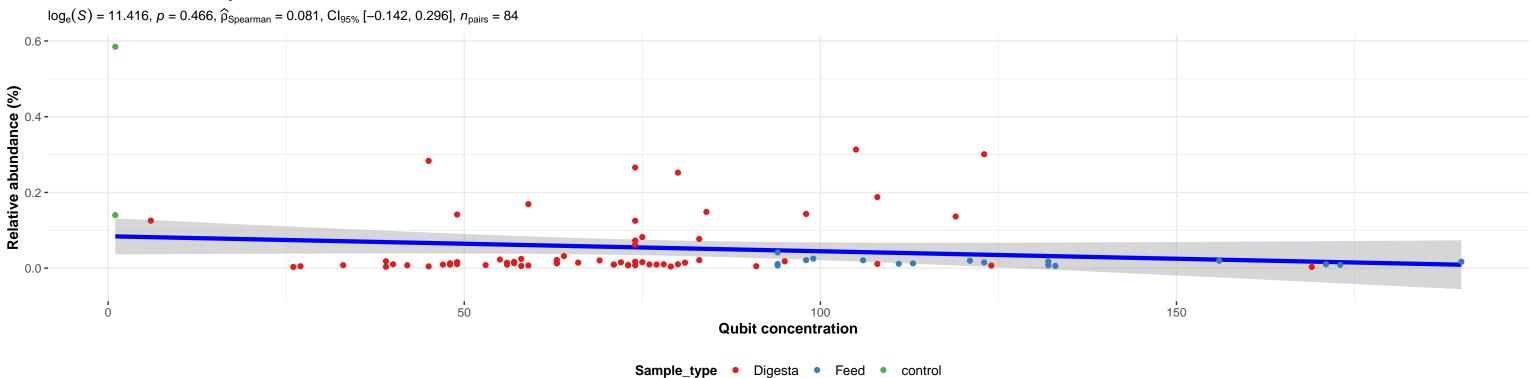




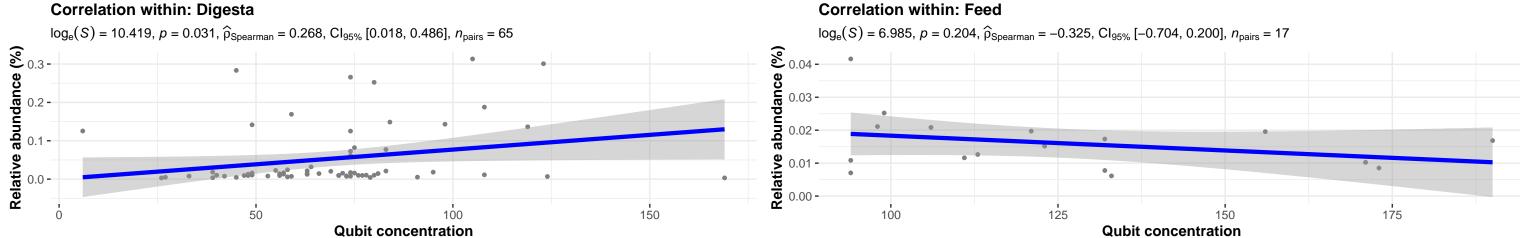


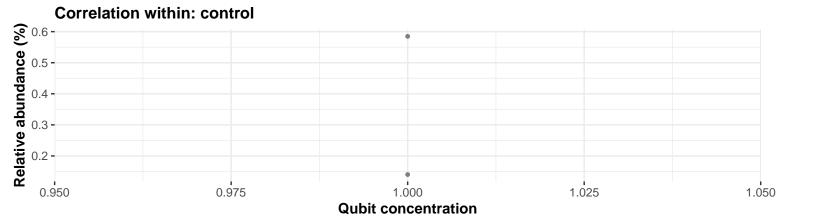
## Bacteria; Firmicutes; Bacilli; Lactobacillales; Enterococcaceae; Enterococcus; cecorum





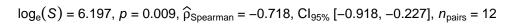


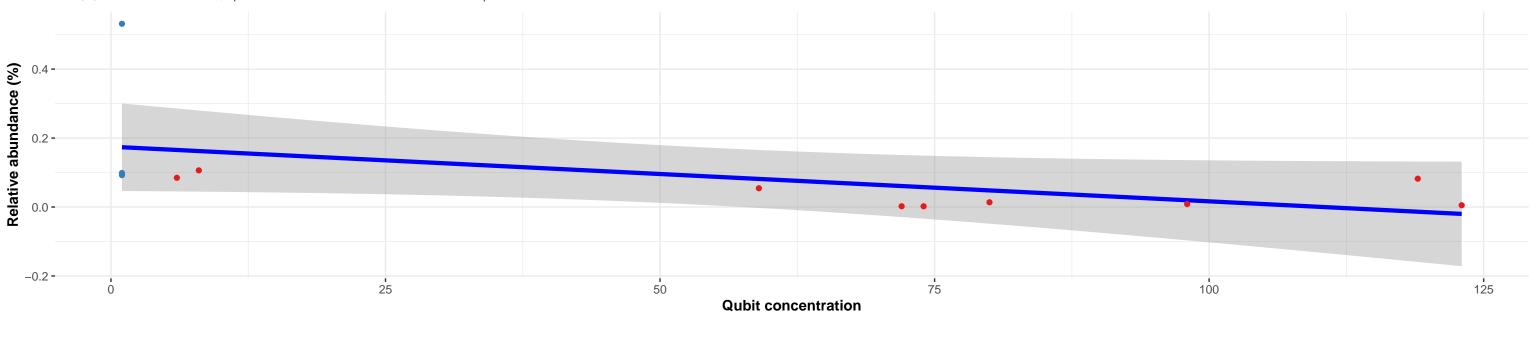




# Bacteria; Verrucomicrobiota; Verrucomicrobiae; Verrucomicrobiales; Rubritaleaceae; Luteolibacter; NA

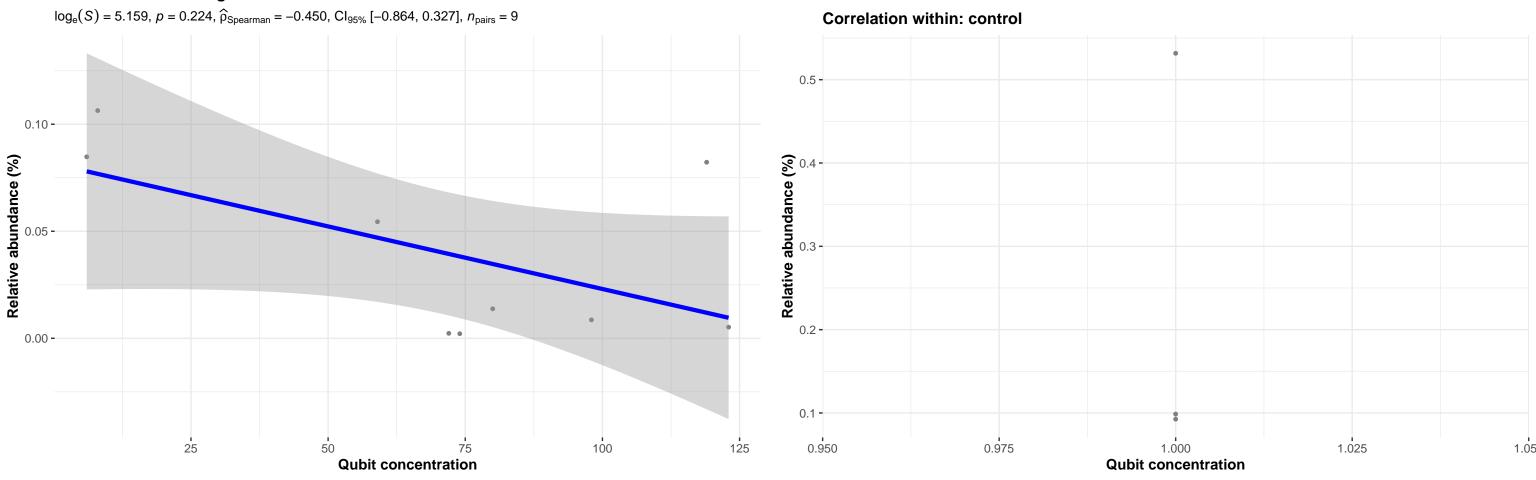
#### **Correlation with all samples**



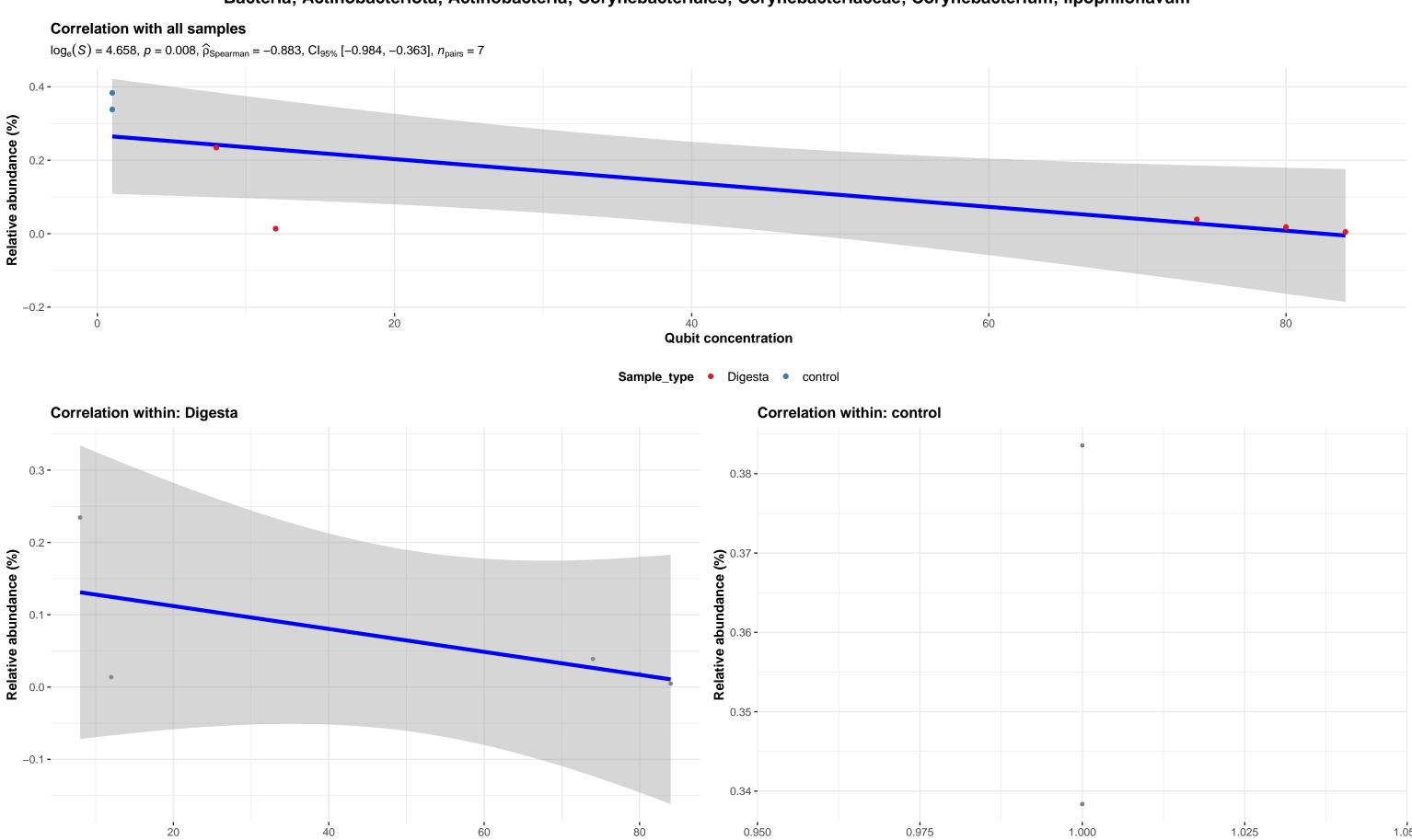


Sample\_type • Digesta • control





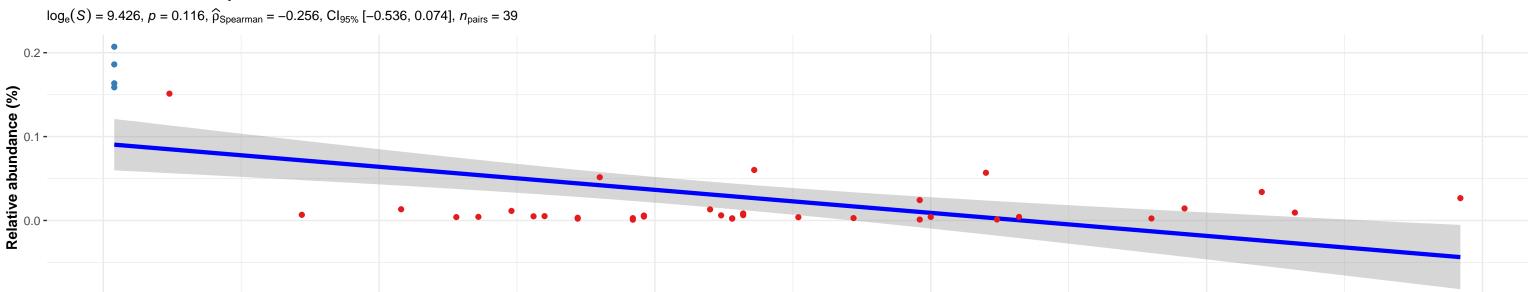
# Bacteria; Actinobacteriota; Actinobacteria; Corynebacteriales; Corynebacteriaceae; Corynebacterium; lipophiloflavum



**Qubit concentration** 

**Qubit concentration** 

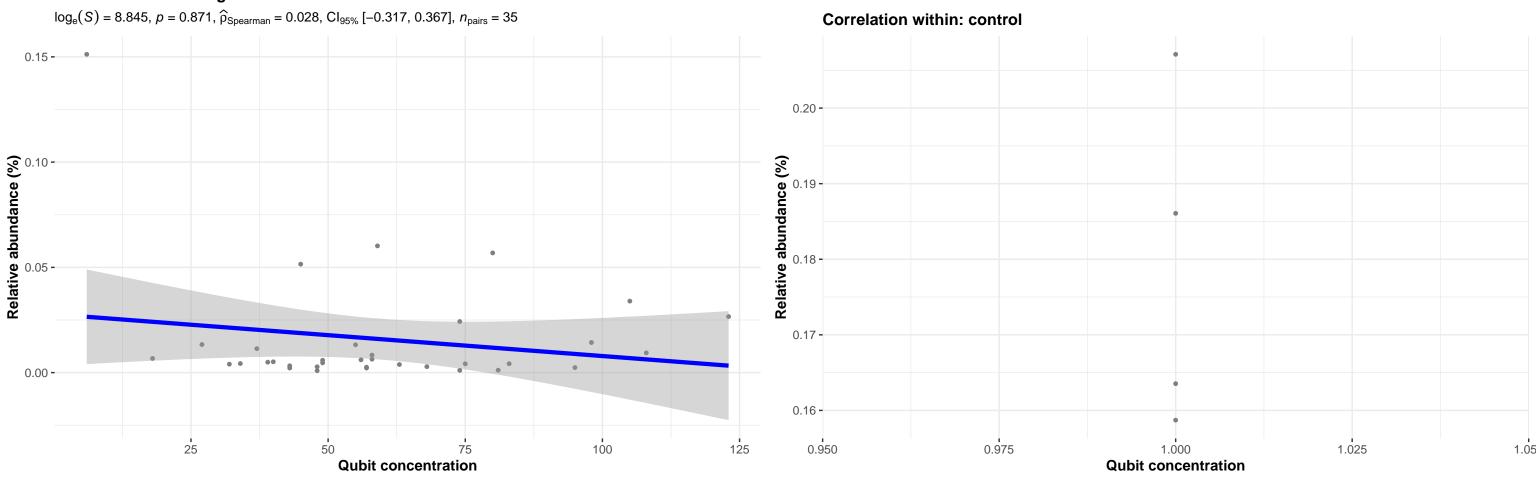
#### **Correlation with all samples**





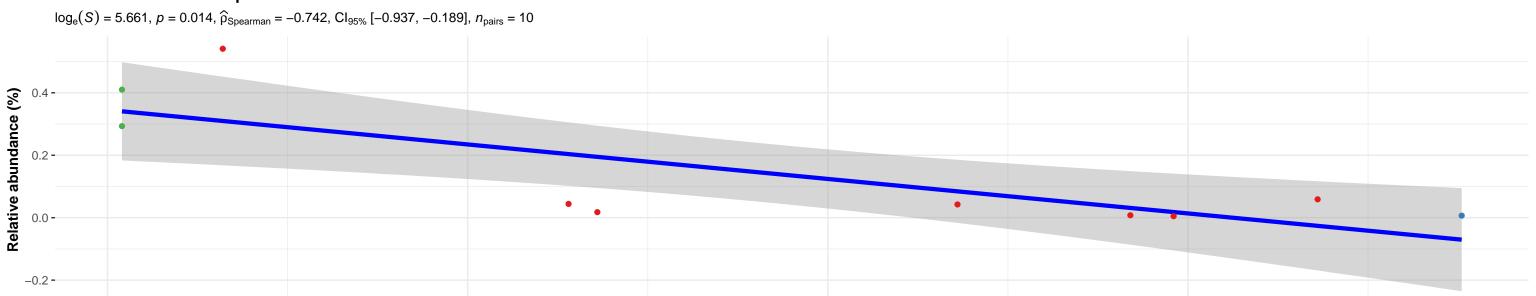
**Qubit concentration** 





# Bacteria; Actinobacteriota; Actinobacteria; Corynebacteriales; Corynebacteriaceae; Corynebacterium; NA



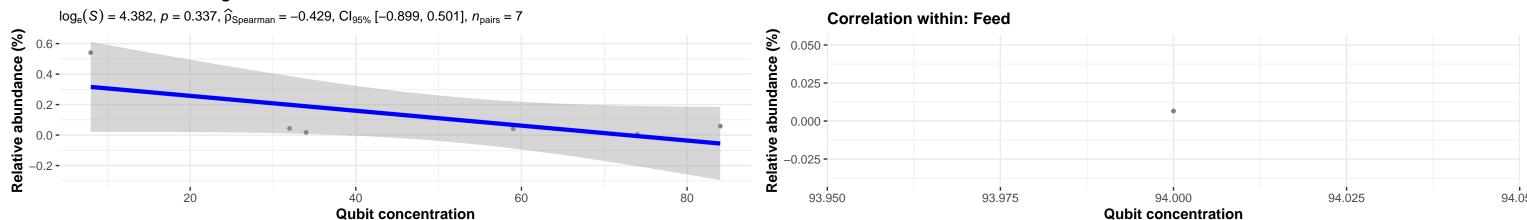


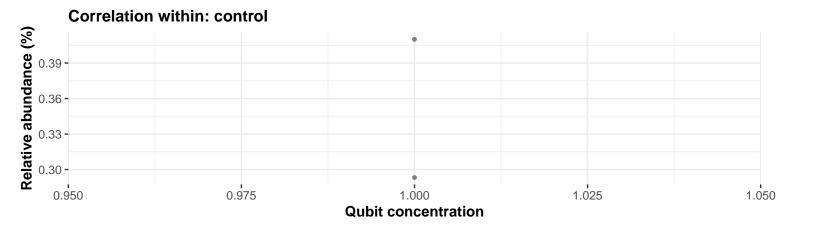


**Qubit concentration** 

75

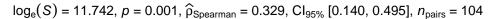
#### Correlation within: Digesta

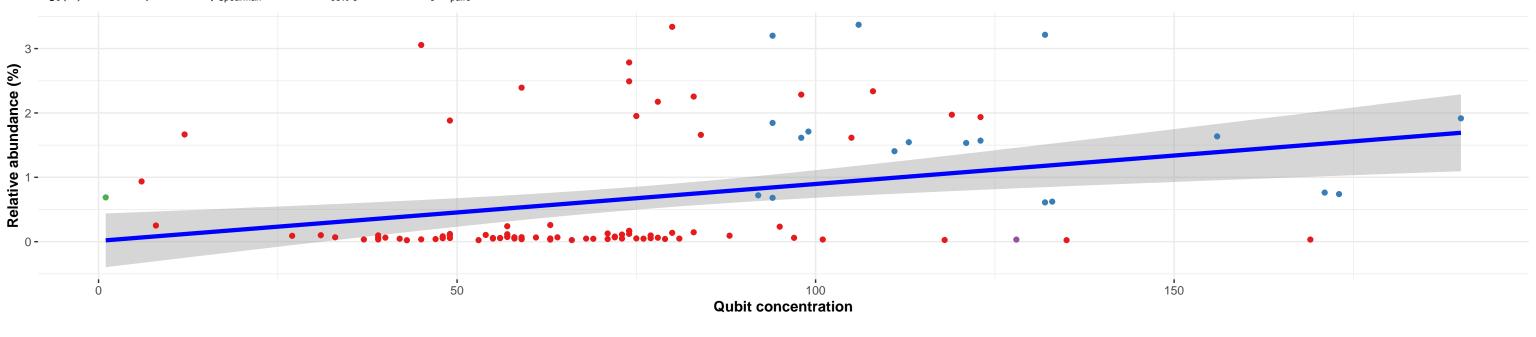




25

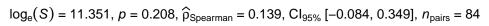
#### **Correlation with all samples**

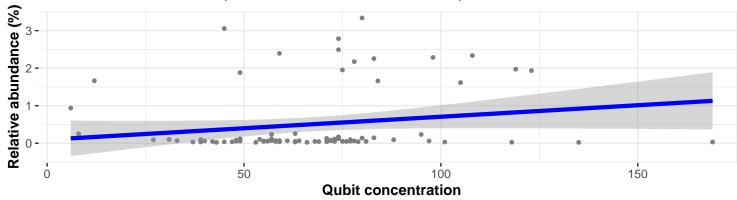




Sample\_type •

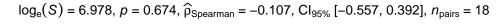


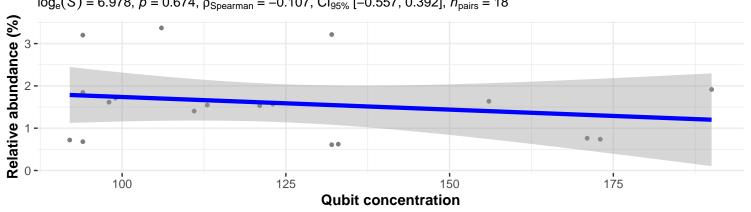


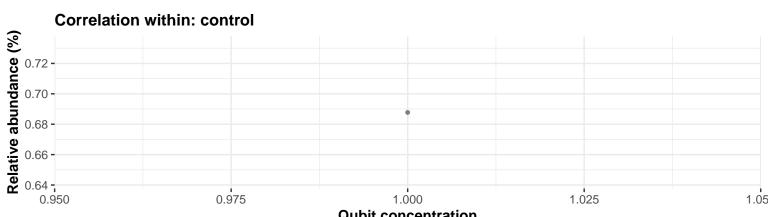


#### **Correlation within: Feed**

Digesta • Feed • control • water

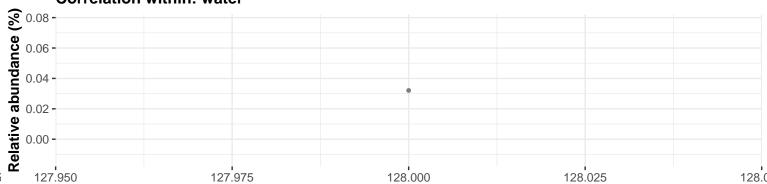






**Qubit concentration** 

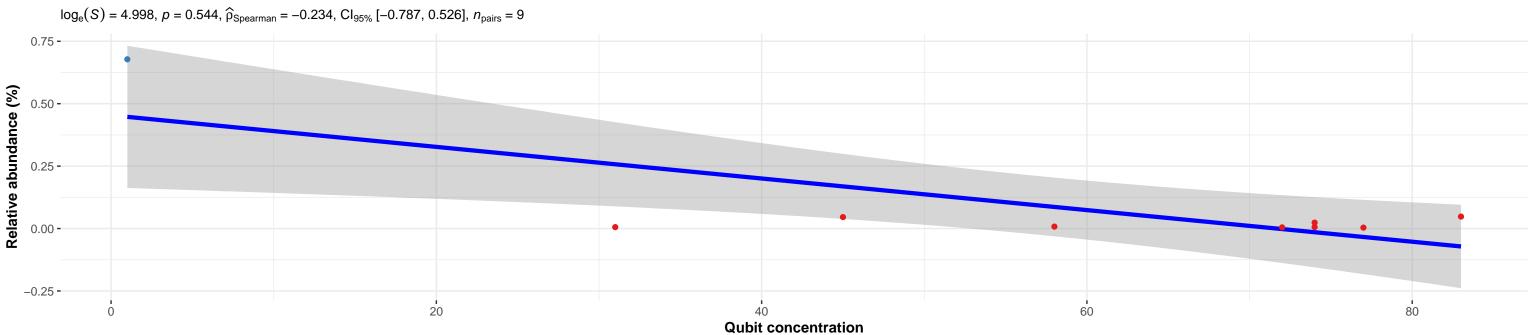
# **Correlation within: water**

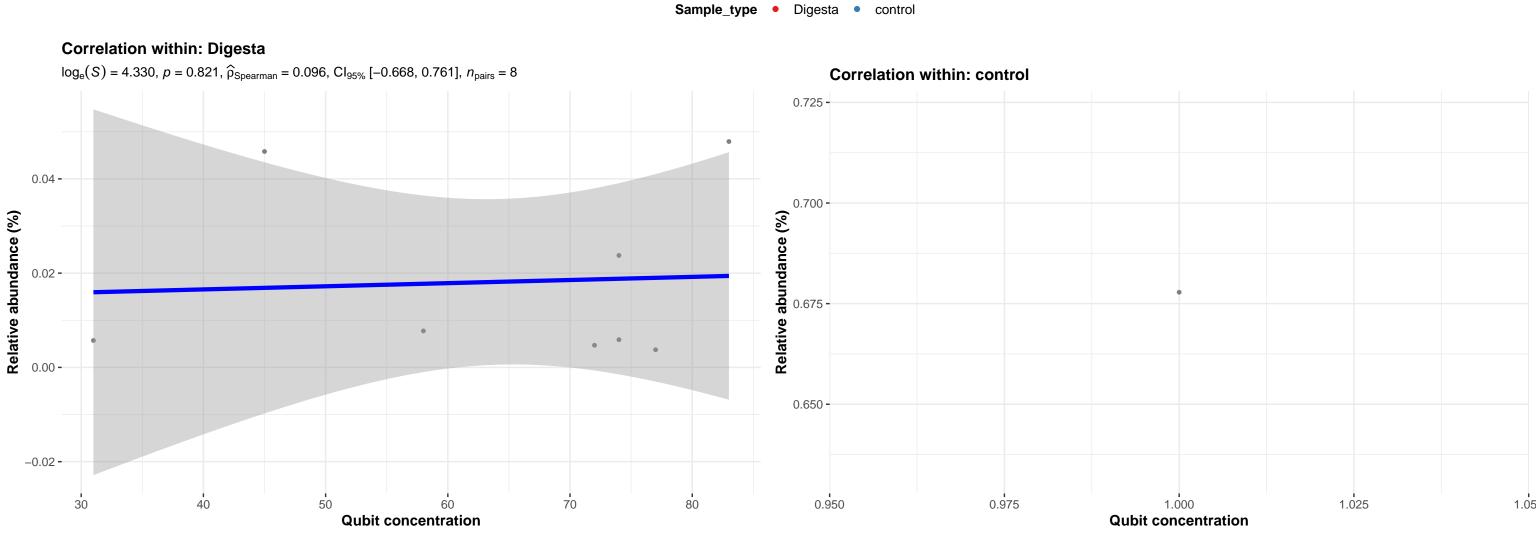


**Qubit concentration** 

# Bacteria; Firmicutes; Bacilli; Bacillales; Planococcaceae; Chungangia; NA

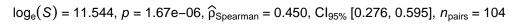


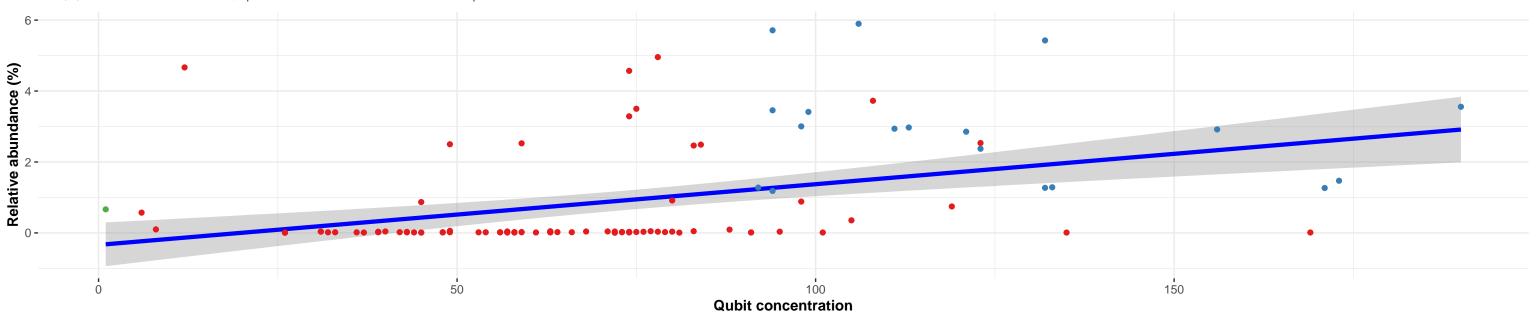




## Bacteria; Firmicutes; Bacilli; Lactobacillales; Lactobacillaceae; Lactobacillus; NA

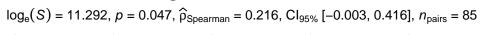


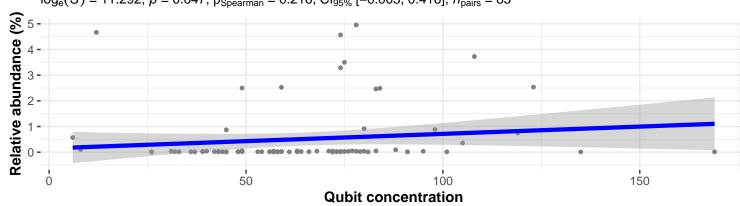




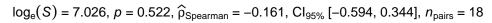
Sample\_type • Digesta • Feed • control

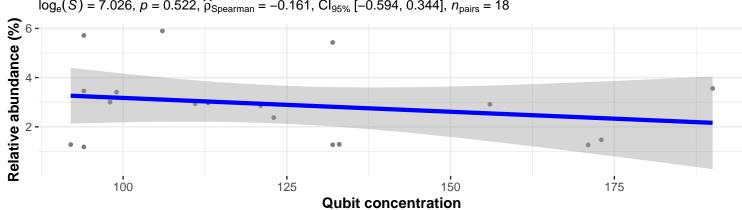
## **Correlation within: Digesta**

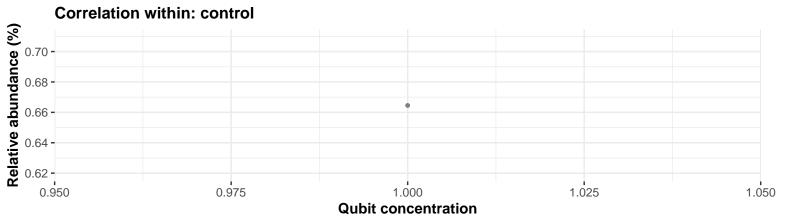




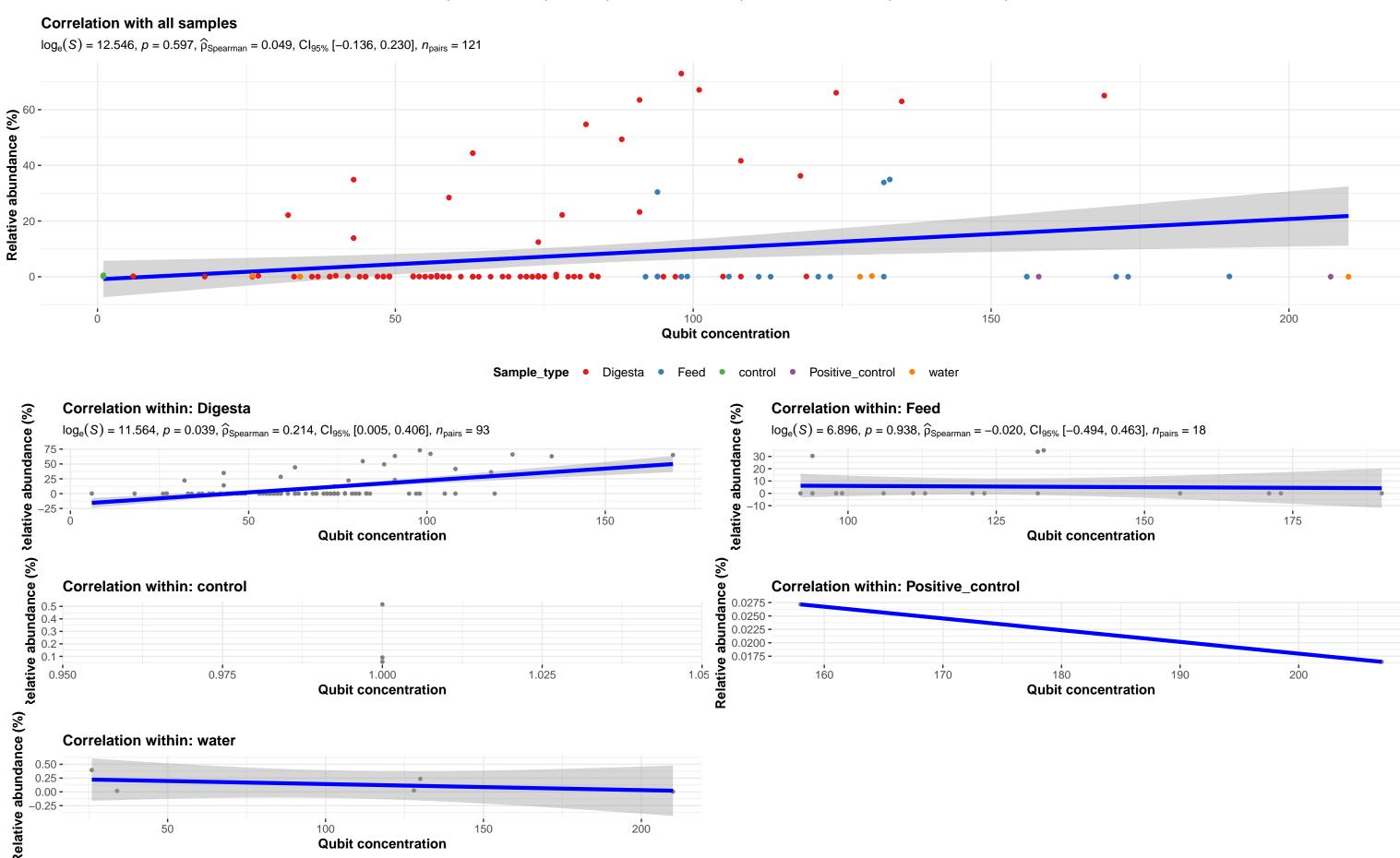
#### **Correlation within: Feed**



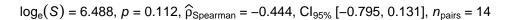


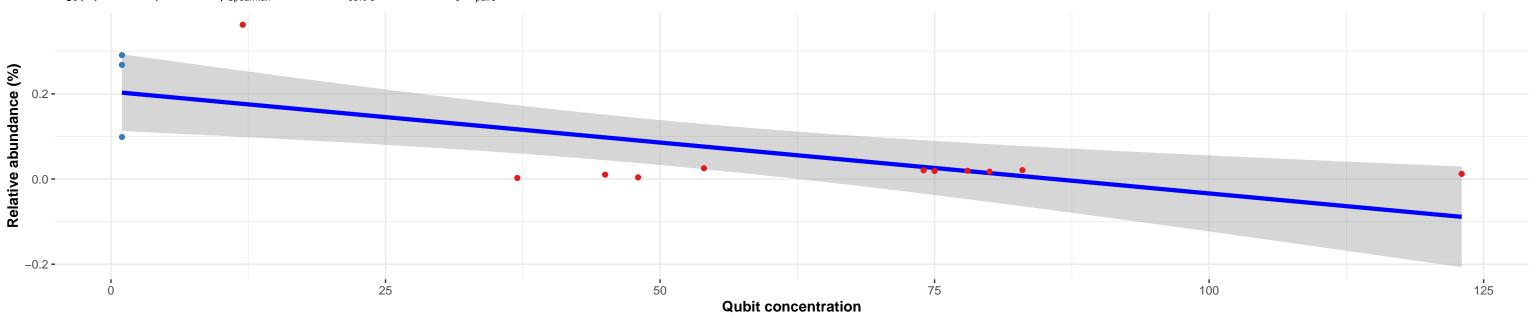


### Bacteria; Firmicutes; Bacilli; Lactobacillales; Lactobacillaceae; Pediococcus; NA



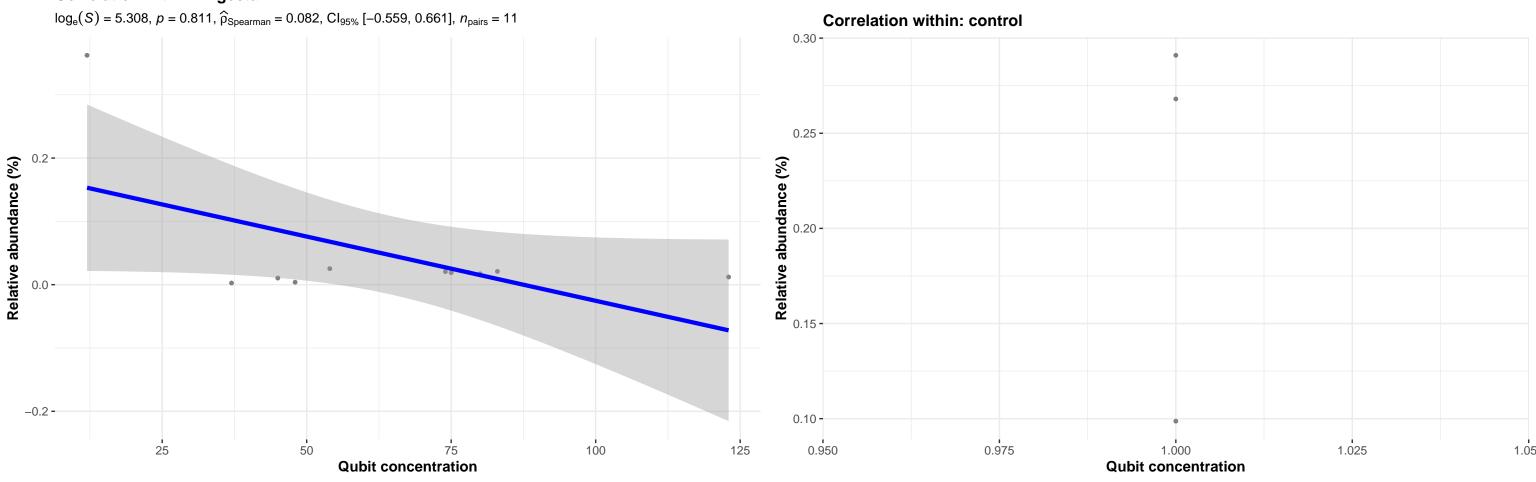
## **Correlation with all samples**





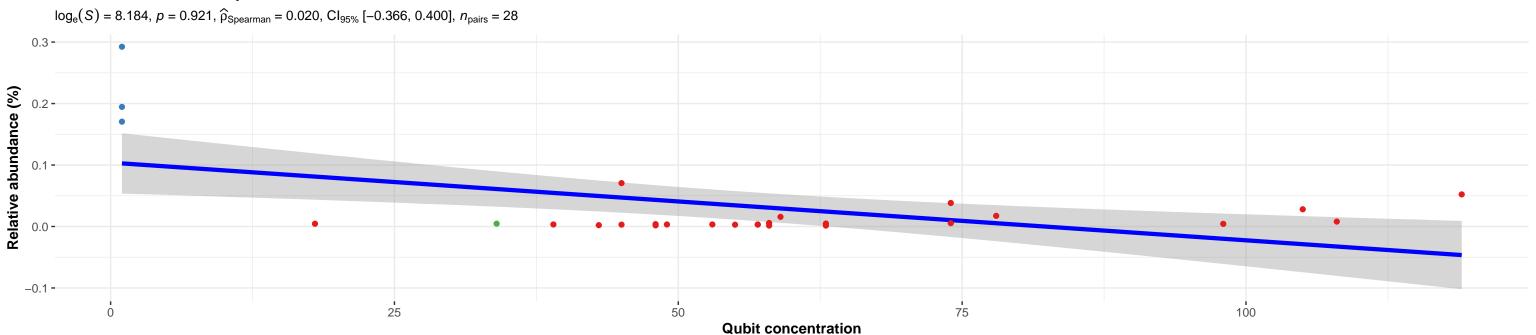
Sample\_type • Digesta • control



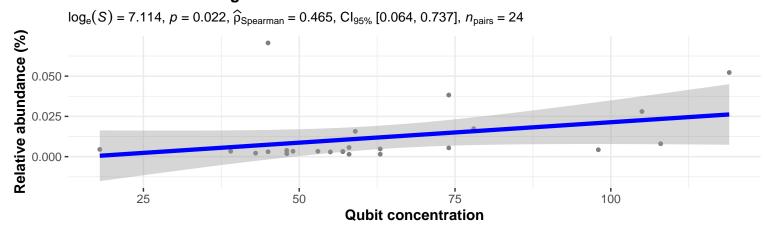


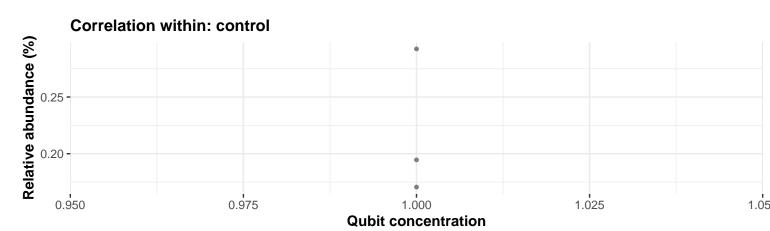
# Bacteria; Bacteroidota; Bacteroidia; Sphingobacteriales; Sphingobacteriaceae; Pedobacter; NA

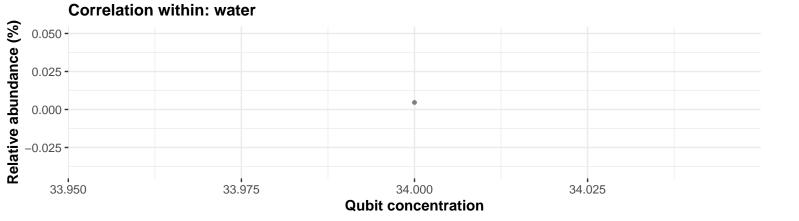












## Bacteria; Actinobacteriota; Actinobacteria; Corynebacteriales; Dietziaceae; Dietzia; NA



Relative abundance (%)

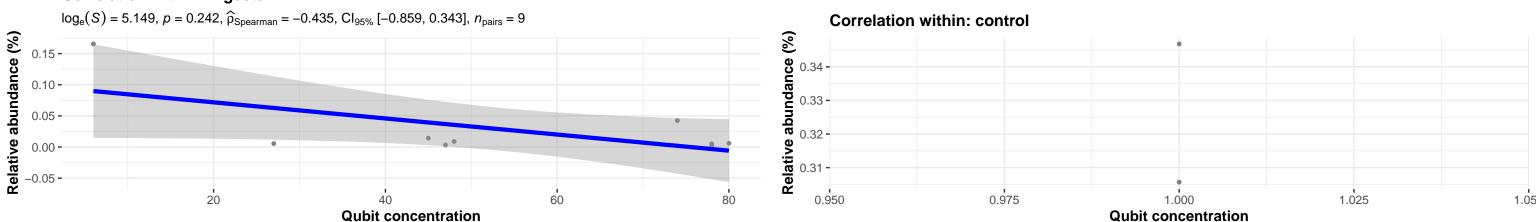


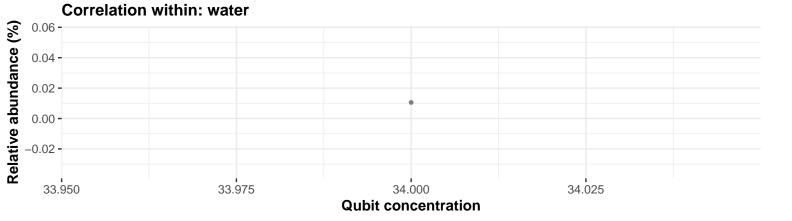


**Qubit concentration** 

60

#### **Correlation within: Digesta**

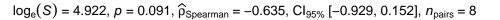


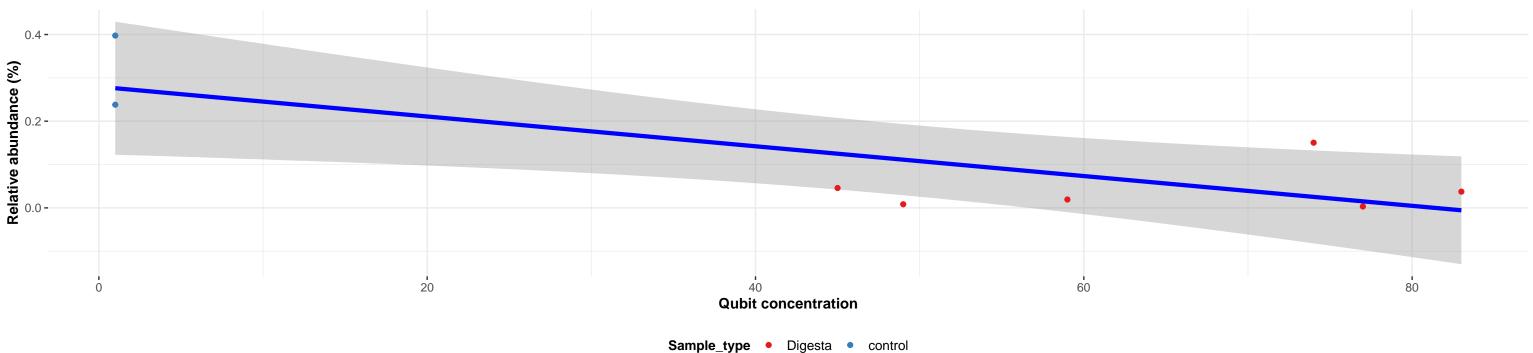


20

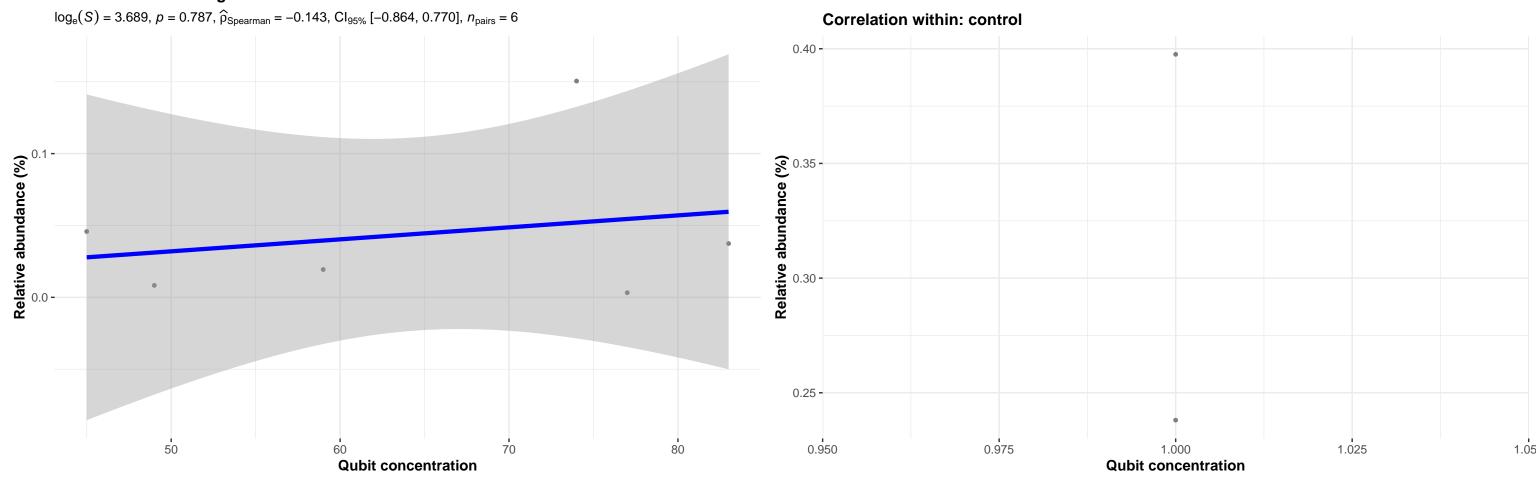
## Bacteria; Proteobacteria; Gammaproteobacteria; Burkholderiales; Comamonadaceae; Tepidimonas; NA

### **Correlation with all samples**

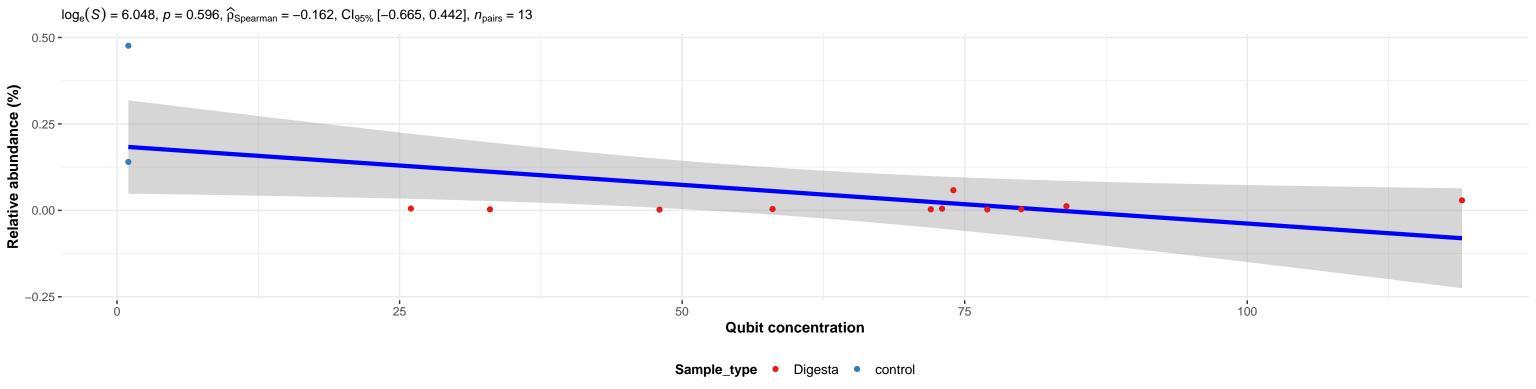




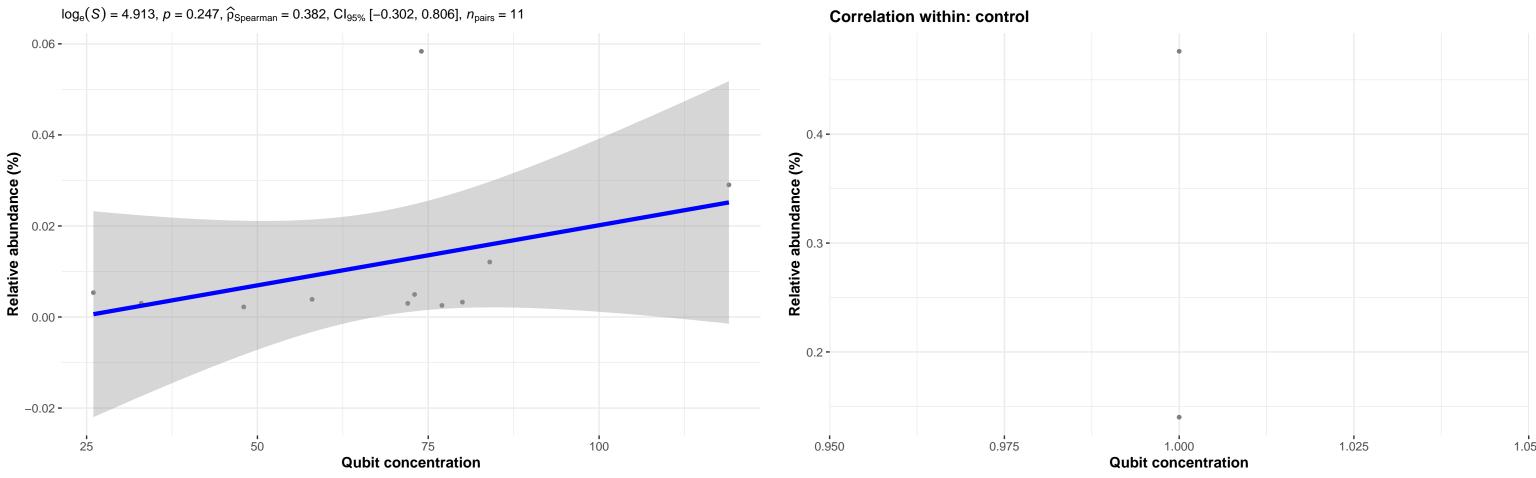






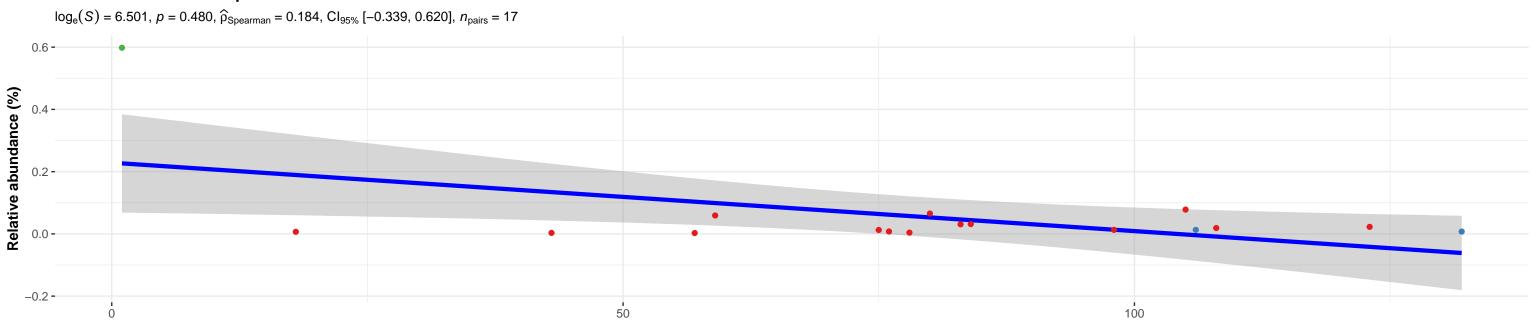






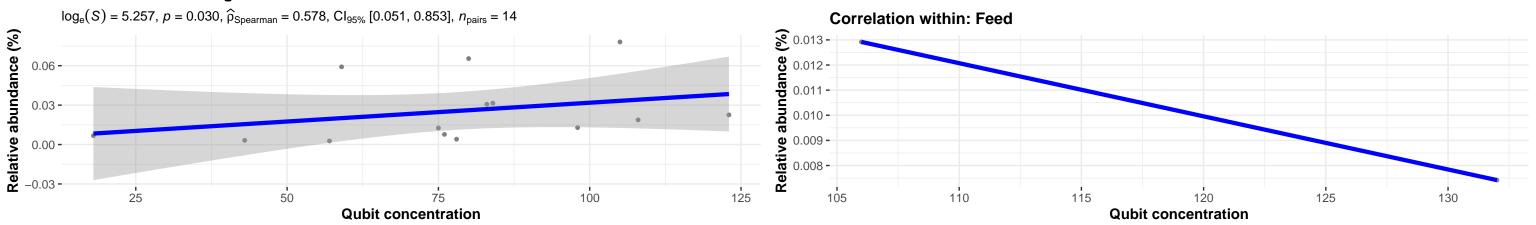
## Bacteria; Firmicutes; Bacilli; Bacillales; Planococcaceae; Lysinibacillus; sphaericus

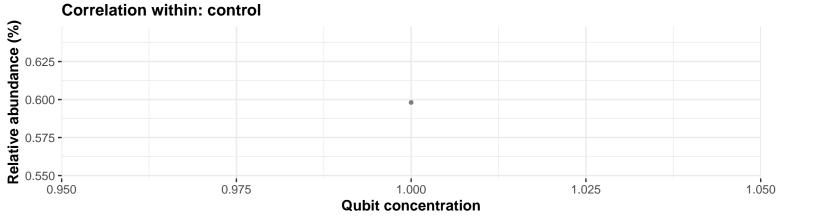




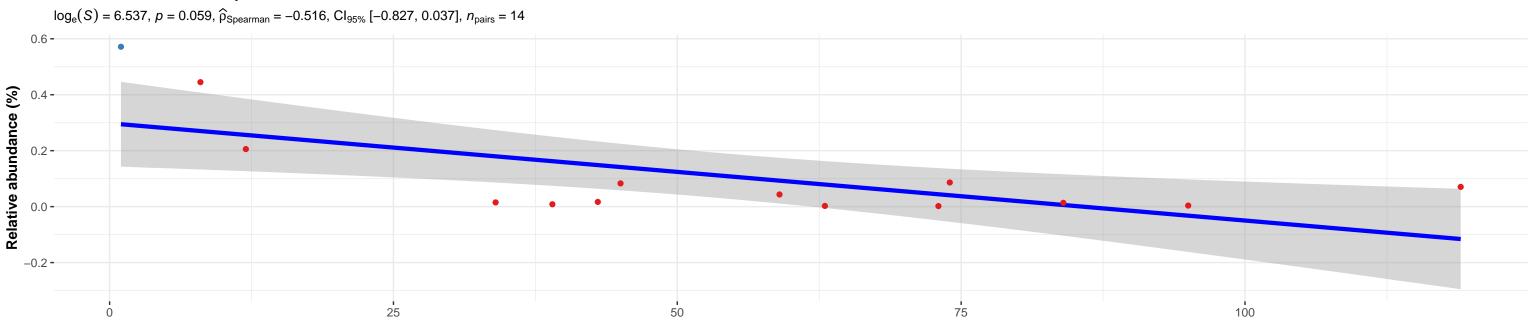
**Qubit concentration** 





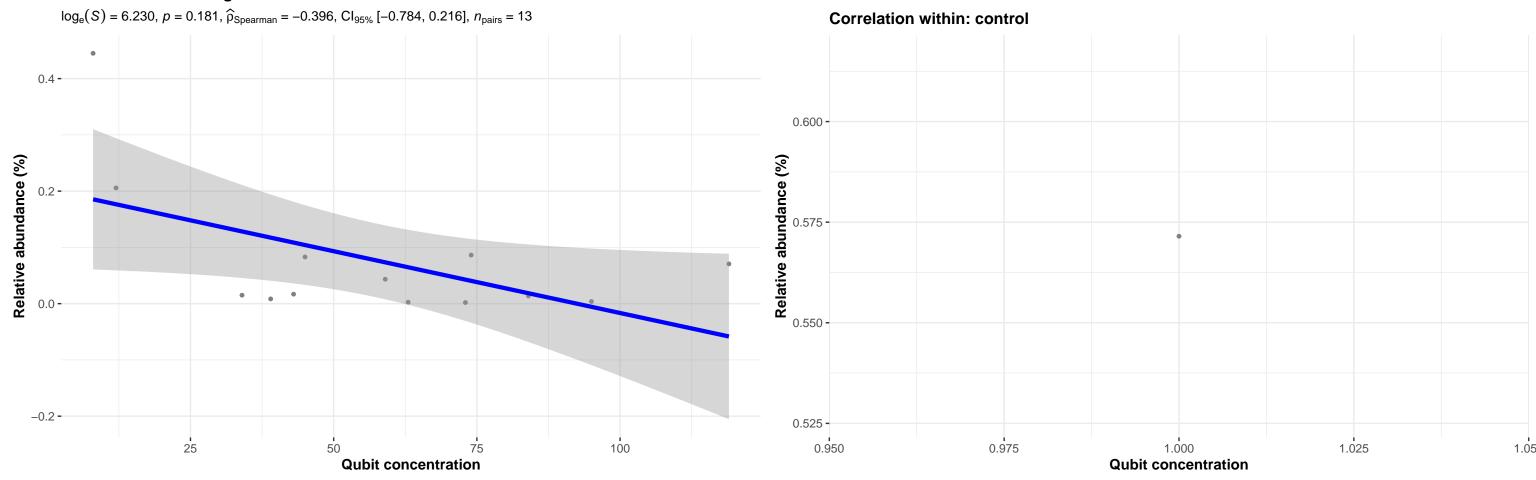


## **Correlation with all samples**



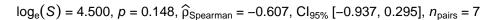


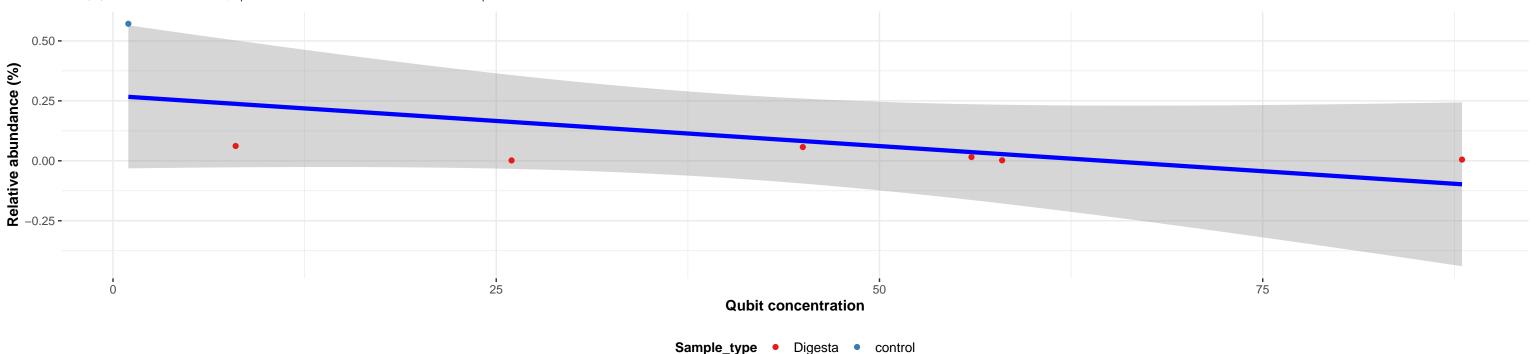
**Qubit concentration** 



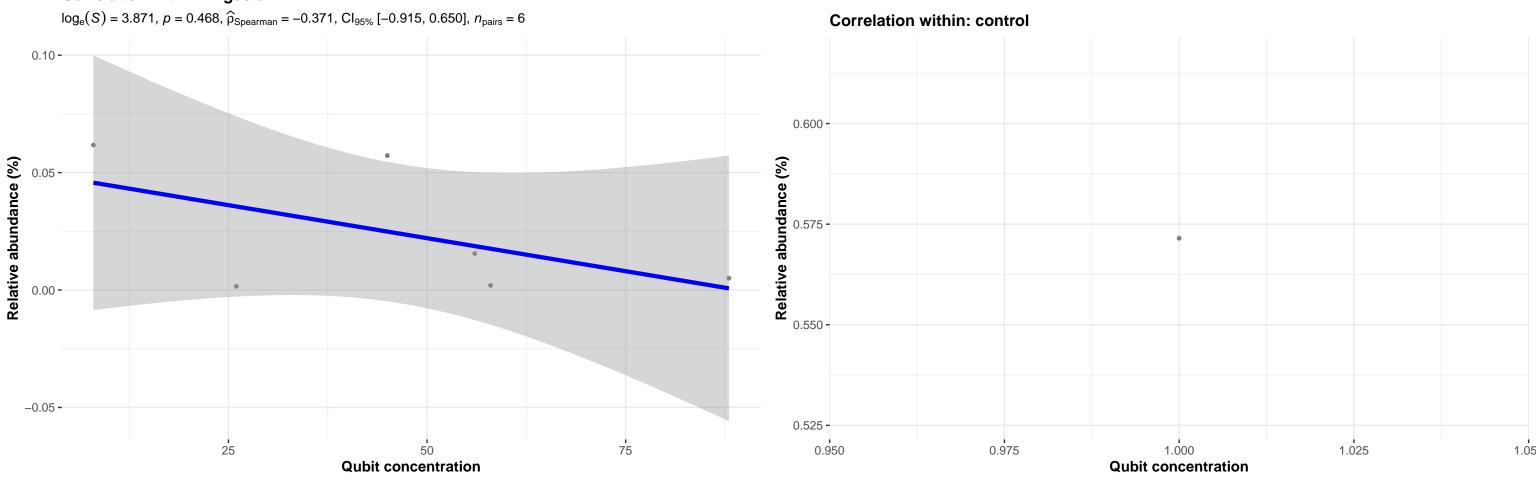
## Bacteria; Firmicutes; Clostridia; Peptostreptococcales-Tissierellales; Family XI; Anaerococcus; NA





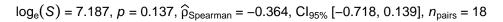


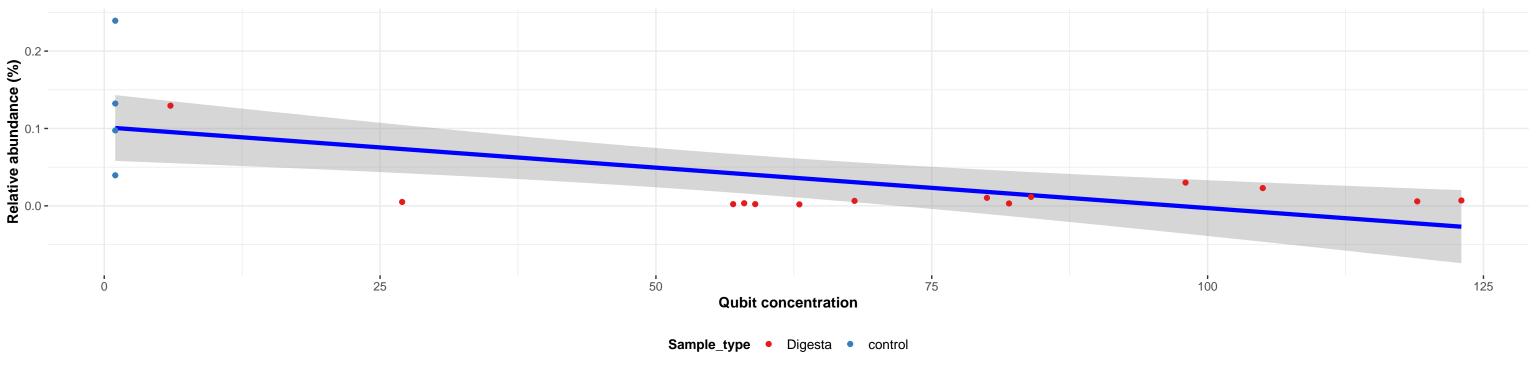


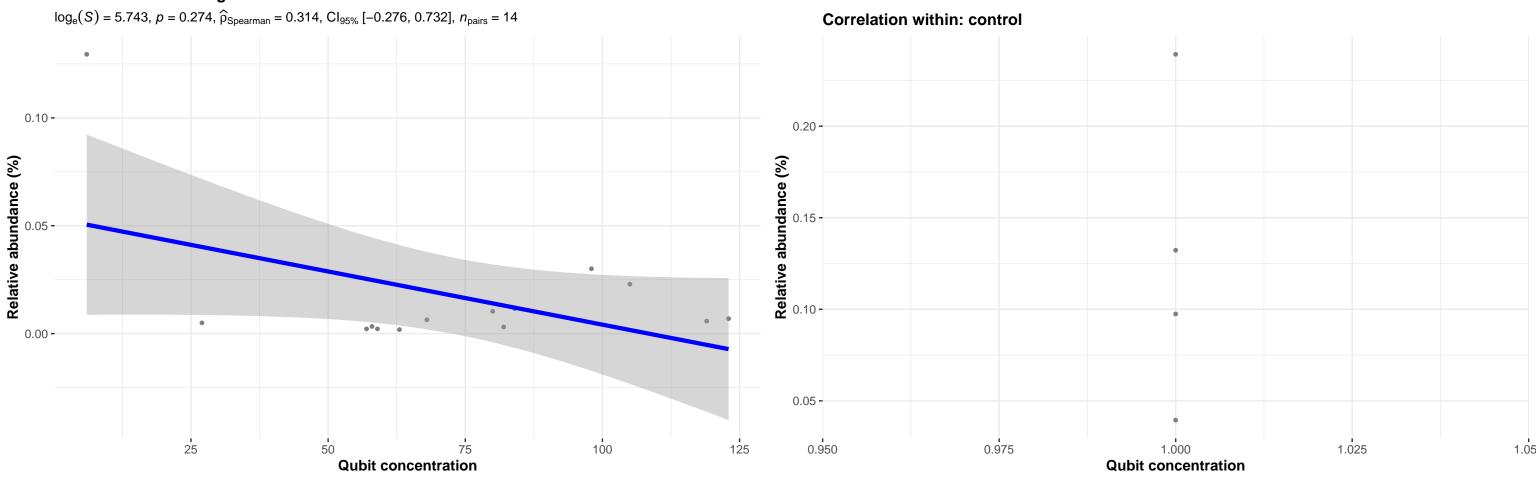


## Bacteria; Proteobacteria; Gammaproteobacteria; Burkholderiales; Comamonadaceae; Paucibacter; NA

### **Correlation with all samples**

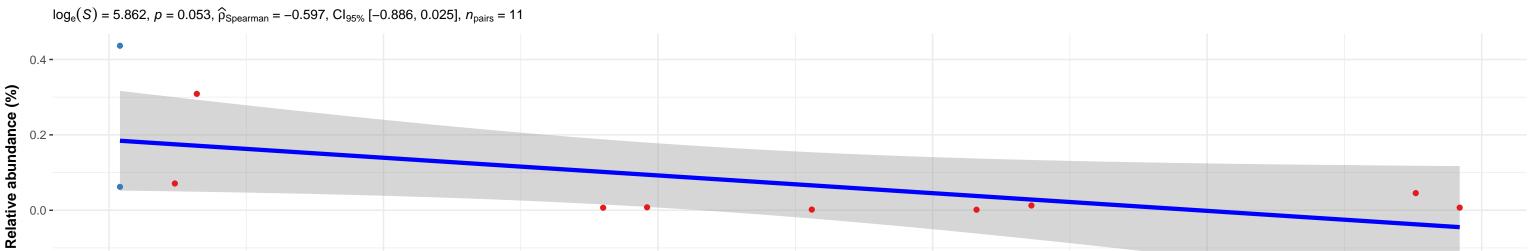






## Bacteria; Proteobacteria; Gammaproteobacteria; Burkholderiales; Comamonadaceae; Acidovorax; NA

### **Correlation with all samples**





**Qubit concentration** 

75

100

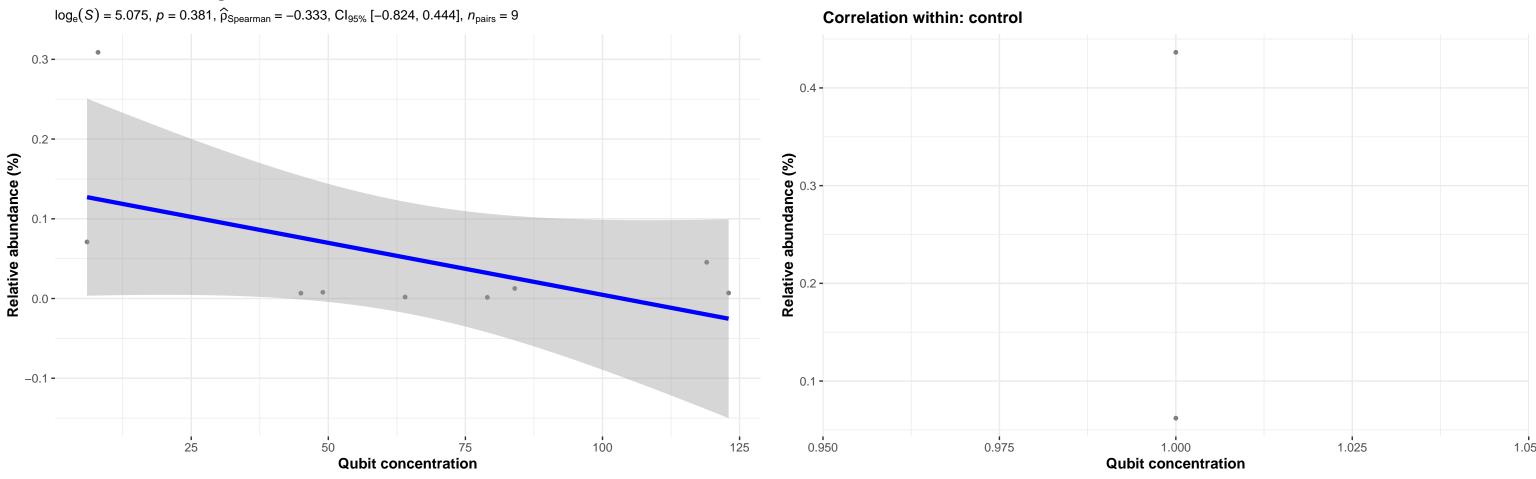
125

50

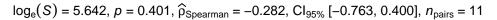


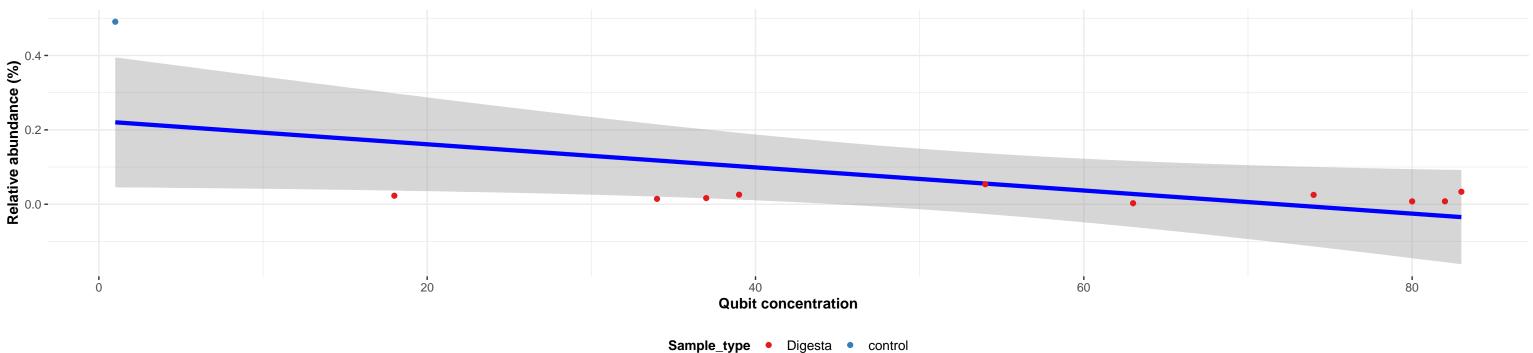
25

-0.2 **-**

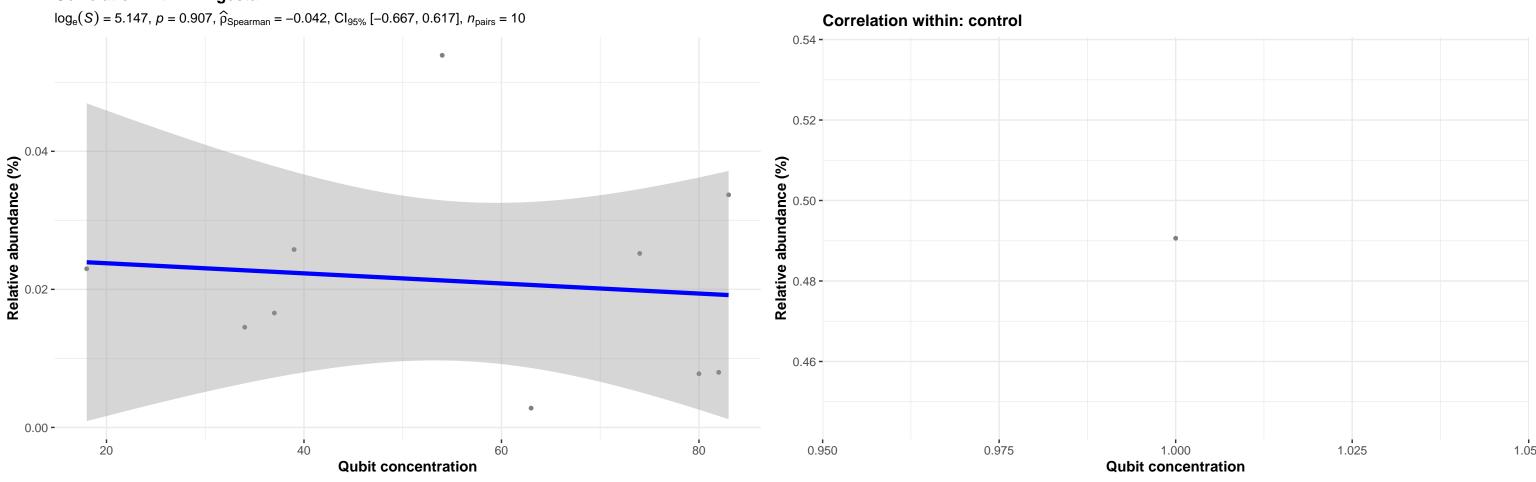


## **Correlation with all samples**

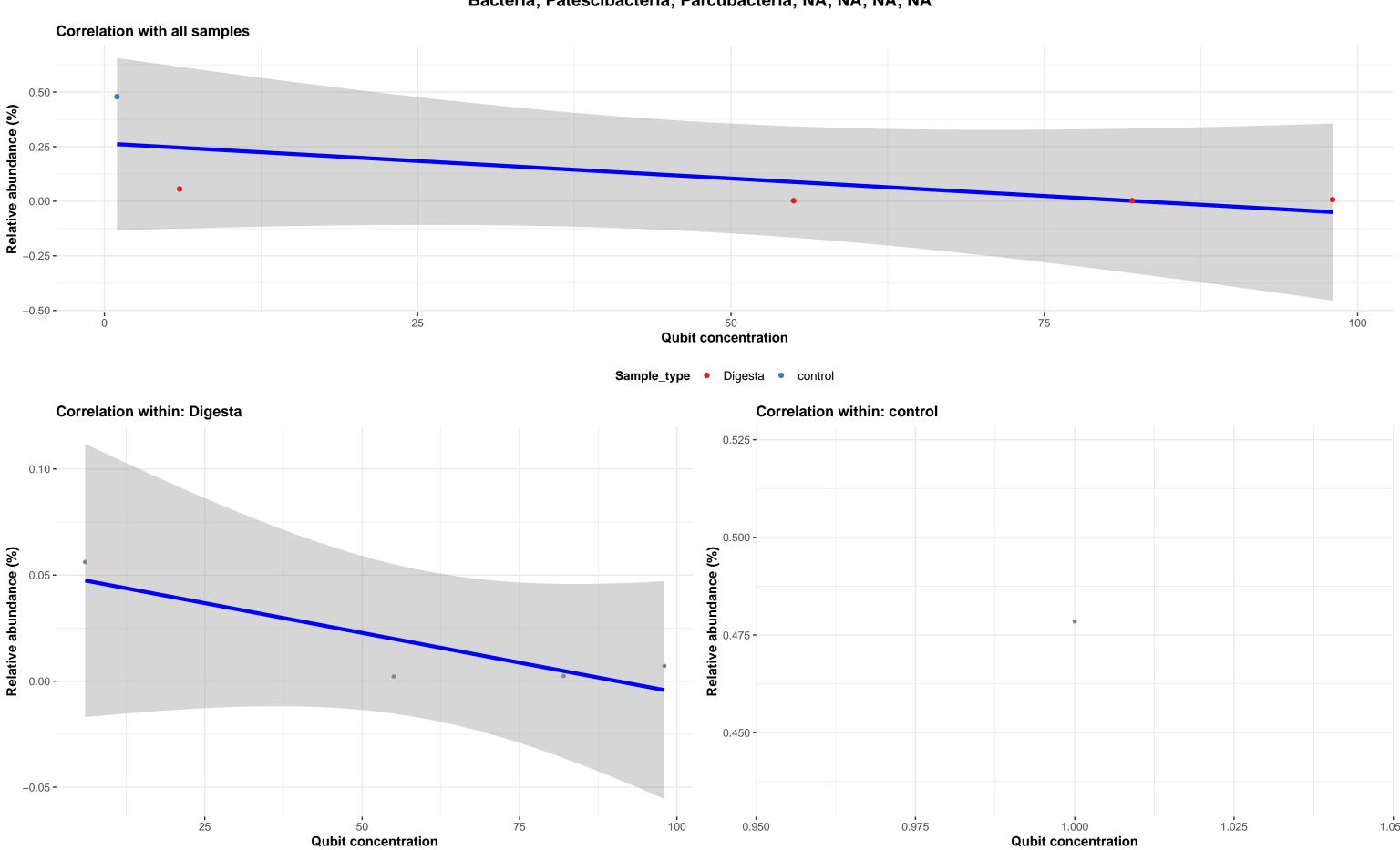








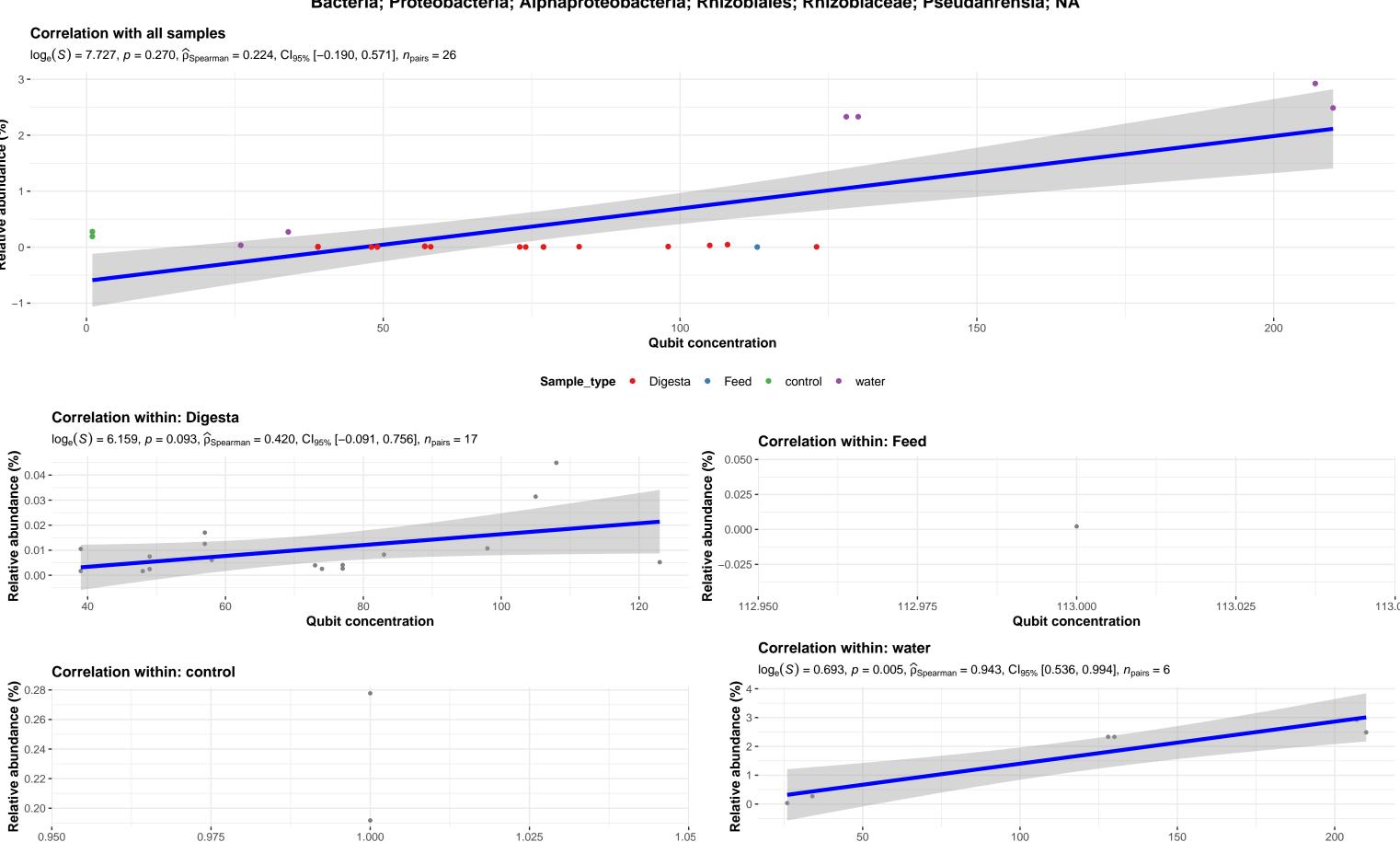
Bacteria; Patescibacteria; Parcubacteria; NA; NA; NA; NA



Relative abundance (%)

0.975

0.950



1.05

1.025

1.000

**Qubit concentration** 

50

100

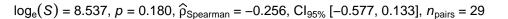
**Qubit concentration** 

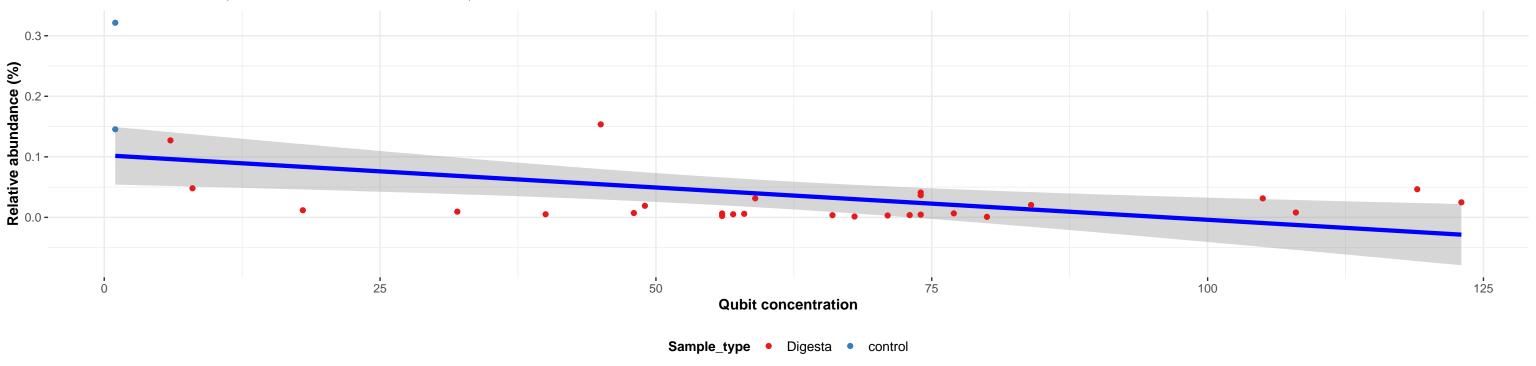
150

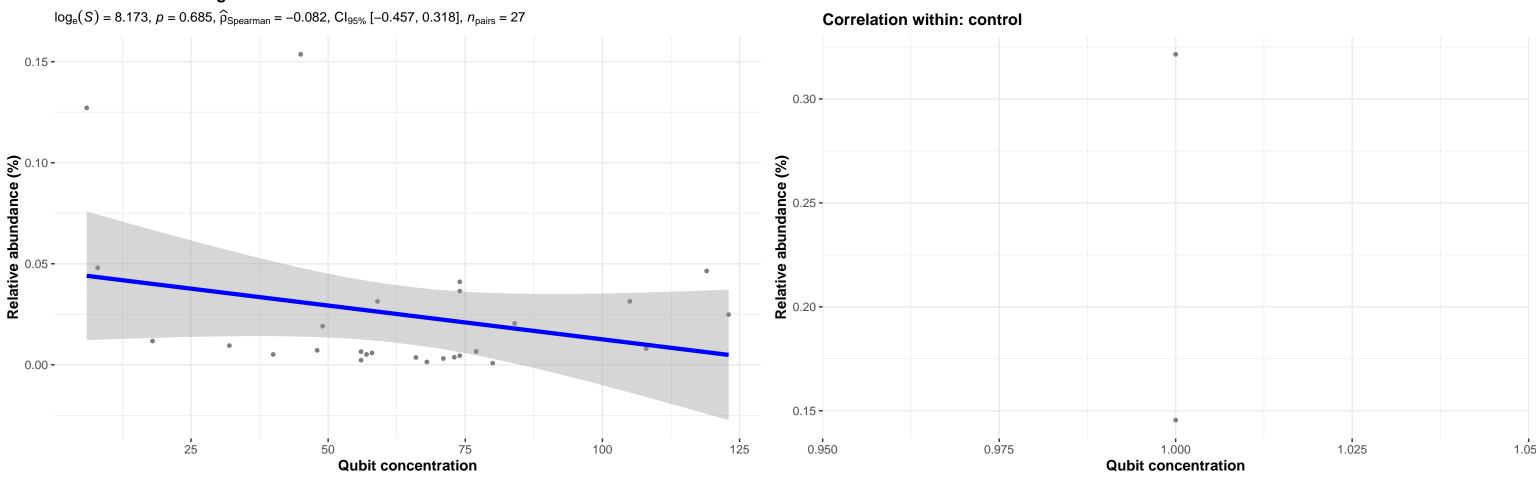
200

## Bacteria; Patescibacteria; Parcubacteria; Candidatus Nomurabacteria; NA; NA; NA

### **Correlation with all samples**



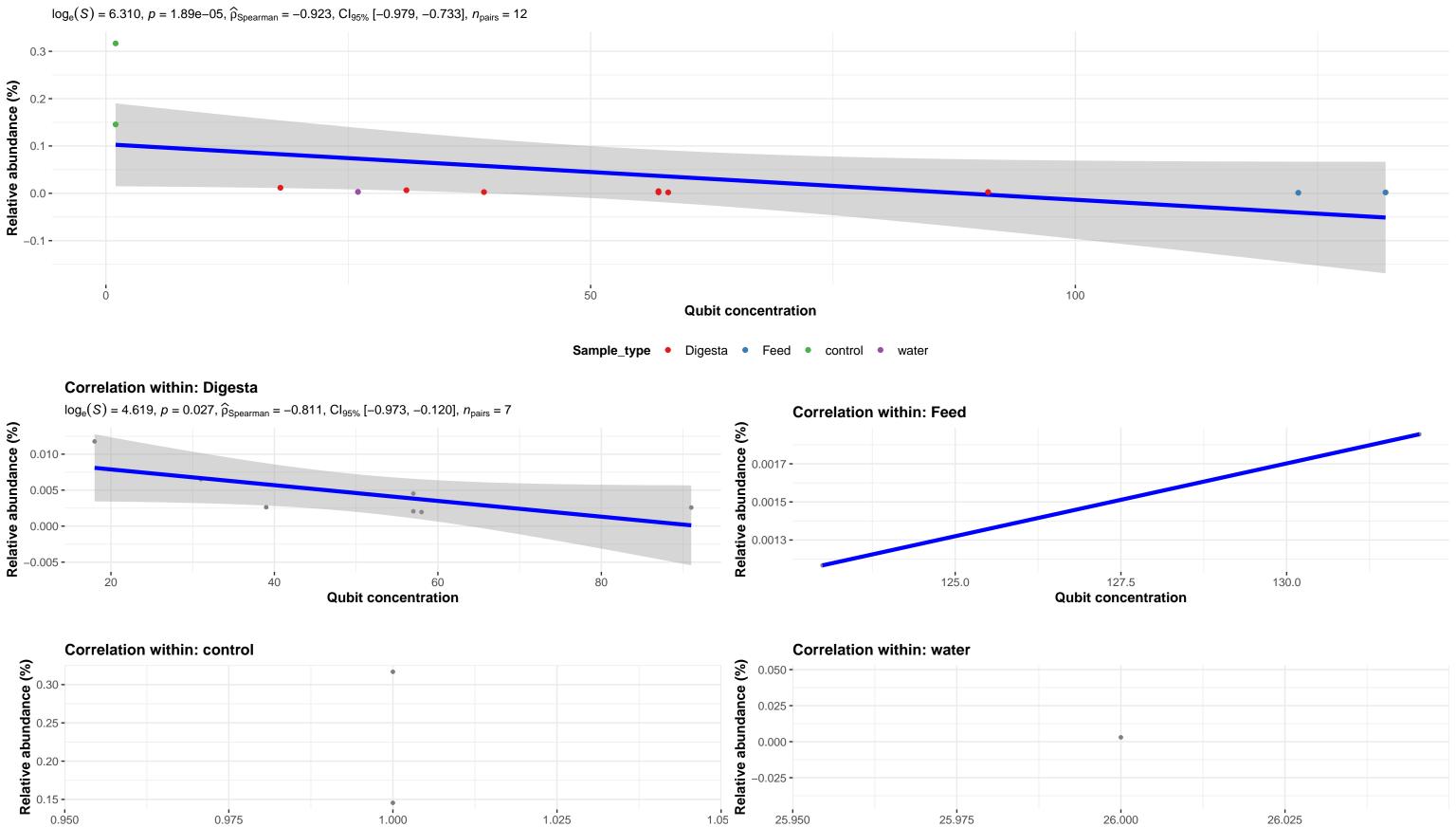






0.950

0.975



1.05

25.950

25.975

26.000

**Qubit concentration** 

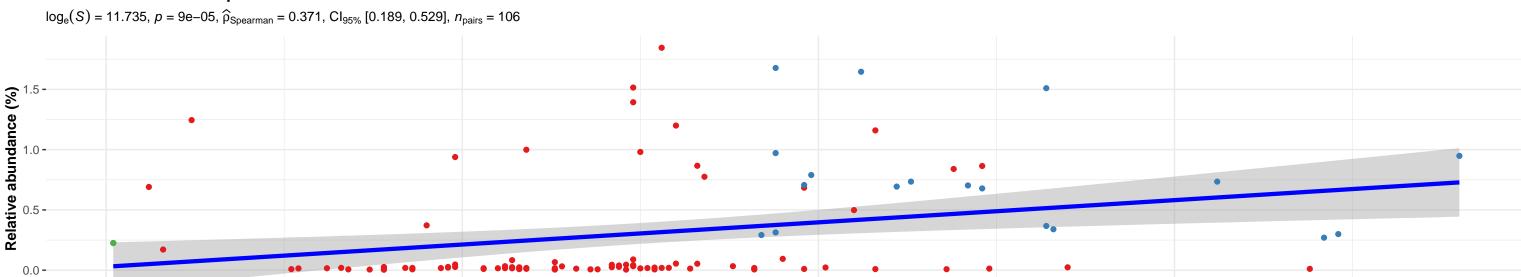
26.025

1.025

1.000 **Qubit concentration** 

## Bacteria; Firmicutes; Bacilli; Lactobacillales; Lactobacillaceae; Ligilactobacillus; NA



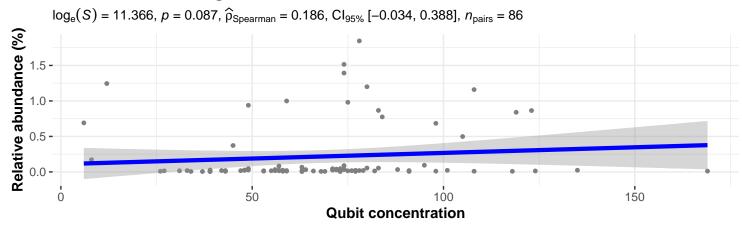




**Qubit concentration** 

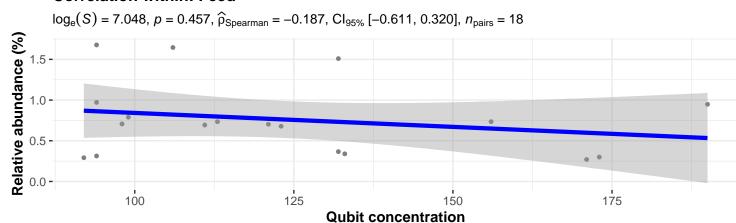
100

### **Correlation within: Digesta**

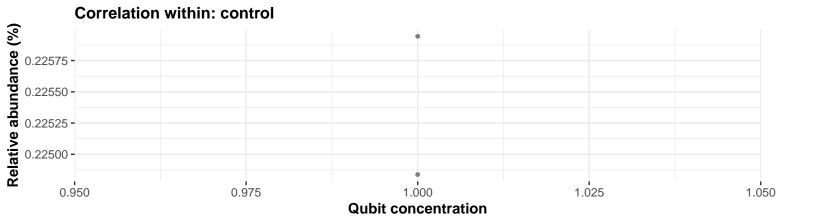


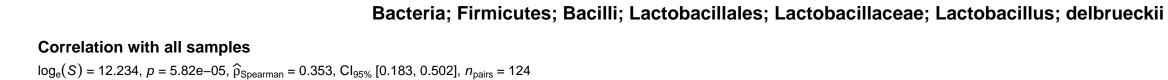
50

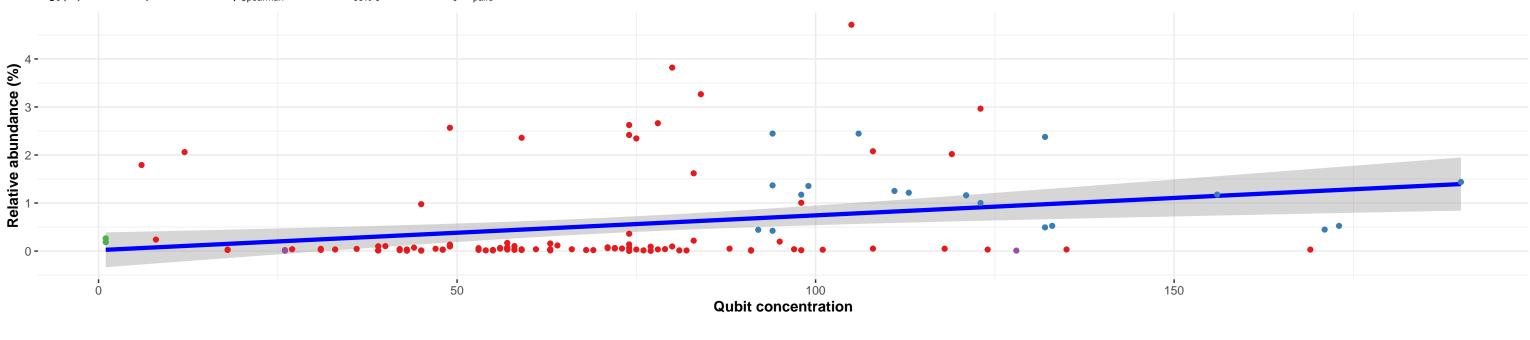
#### **Correlation within: Feed**

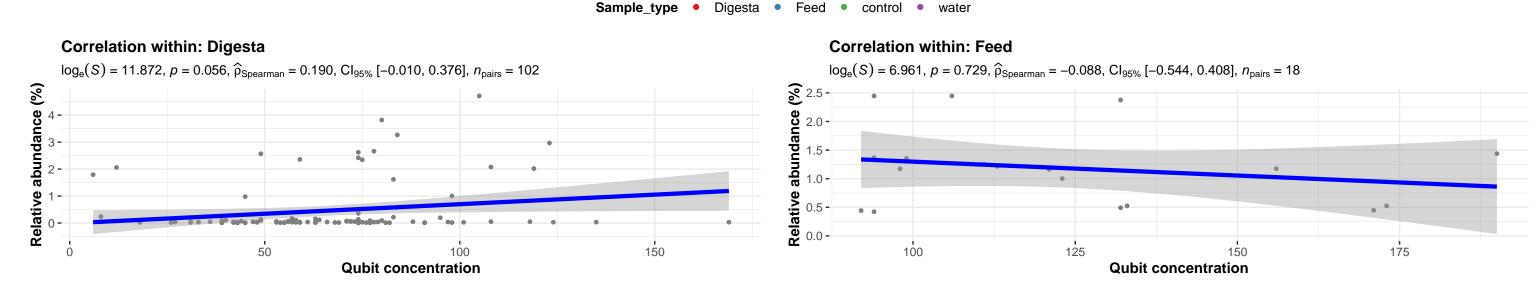


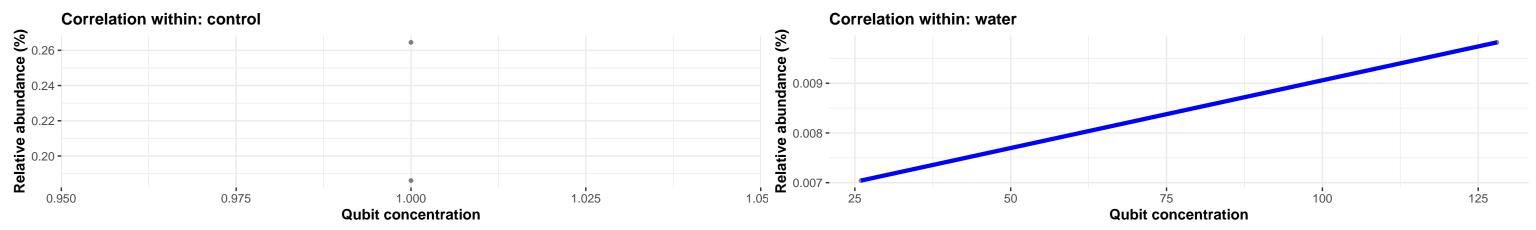
150





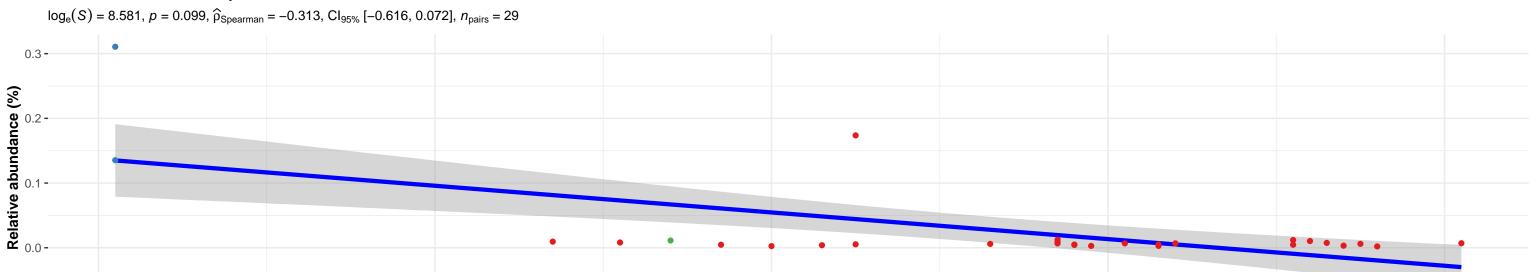






## Bacteria; Firmicutes; Bacilli; Bacillales; Bacillaceae; Oceanobacillus; indicireducens

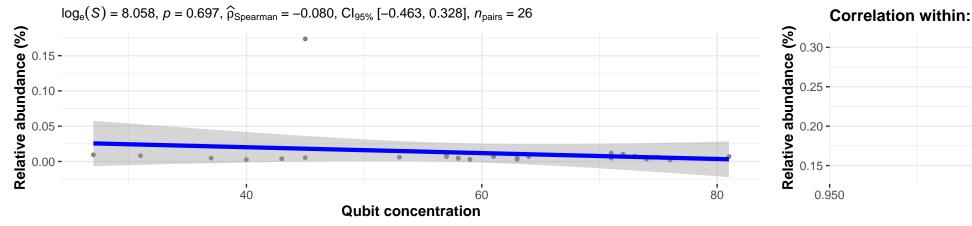




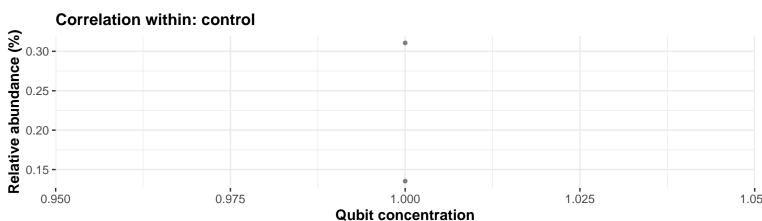


**Qubit concentration** 

#### **Correlation within: Digesta**

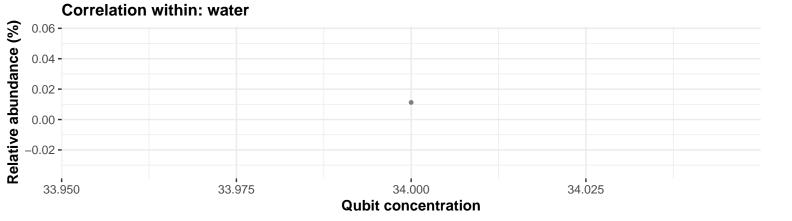


20



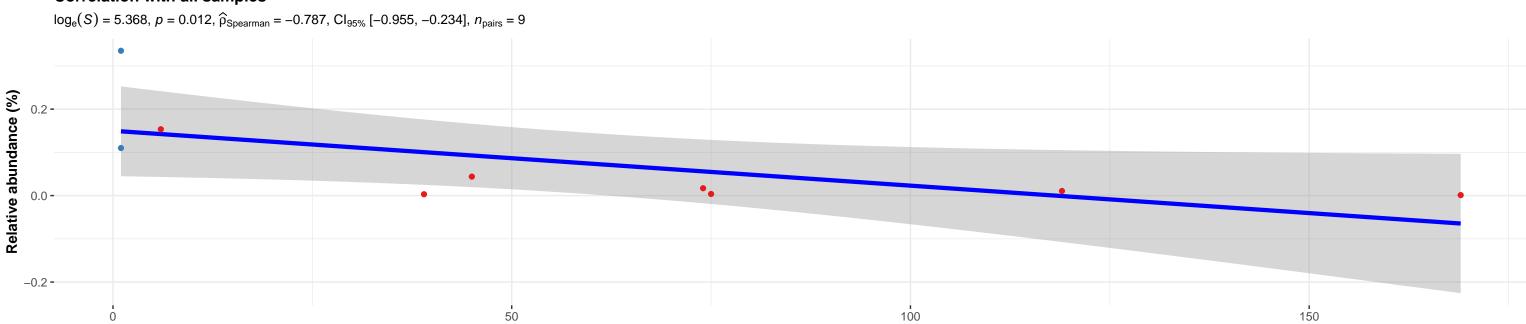
80

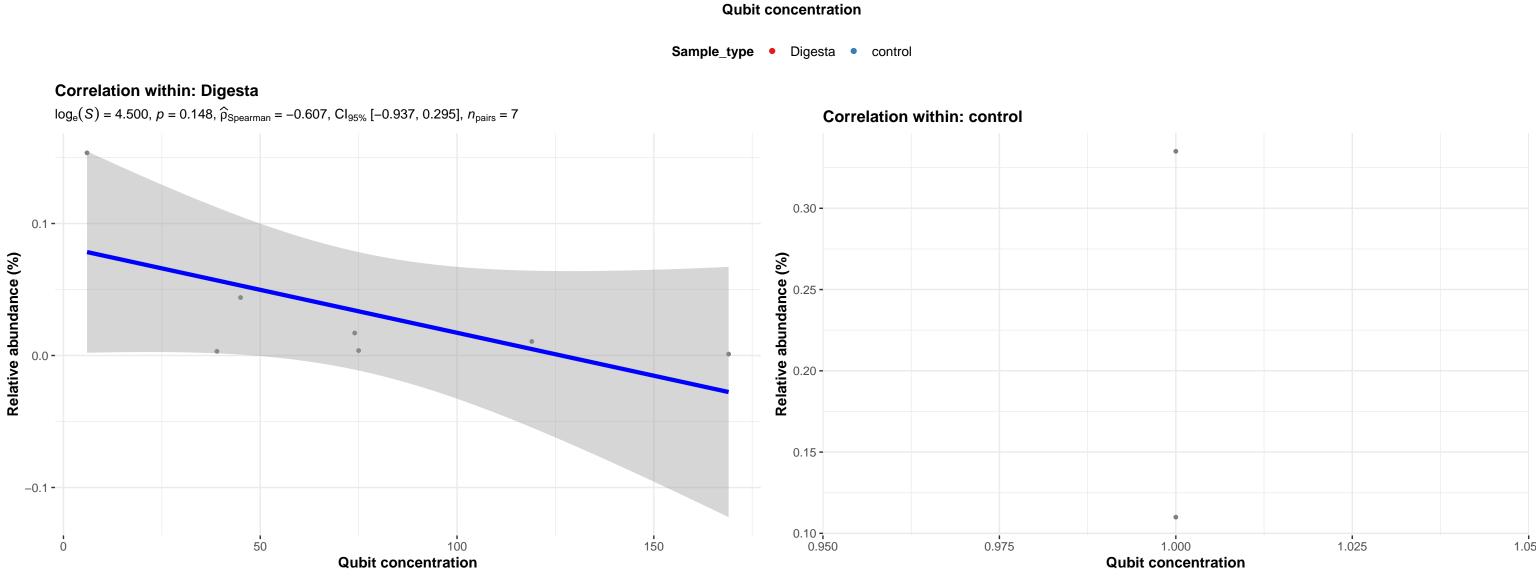
**6**0

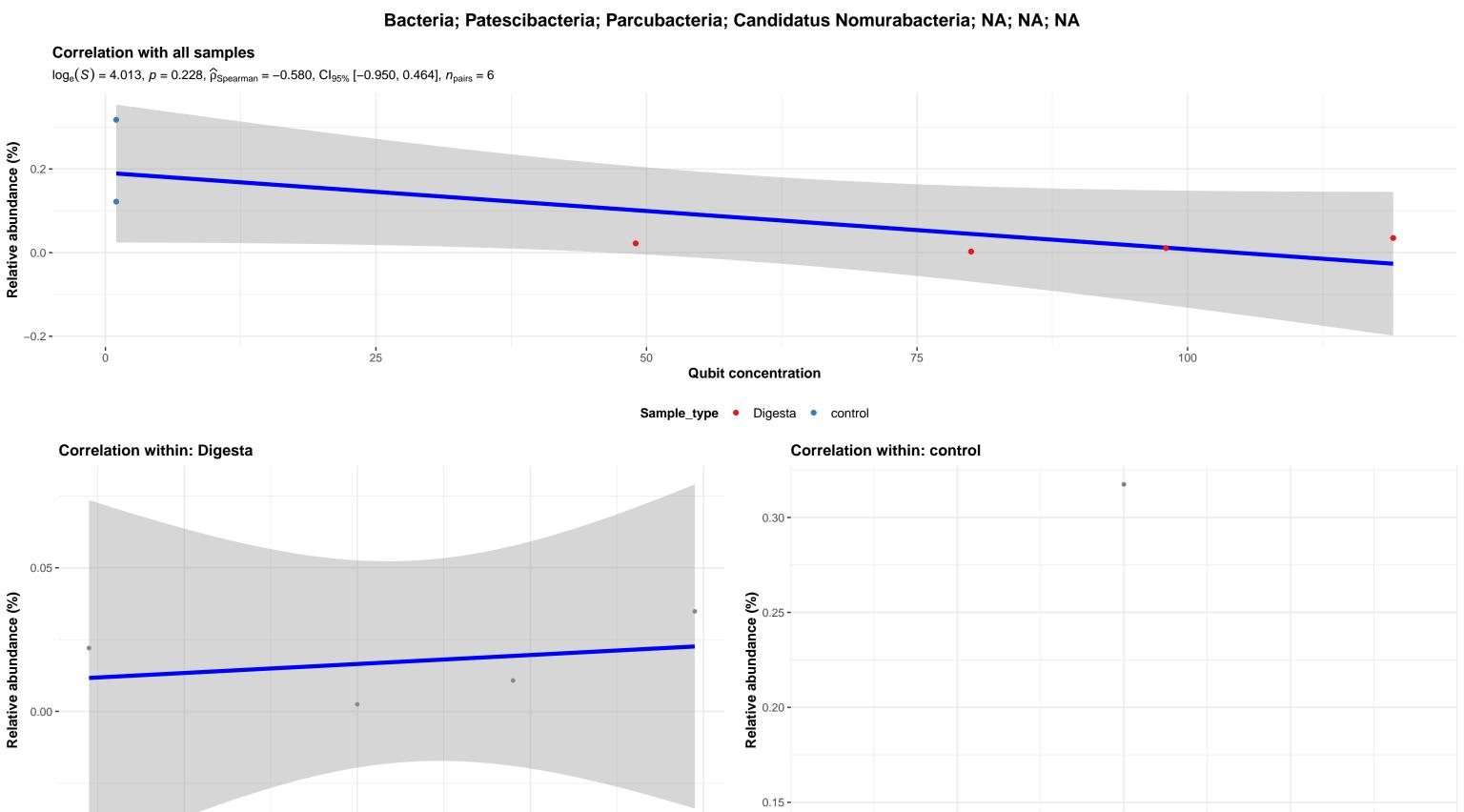


## Bacteria; Proteobacteria; Gammaproteobacteria; Burkholderiales; Comamonadaceae; Pelomonas; saccharophila









0.950

0.975

1.000

**Qubit concentration** 

120

100

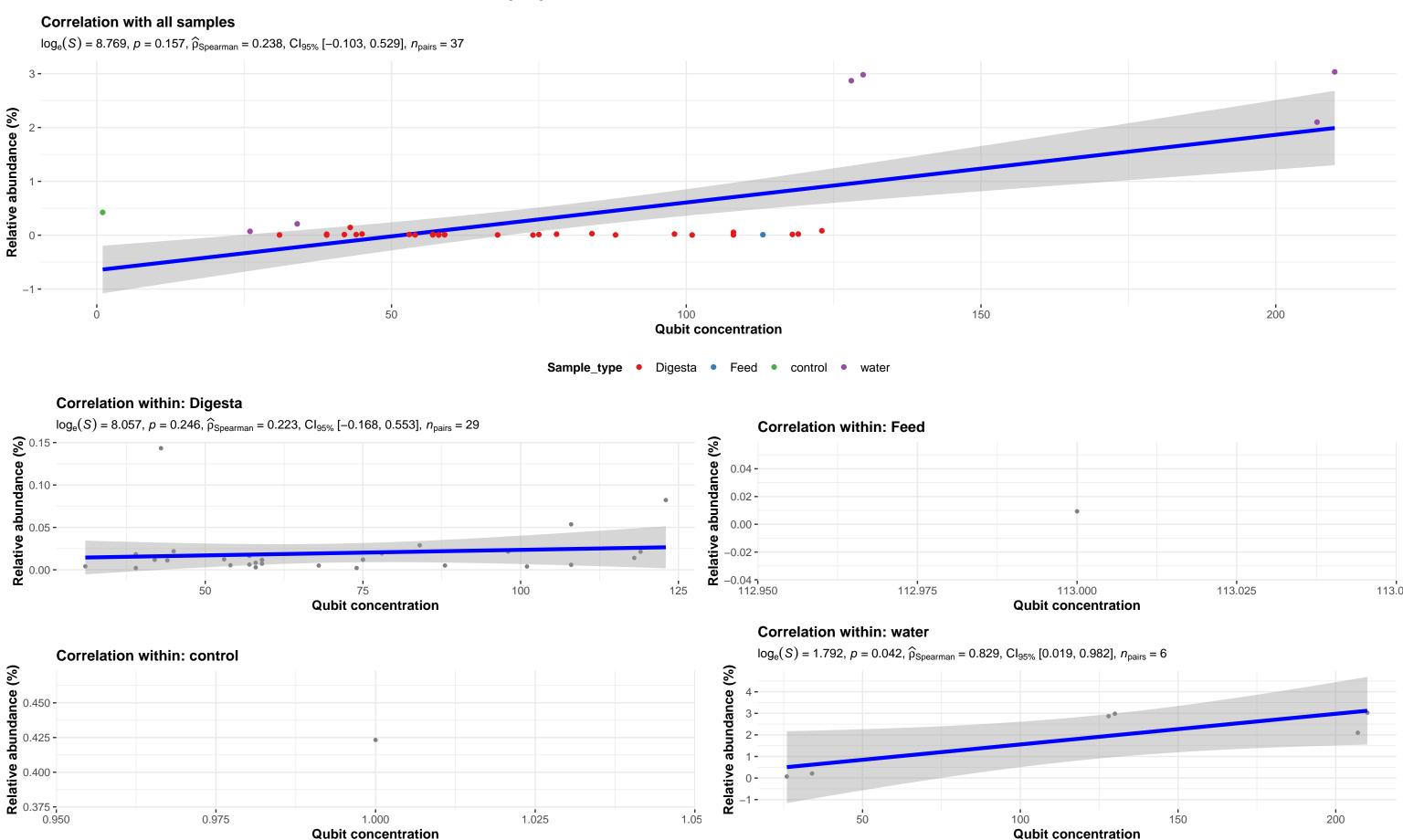
**Qubit concentration** 

1.05

1.025

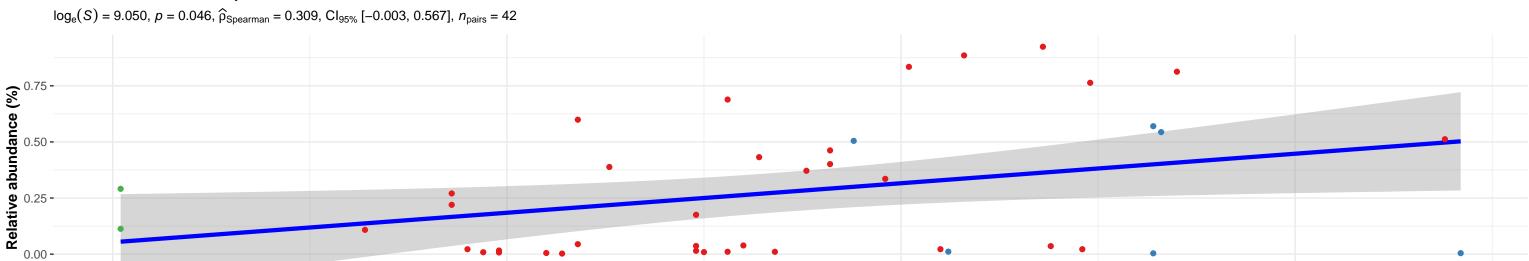
-0.05

60



## Bacteria; Firmicutes; Bacilli; Bacillales; Bacillaceae; Bacillus; coagulans





**Qubit concentration** 

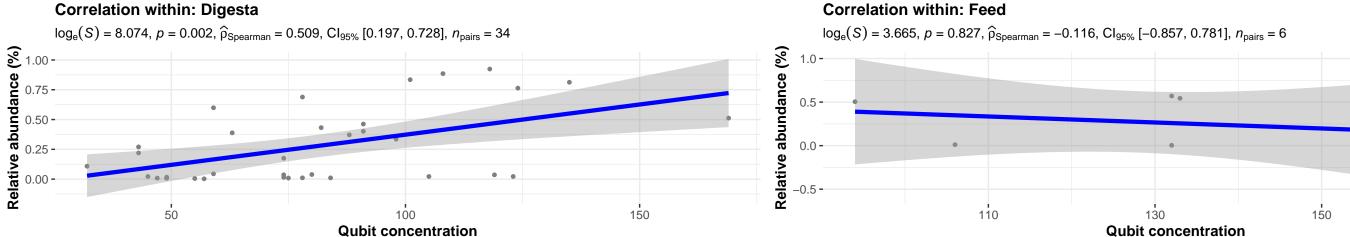
100

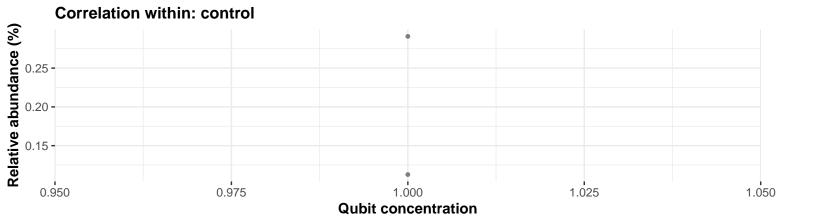
150

170

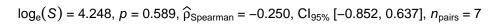


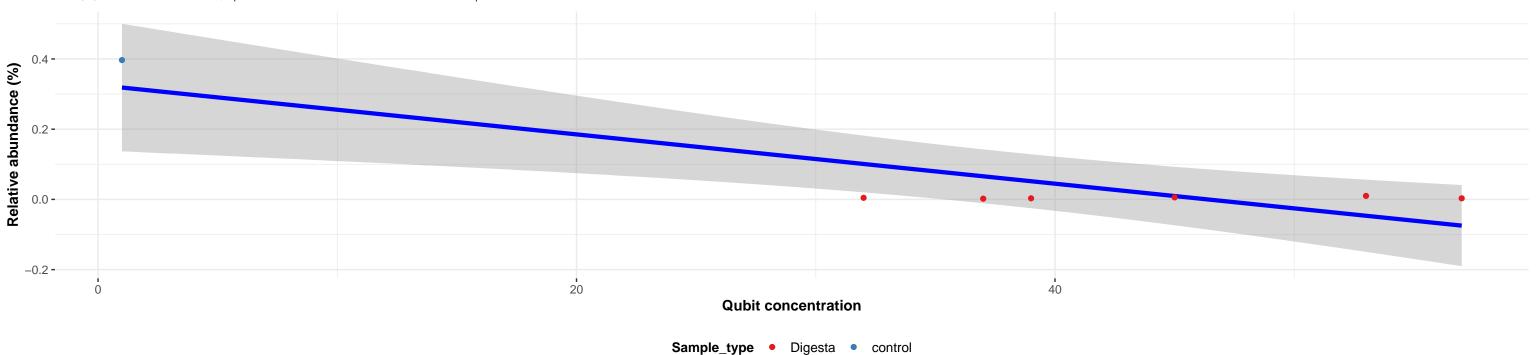
50

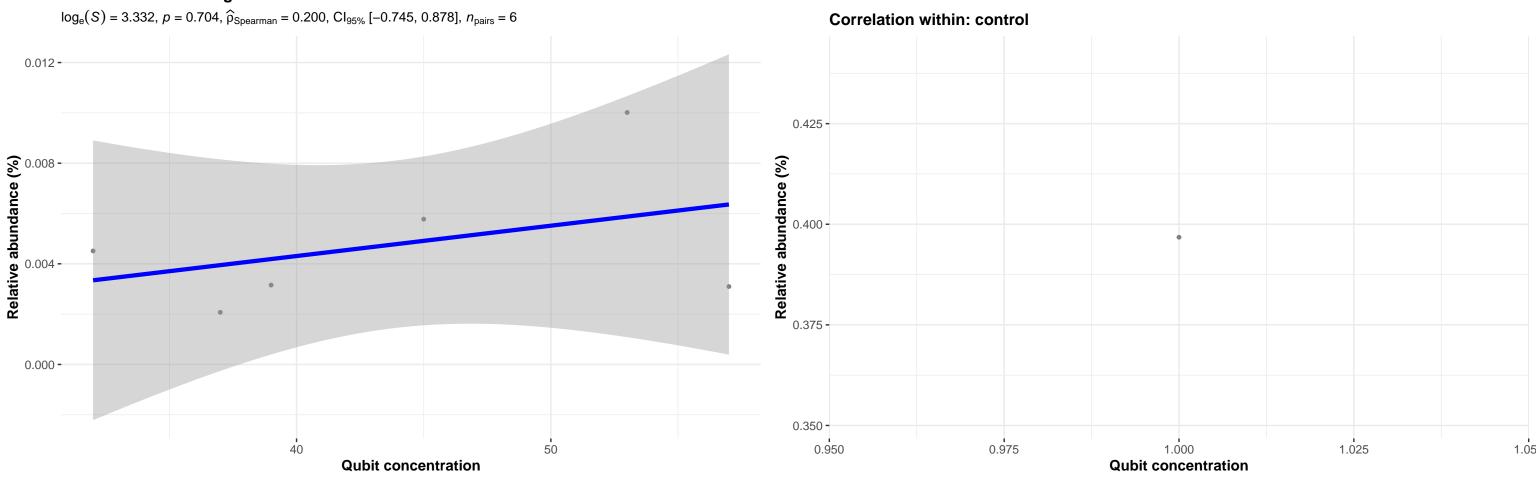


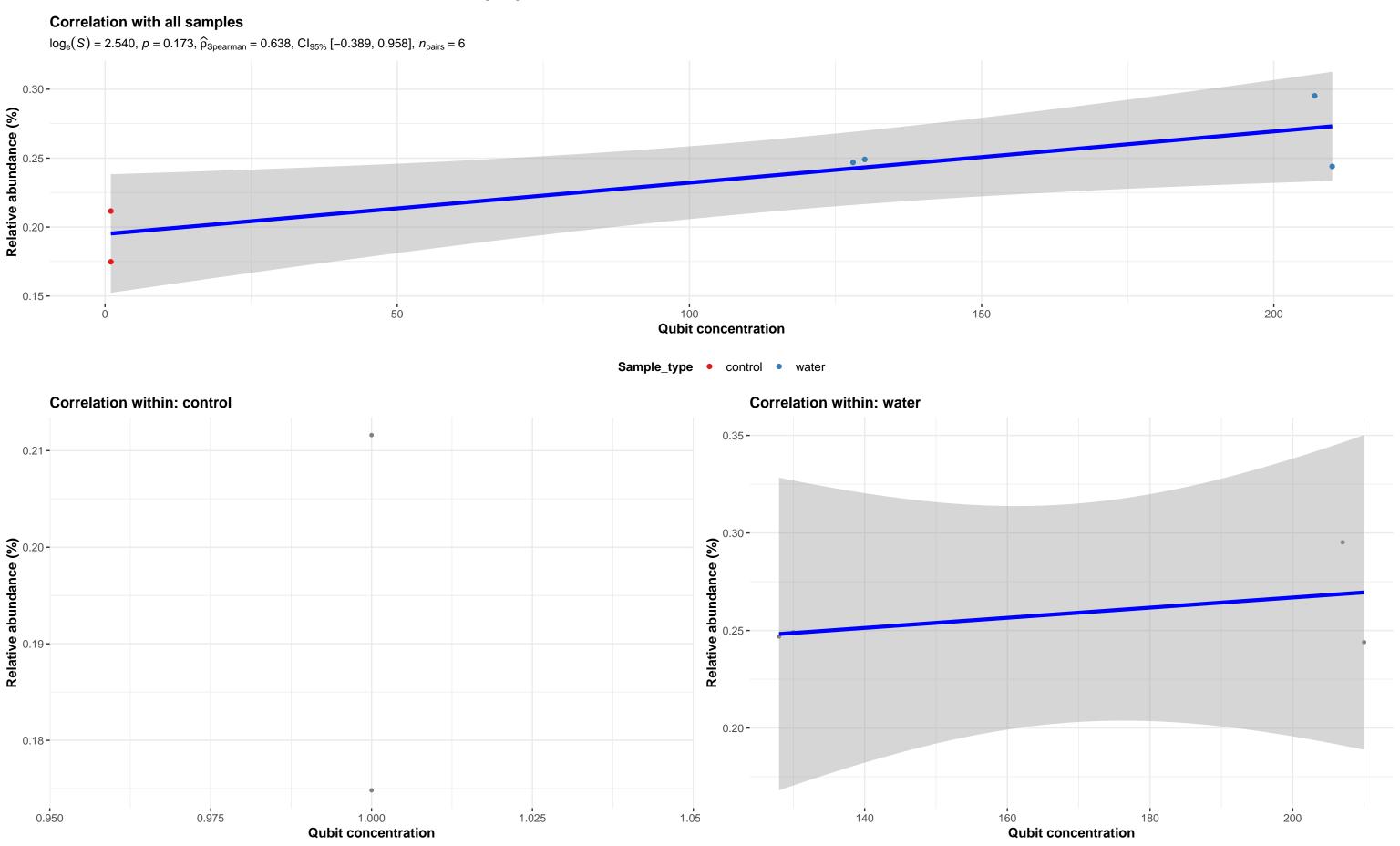






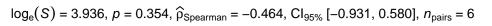


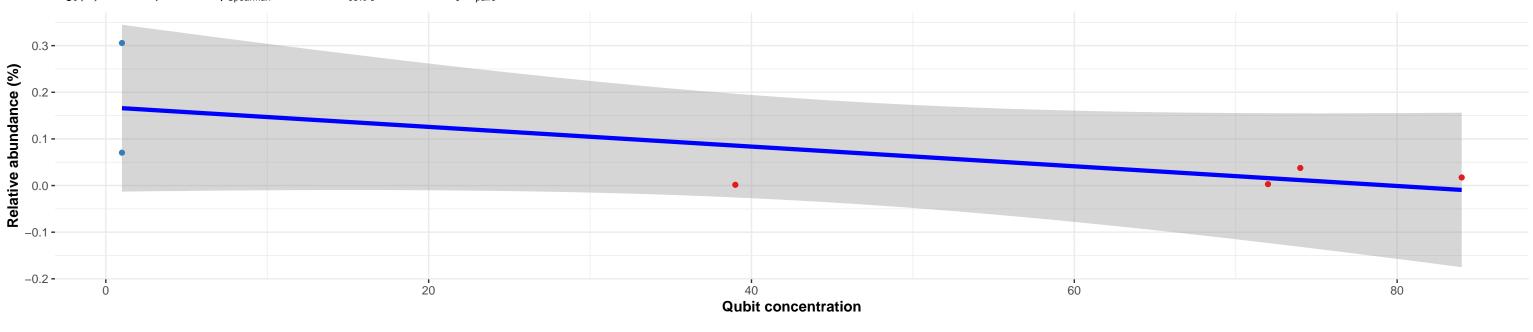


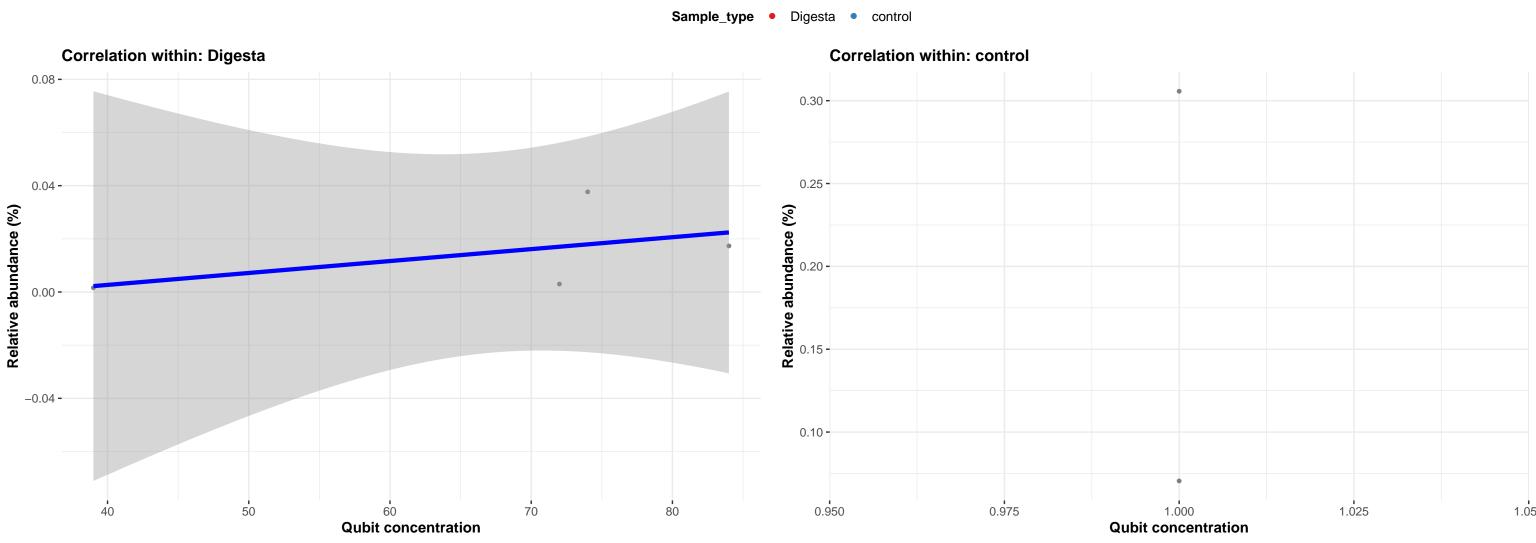


# Bacteria; Bacteroidota; Bacteroidia; Sphingobacteriales; Sphingobacteriaceae; Pedobacter; NA



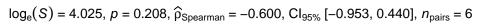


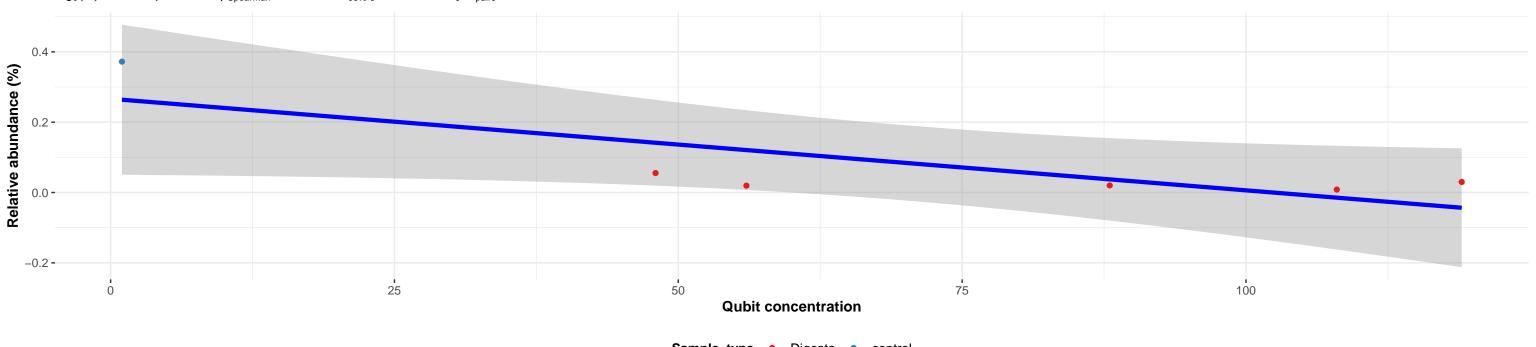


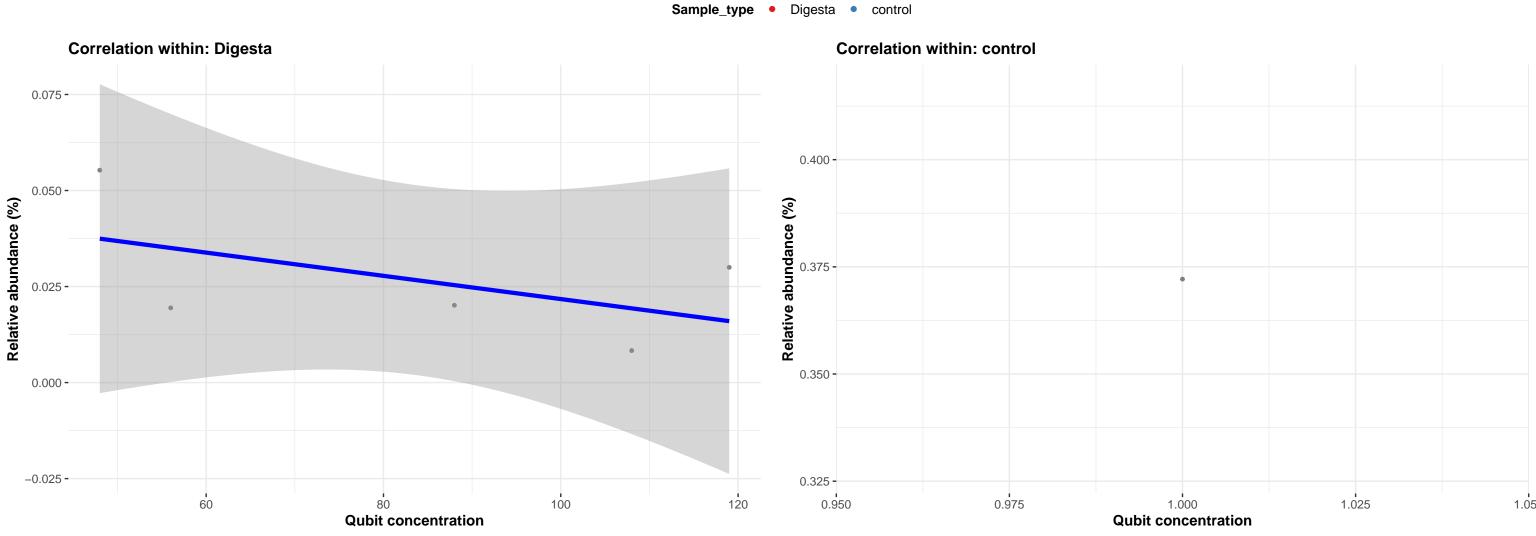


# Bacteria; Firmicutes; Bacilli; Staphylococcales; Staphylococcaceae; Staphylococcus; NA



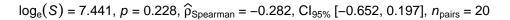


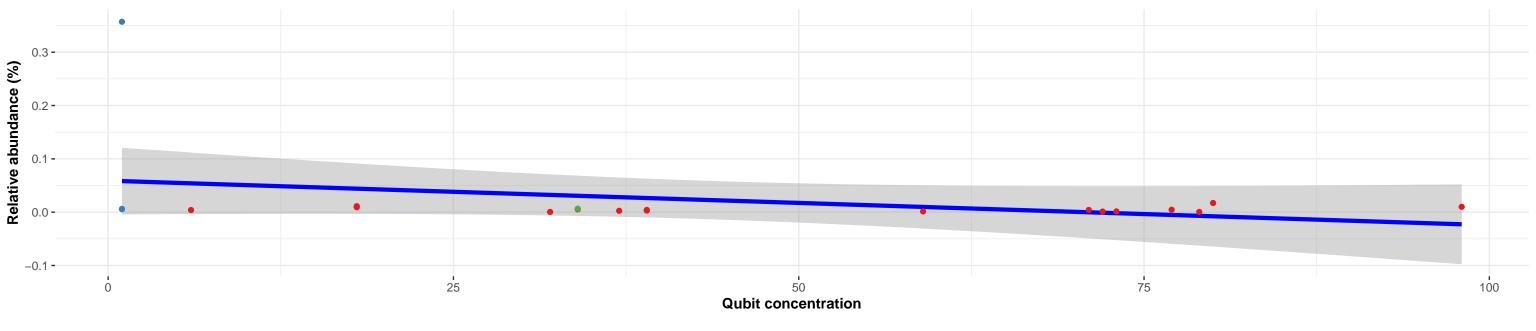




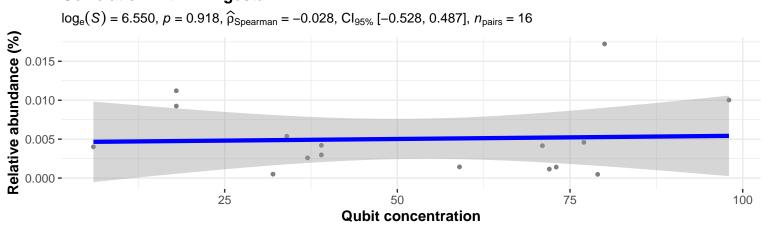
## Bacteria; Firmicutes; Bacilli; Lactobacillales; Enterococcaceae; Enterococcus; faecalis

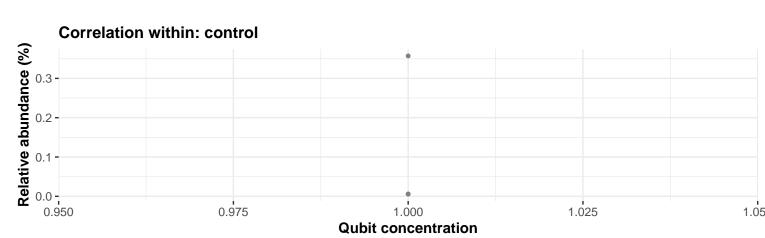


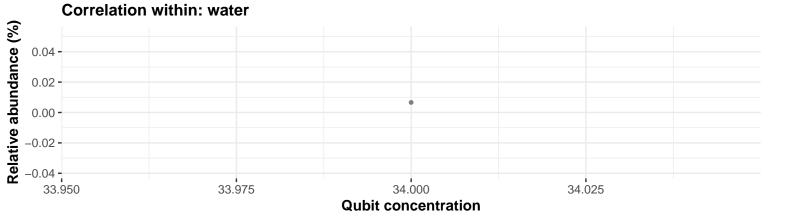




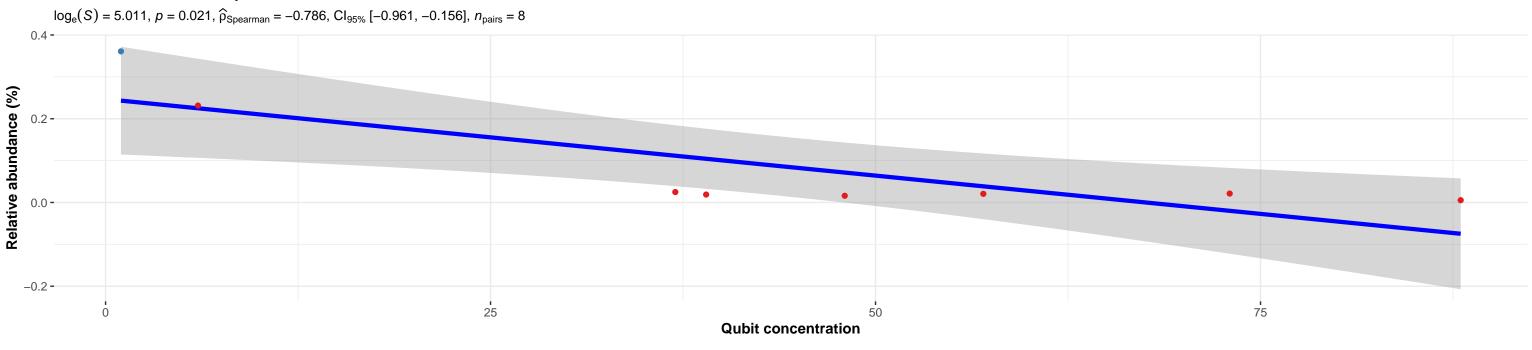
Sample\_type • Digesta • control • water





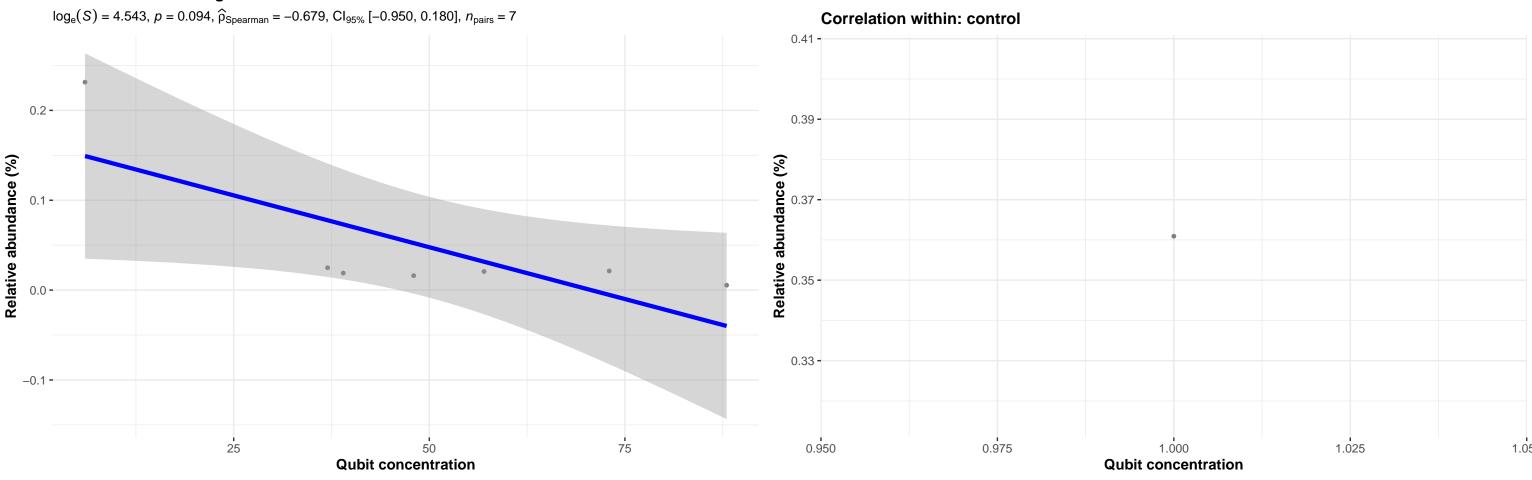






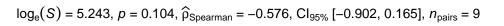
Sample\_type • Digesta • control

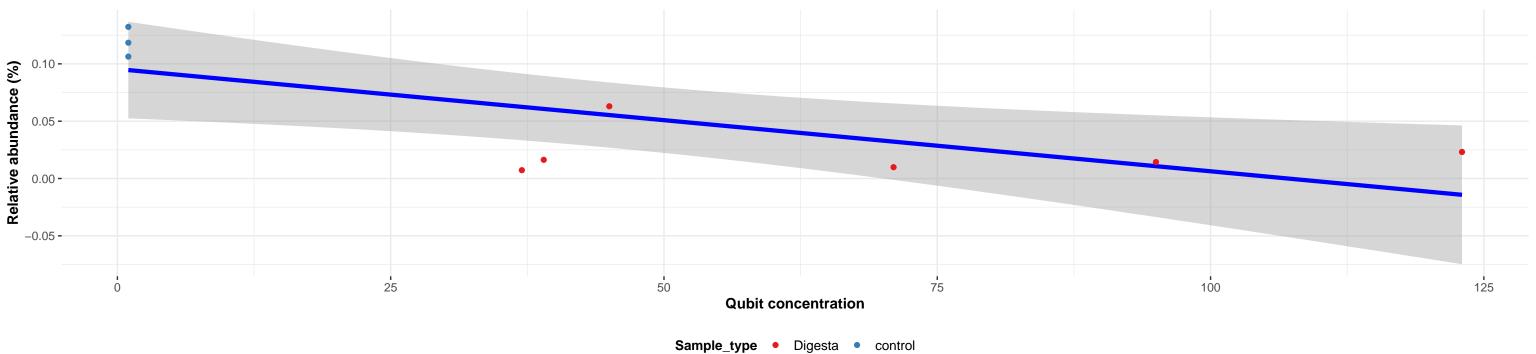




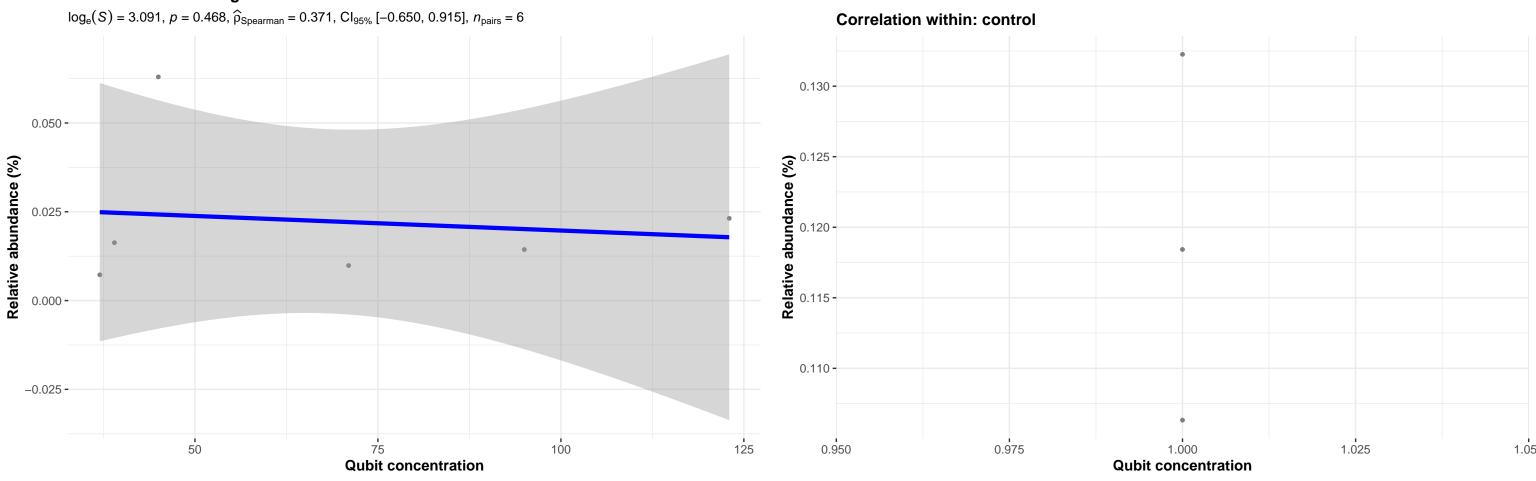
## Bacteria; Firmicutes; Bacilli; Thermicanales; Thermicanaceae; Thermicanus; NA





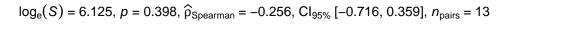


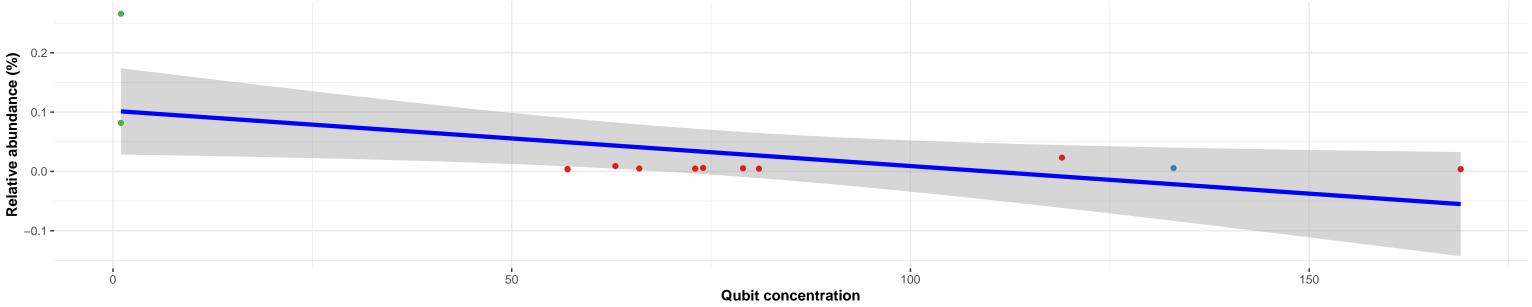




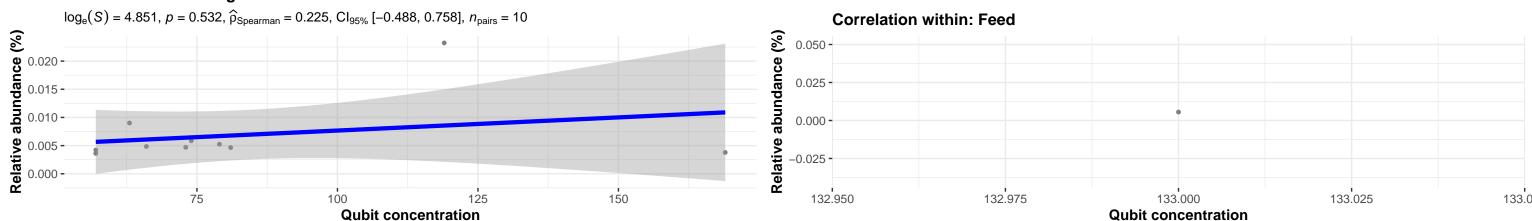
## Bacteria; Proteobacteria; Alphaproteobacteria; Rhizobiales; Beijerinckiaceae; Methylobacterium-Methylorubrum; NA



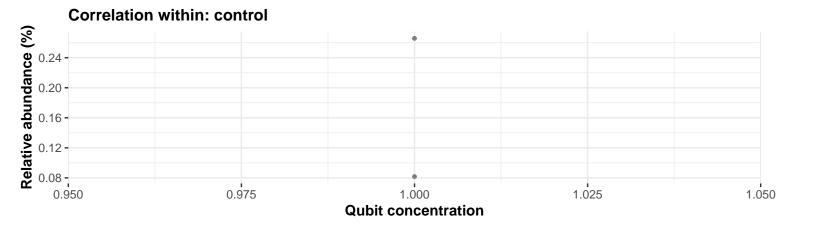




#### Correlation within: Digesta

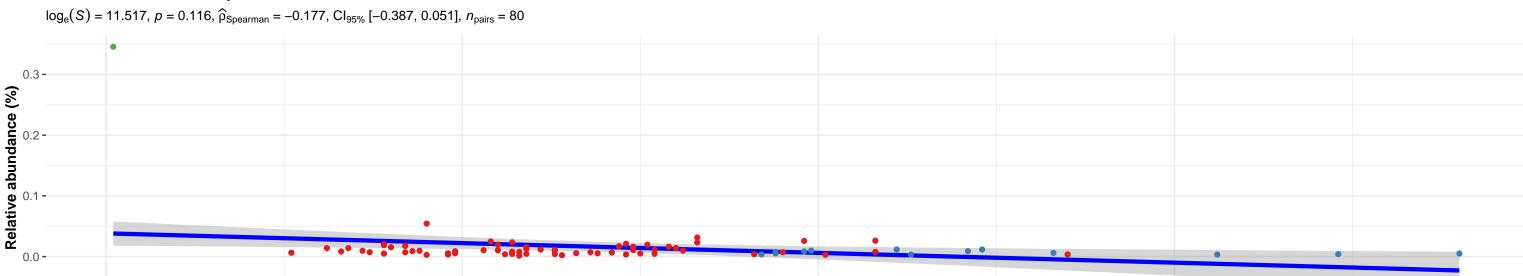


Sample\_type • Digesta • Feed • control



# Bacteria; Firmicutes; Bacilli; Bacillales; Bacillaceae; Bacillus; NA



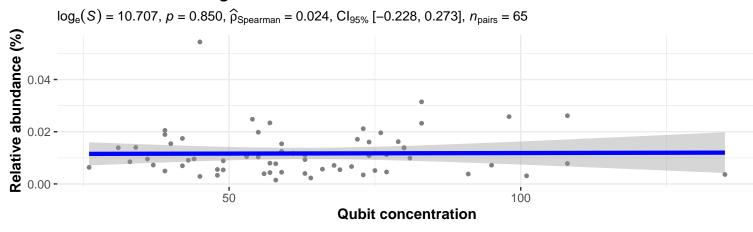




**Qubit concentration** 

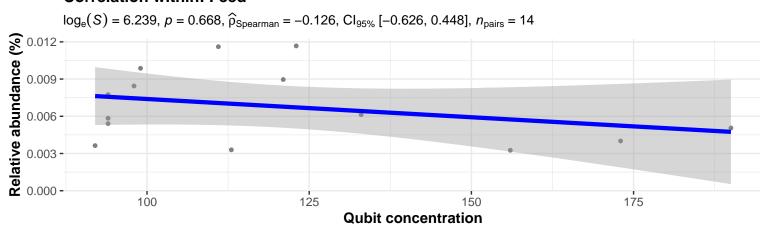
100

#### **Correlation within: Digesta**

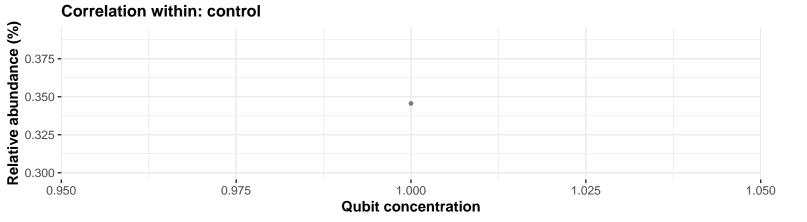


50

#### **Correlation within: Feed**

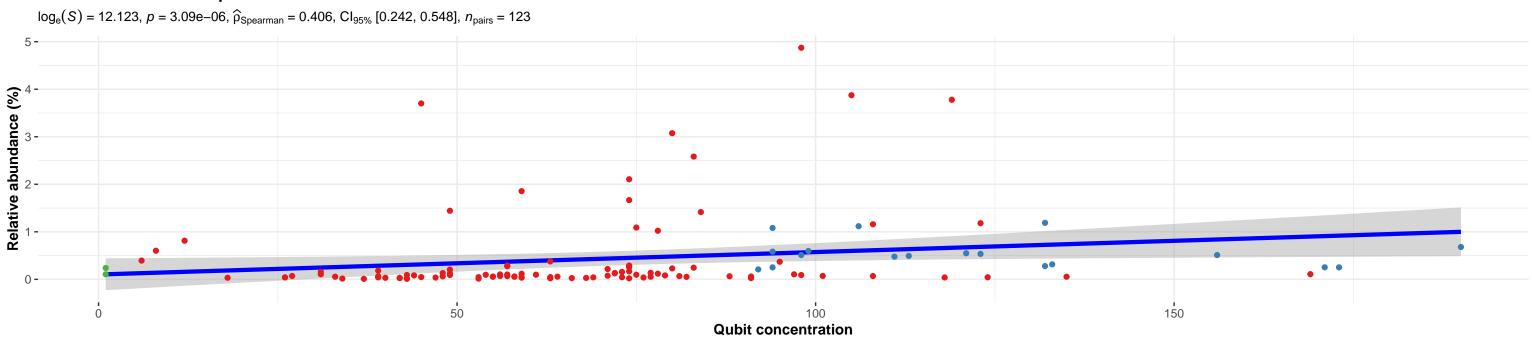


150



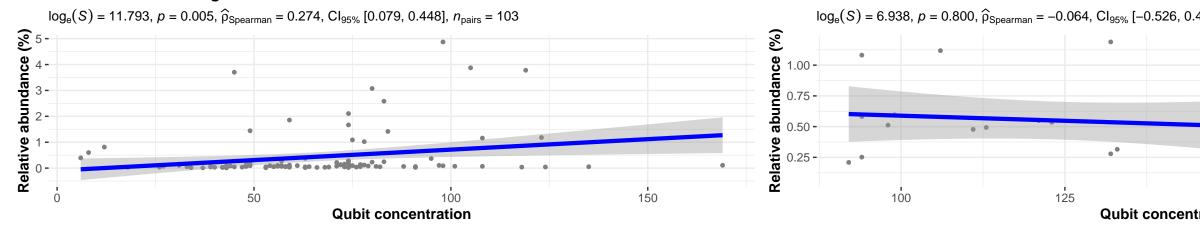
## Bacteria; Firmicutes; Bacilli; Lactobacillales; Streptococcaceae; Streptococcus; NA

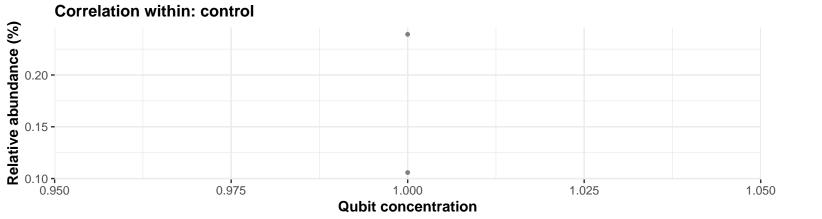




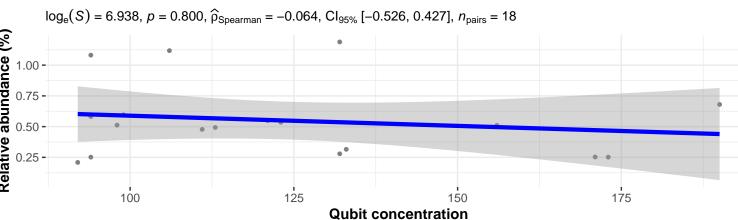
Sample\_type • Digesta • Feed • control





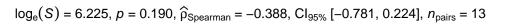


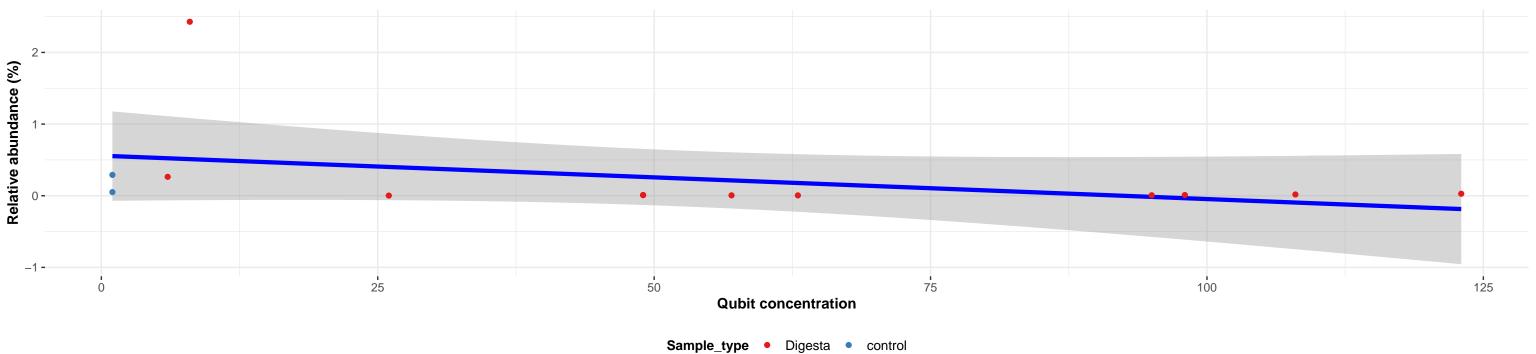
#### **Correlation within: Feed**

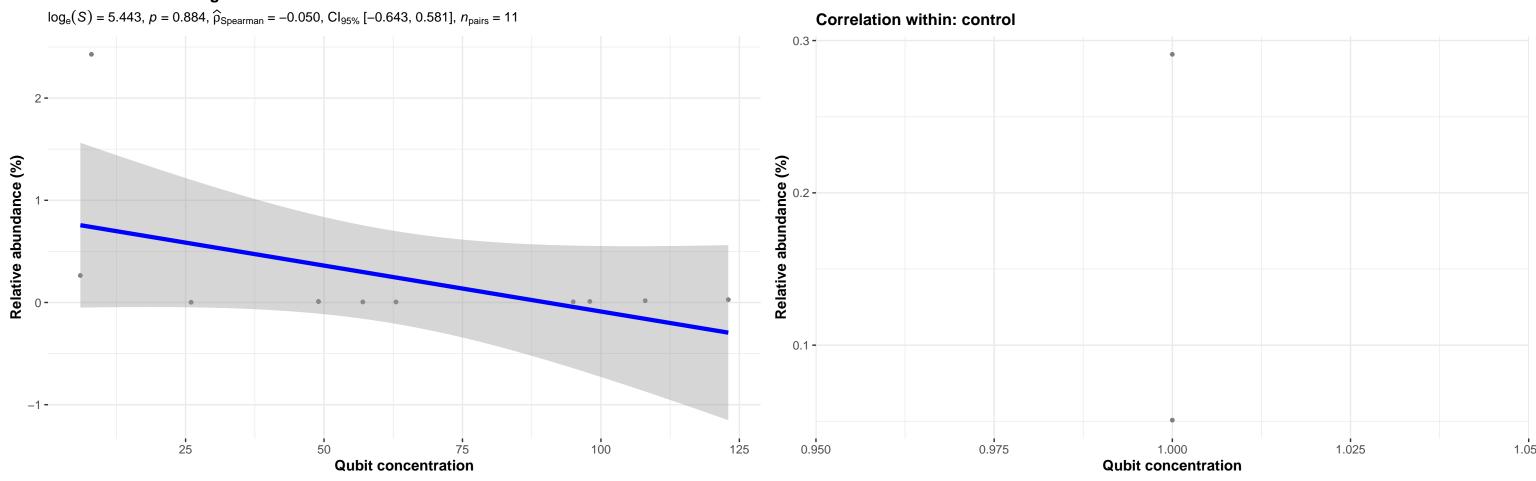


# Bacteria; Firmicutes; Bacilli; Lactobacillales; Streptococcaceae; Streptococcus; NA

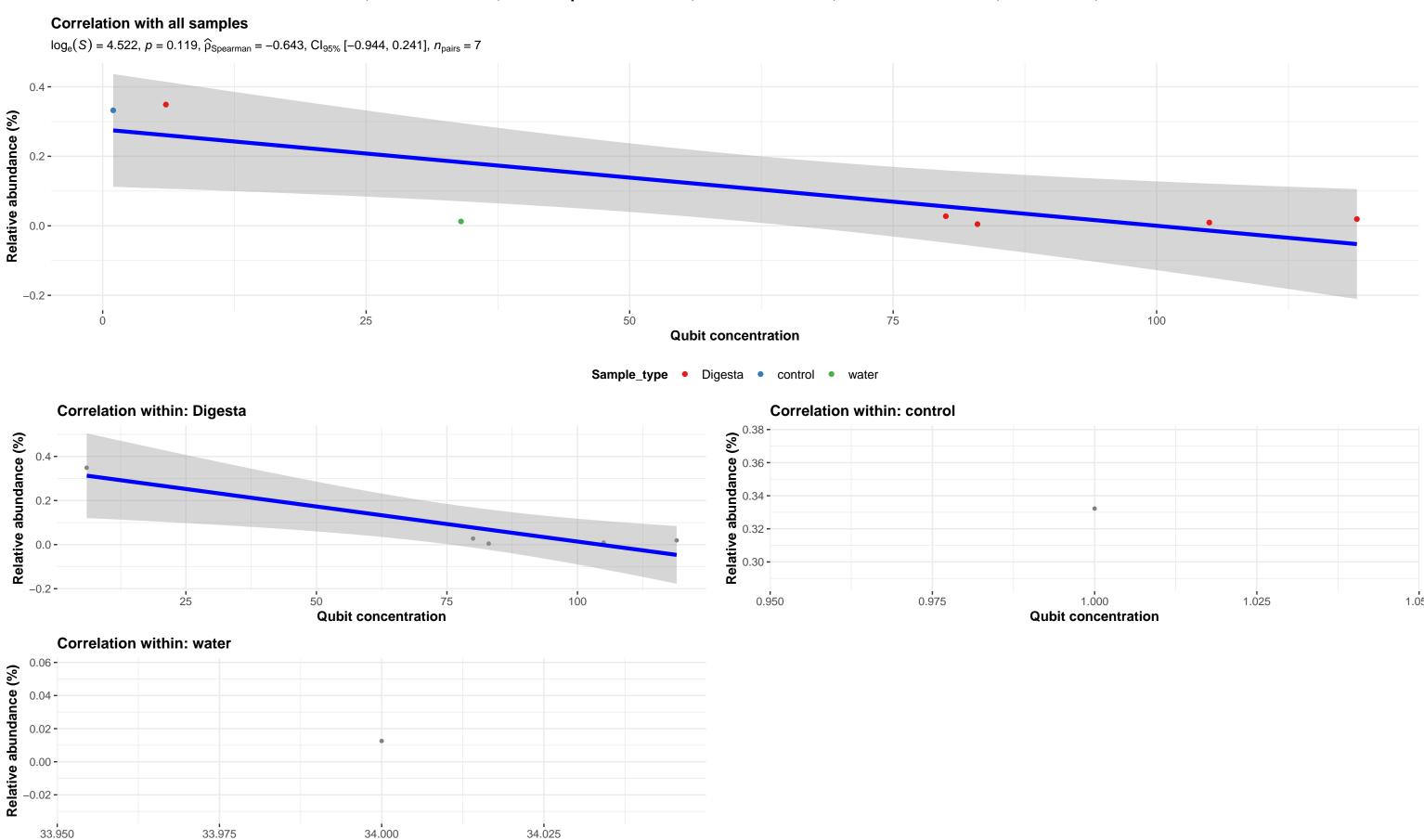
## **Correlation with all samples**





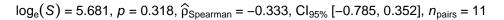


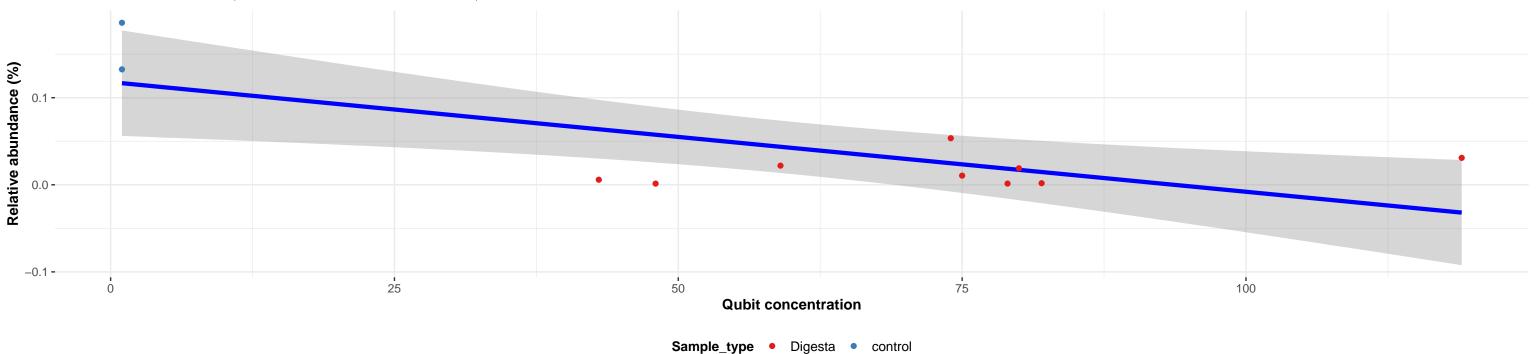
# Bacteria; Proteobacteria; Gammaproteobacteria; Burkholderiales; Comamonadaceae; Variovorax; NA

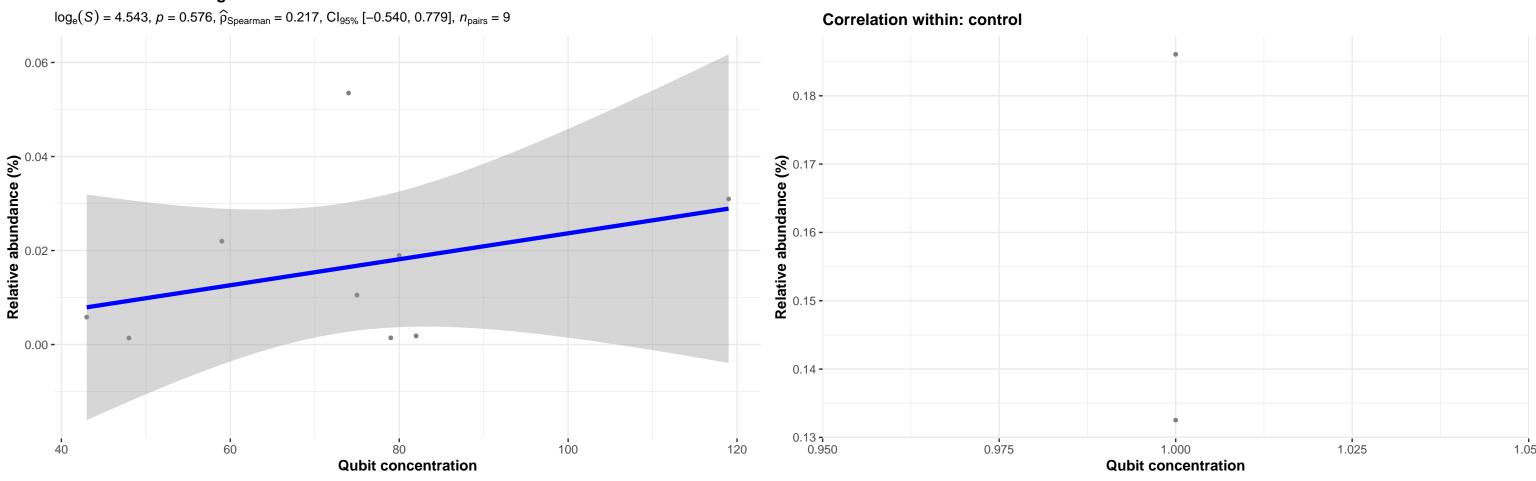


**Qubit concentration** 

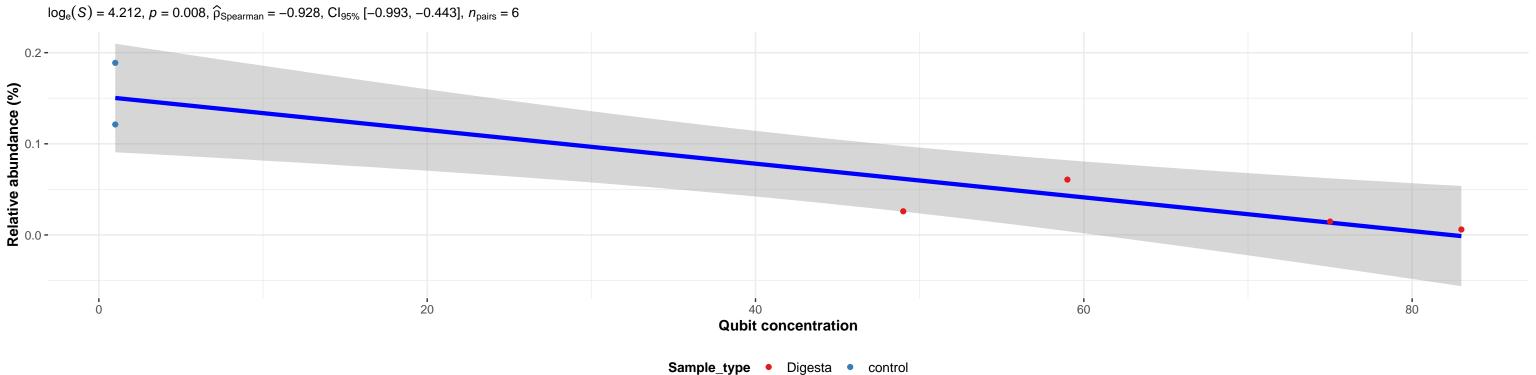
### **Correlation with all samples**

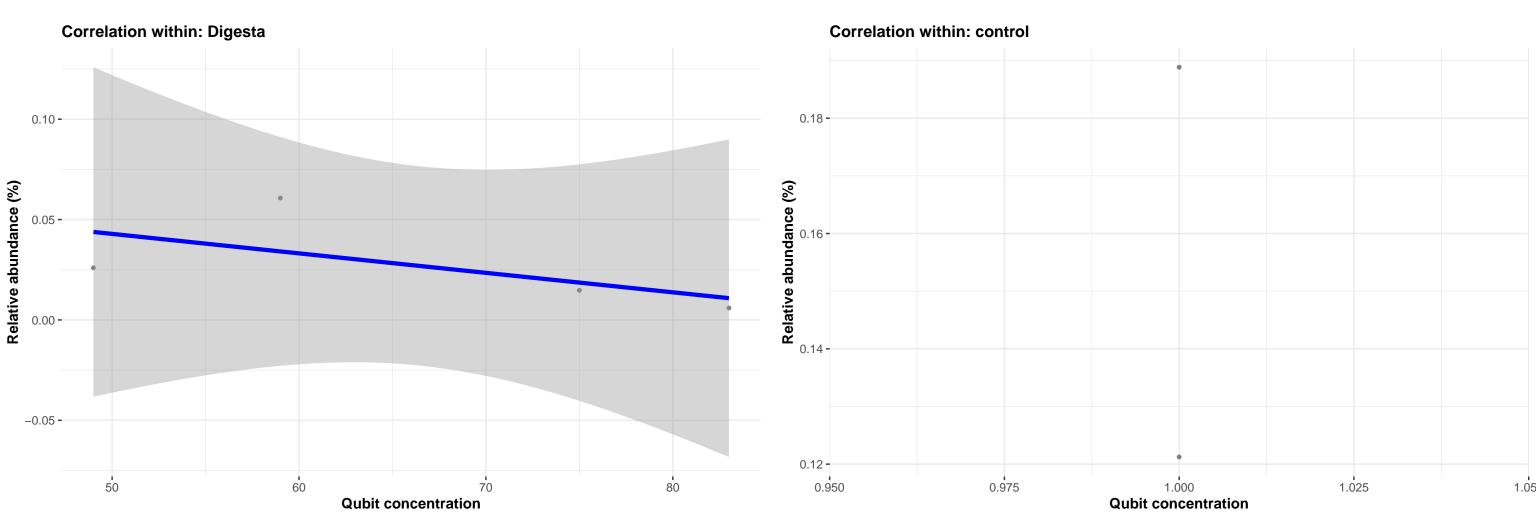






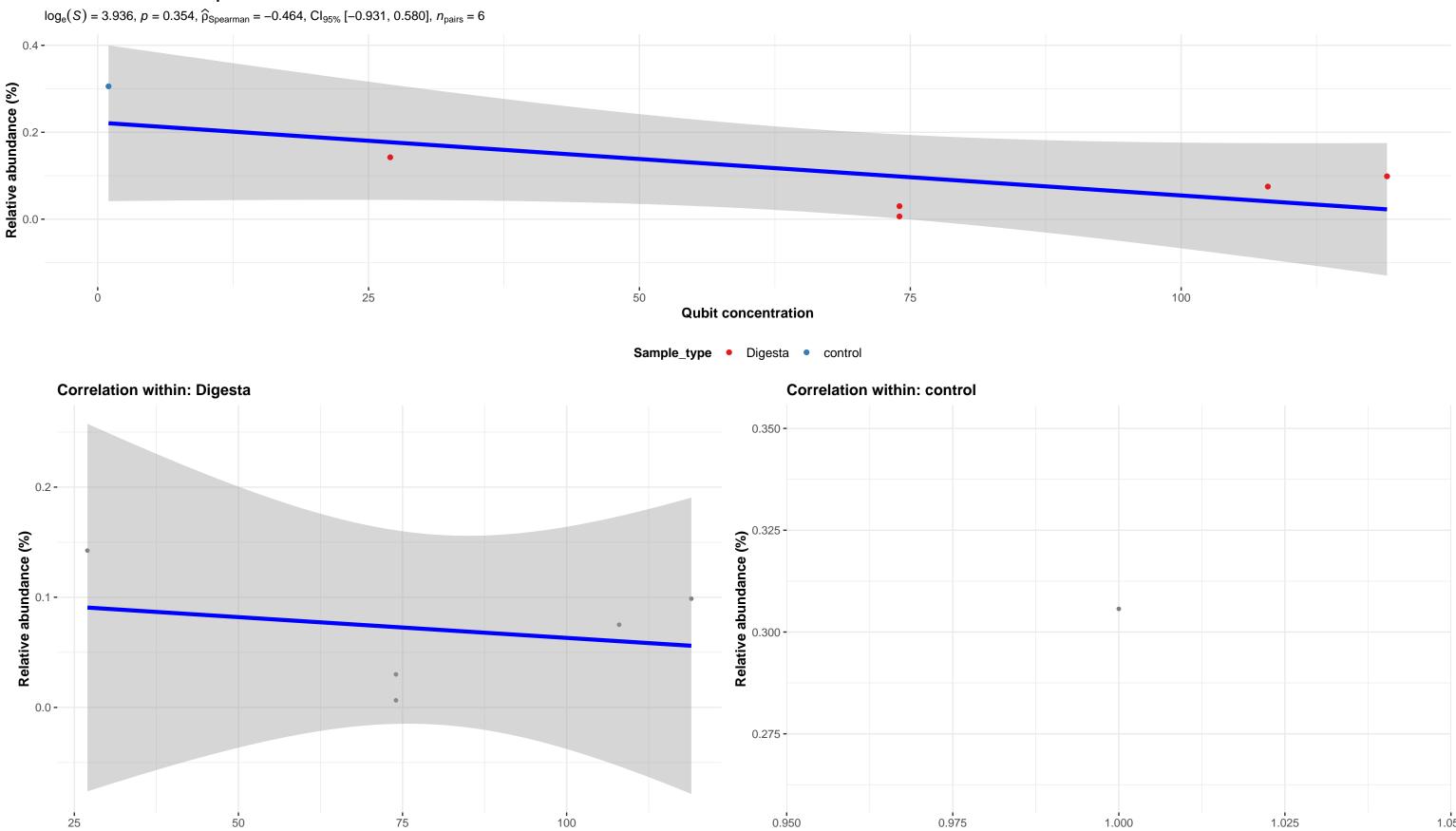






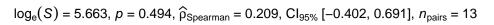


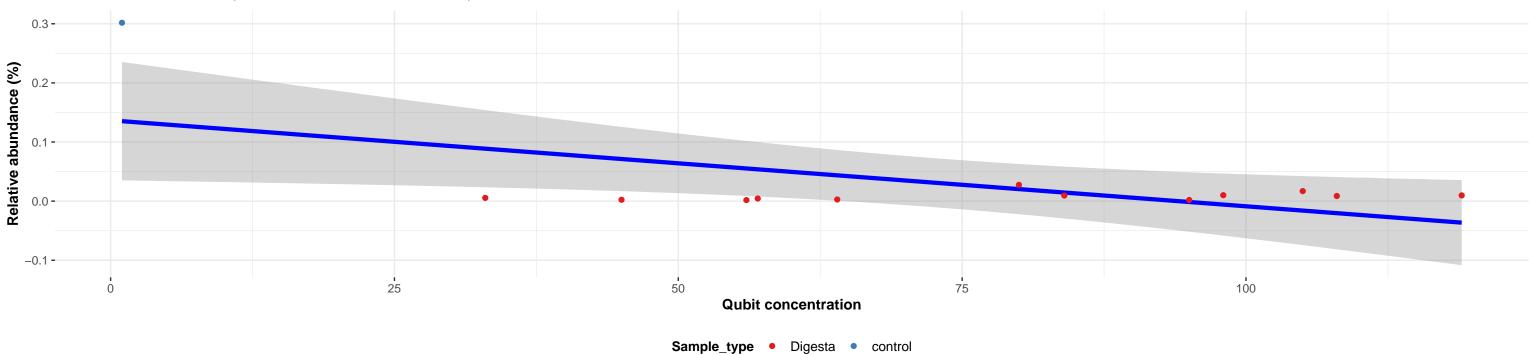
**Qubit concentration** 



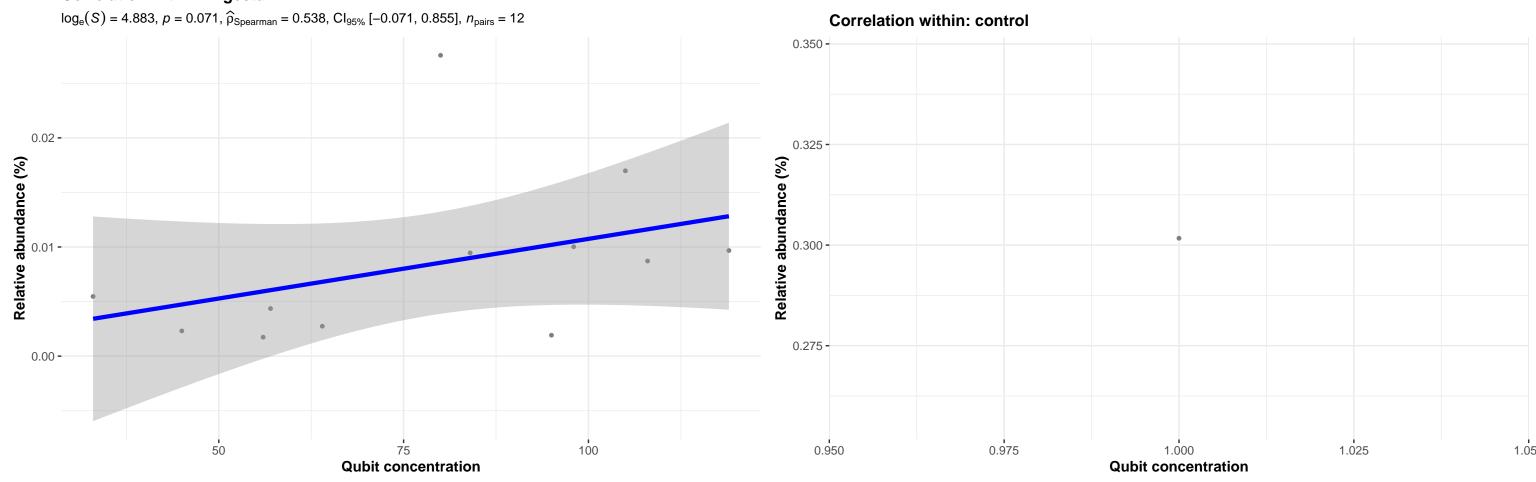
**Qubit concentration** 





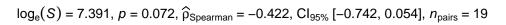


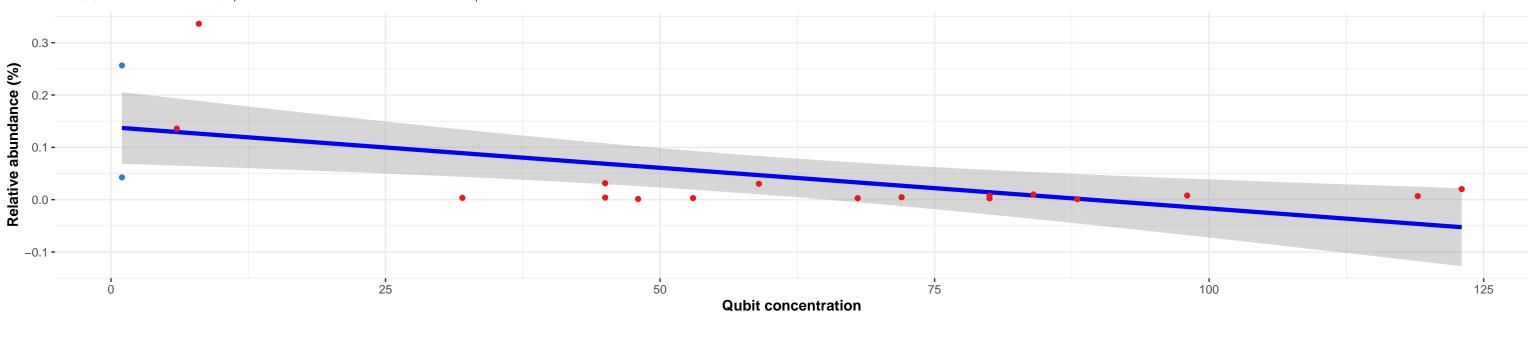




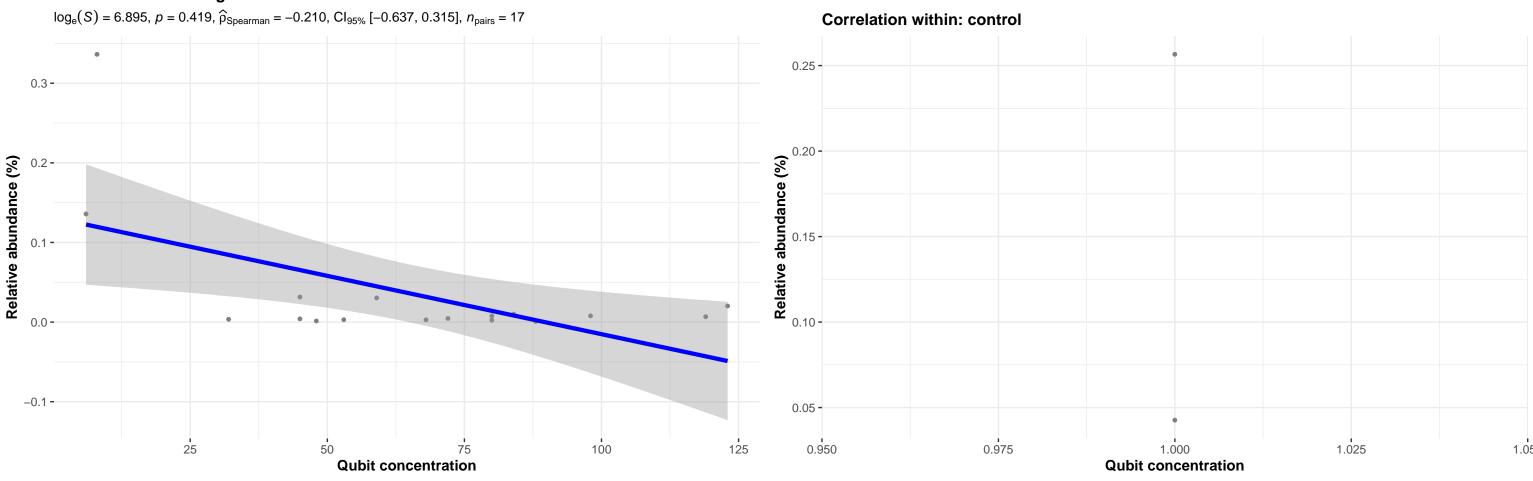
# Bacteria; Verrucomicrobiota; Chlamydiae; Chlamydiales; Chlamydiaceae; NA; NA

### **Correlation with all samples**



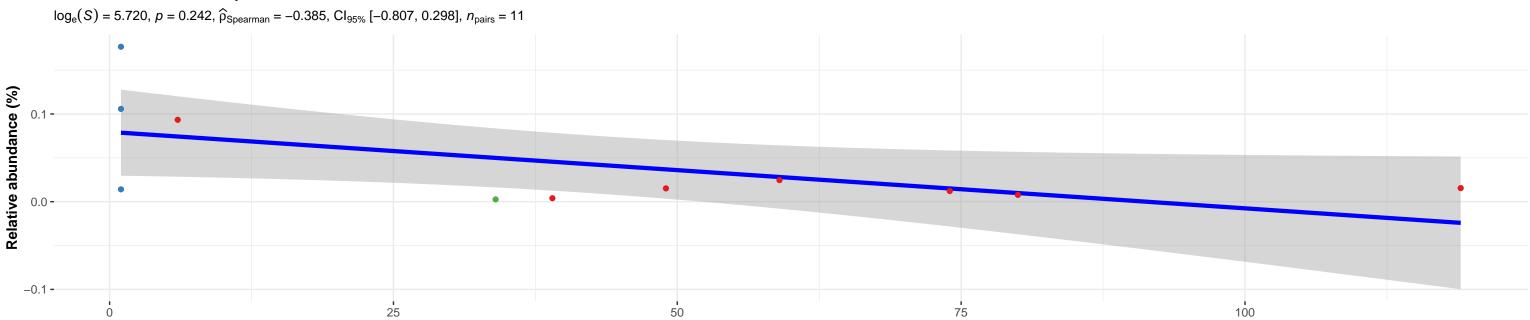


Sample\_type • Digesta • control



# Bacteria; Patescibacteria; Parcubacteria; Candidatus Nomurabacteria; NA; NA; NA

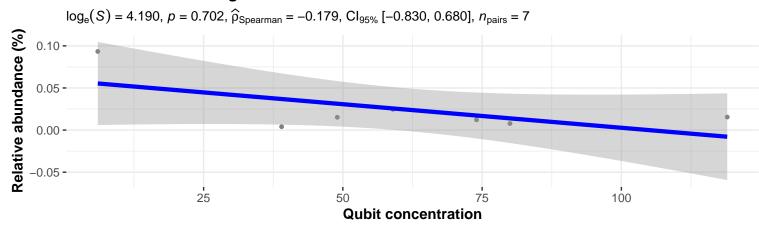


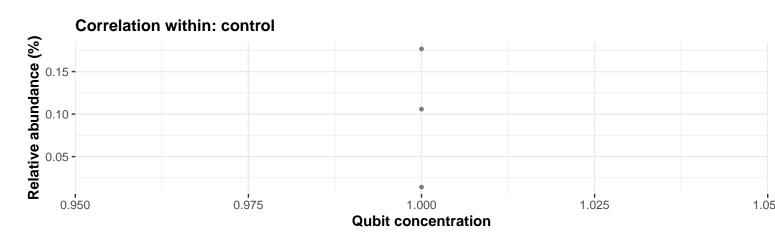




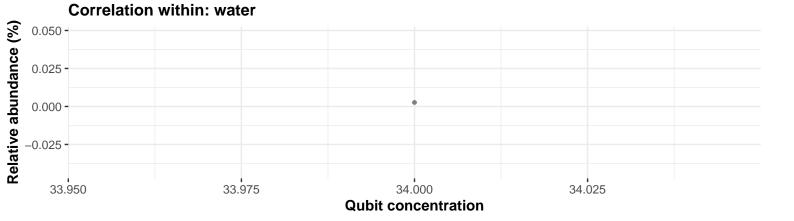
**Qubit concentration** 

### **Correlation within: Digesta**





100



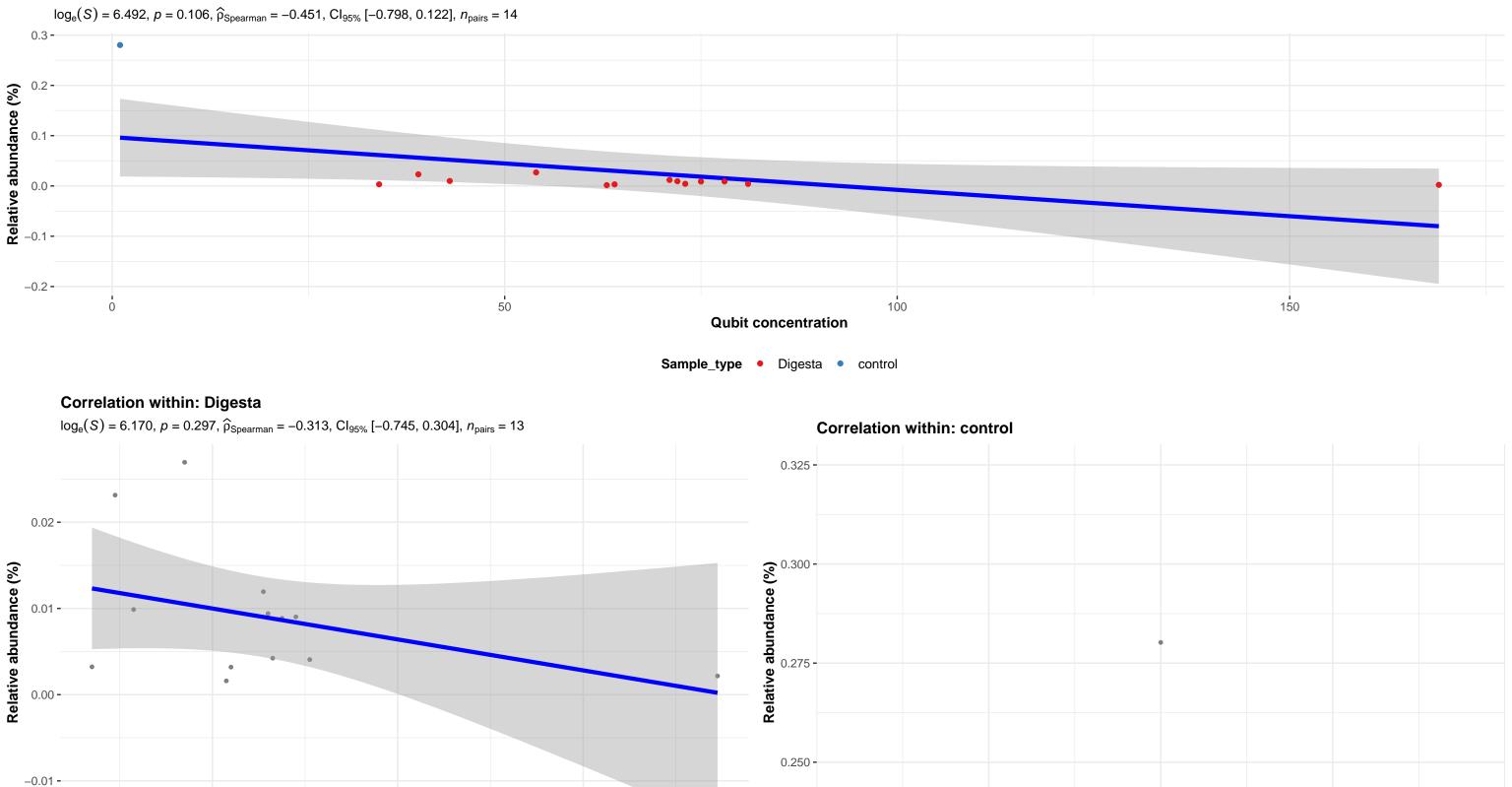


60

100

**Qubit concentration** 

140



0.950

1.05

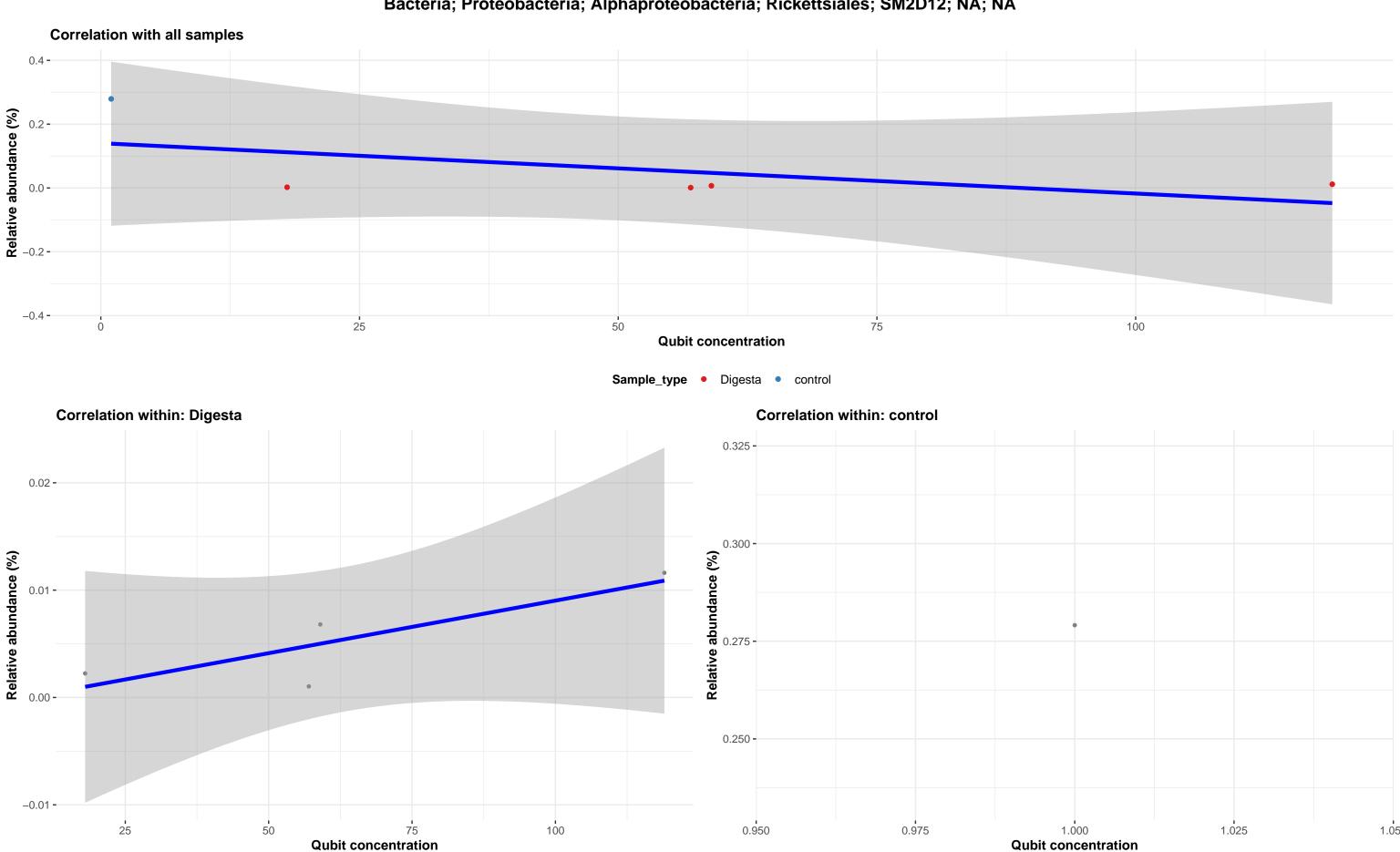
1.025

1.000

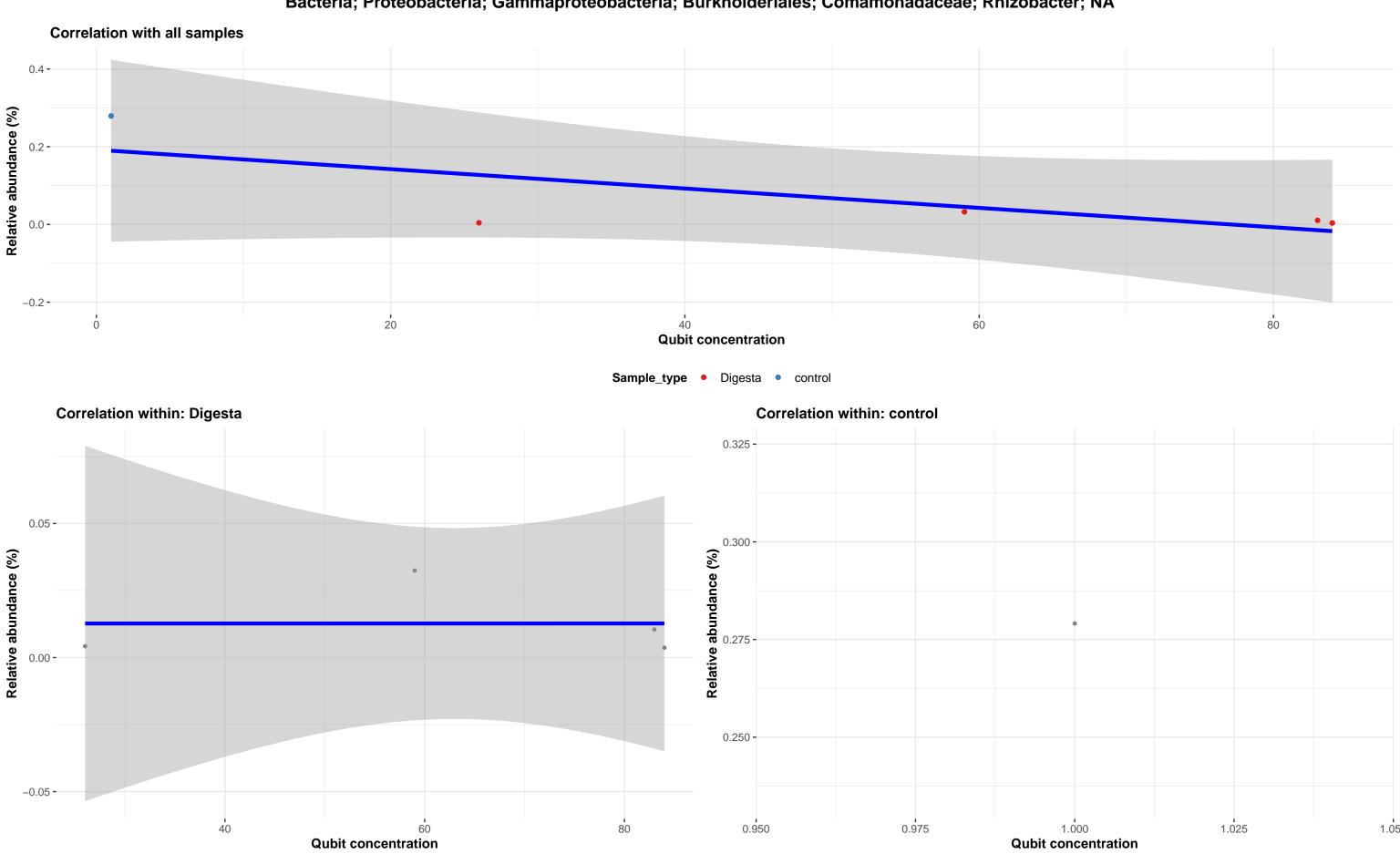
**Qubit concentration** 

0.975

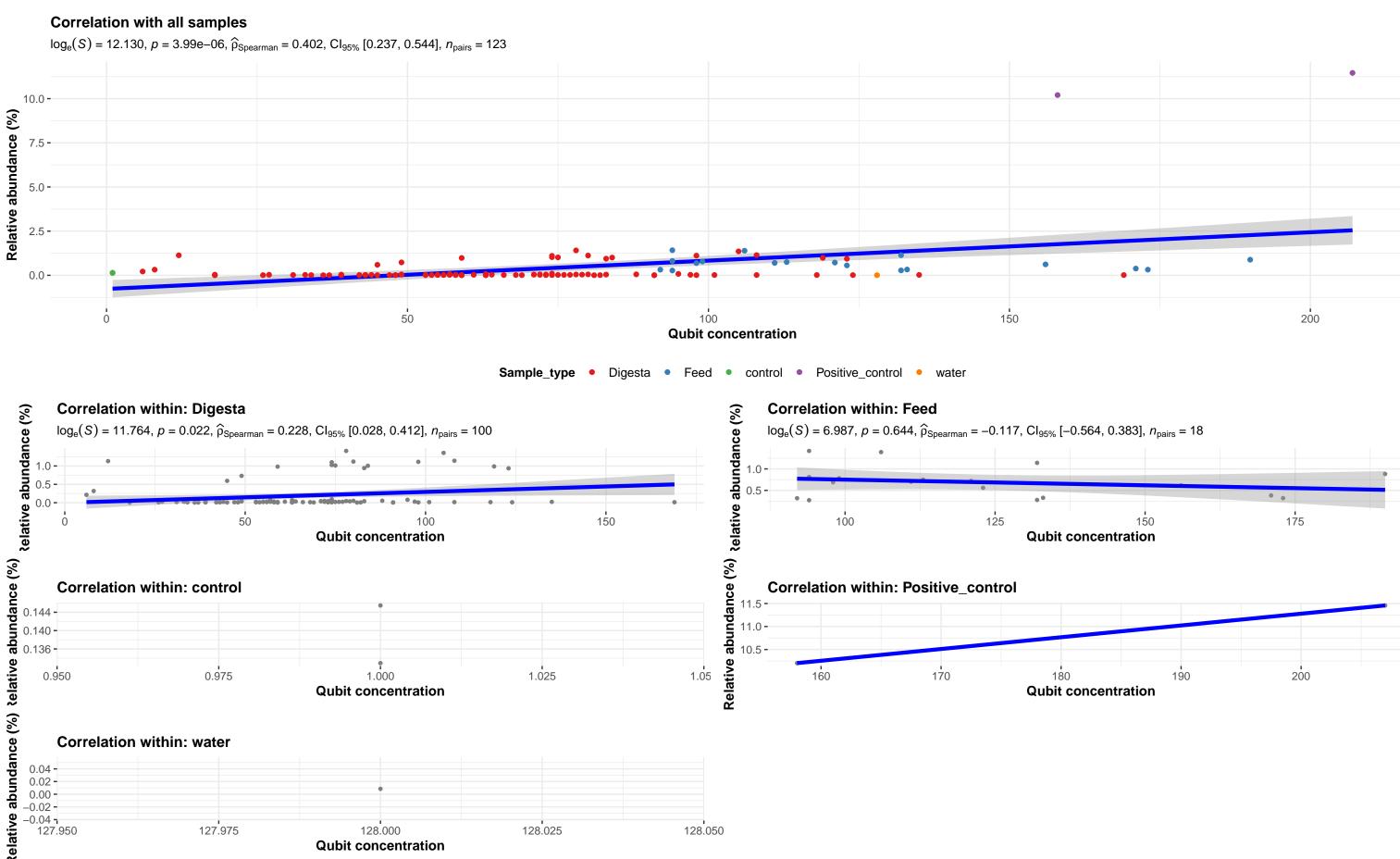
Bacteria; Proteobacteria; Alphaproteobacteria; Rickettsiales; SM2D12; NA; NA



Bacteria; Proteobacteria; Gammaproteobacteria; Burkholderiales; Comamonadaceae; Rhizobacter; NA



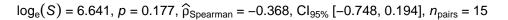
# Bacteria; Firmicutes; Bacilli; Lactobacillales; Lactobacillaceae; Limosilactobacillus; NA

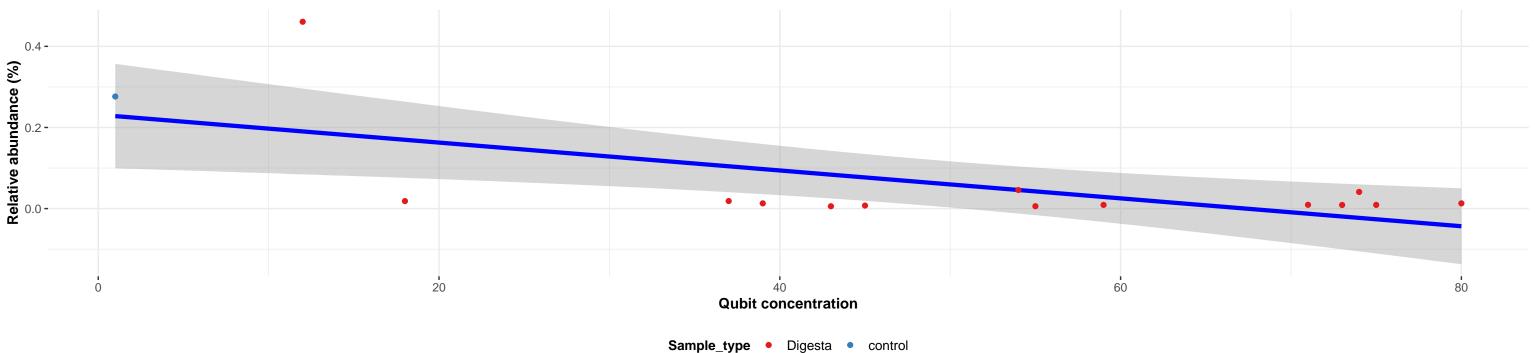


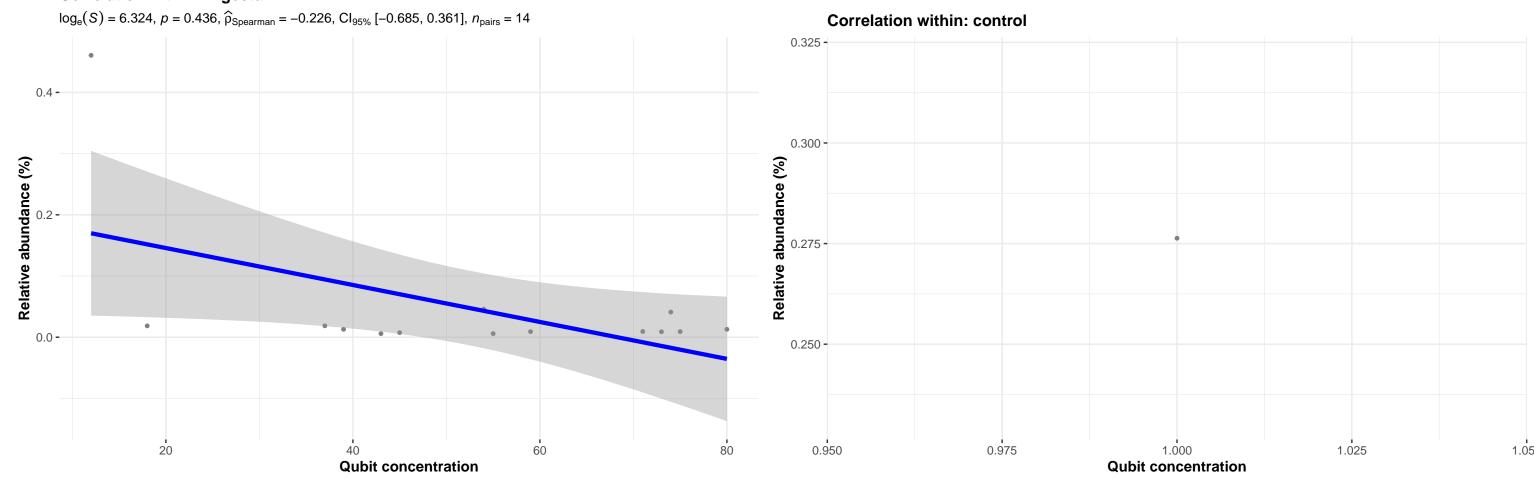
**Qubit concentration** 

# Bacteria; Actinobacteriota; Actinobacteria; Corynebacteriales; Corynebacteriaceae; Corynebacterium; stationis

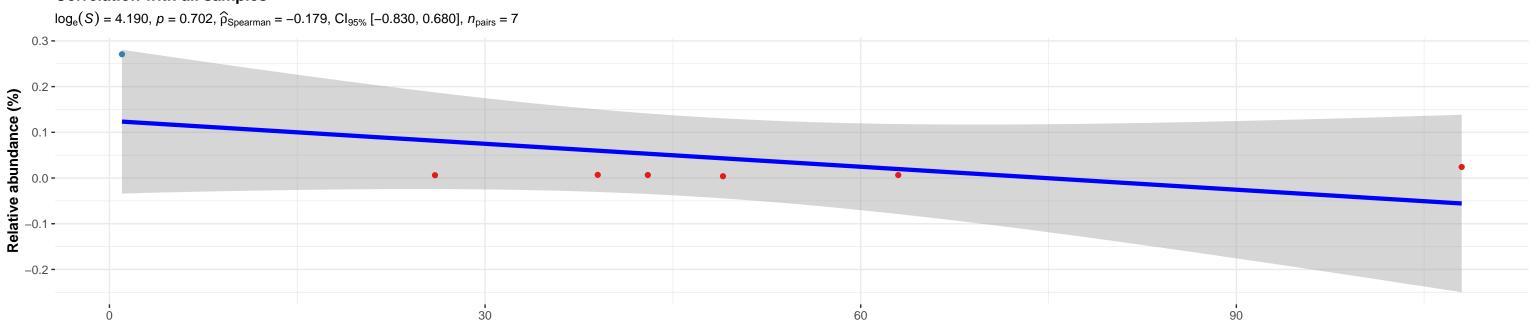
### **Correlation with all samples**







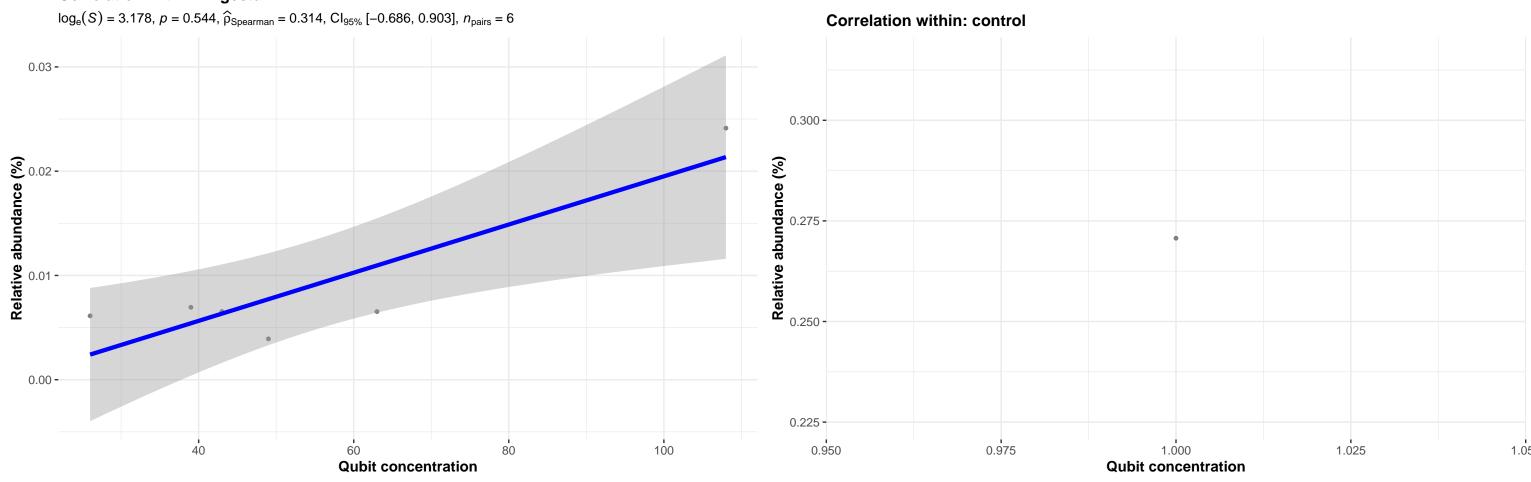




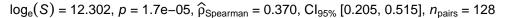


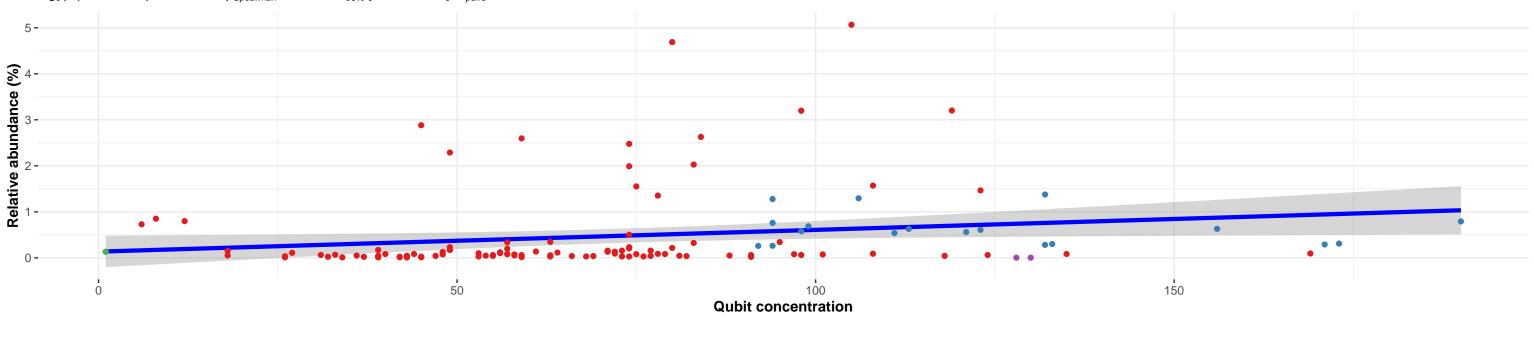
**Qubit concentration** 





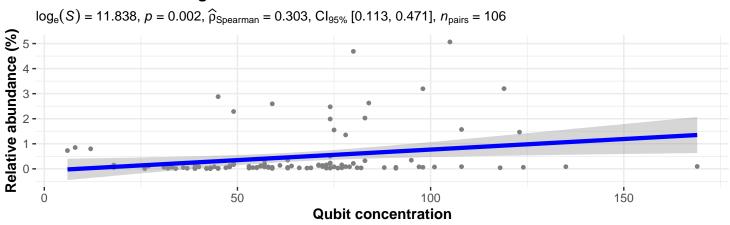
### **Correlation with all samples**





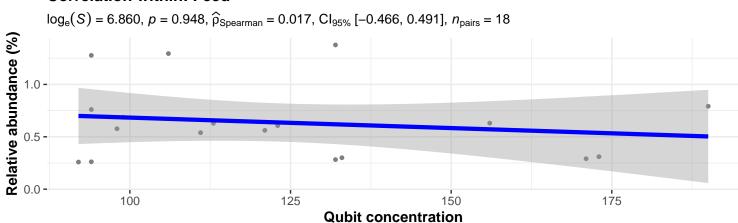
Sample\_type •

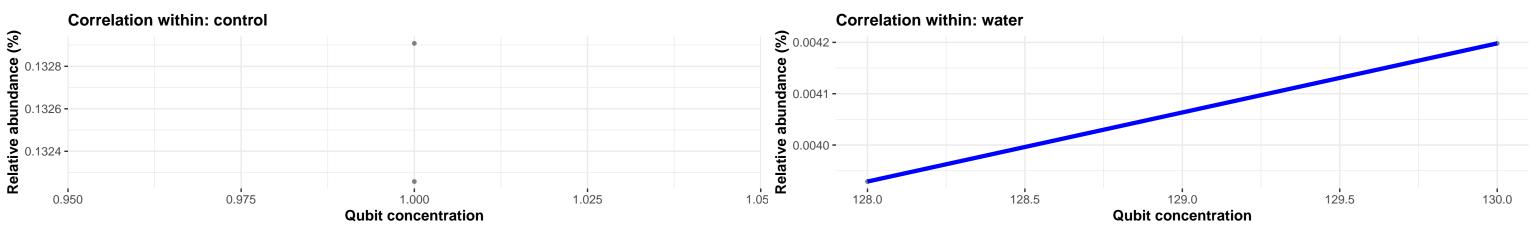
#### Correlation within: Digesta



#### Correlation within: Feed

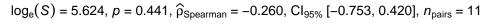
Digesta • Feed • control • water

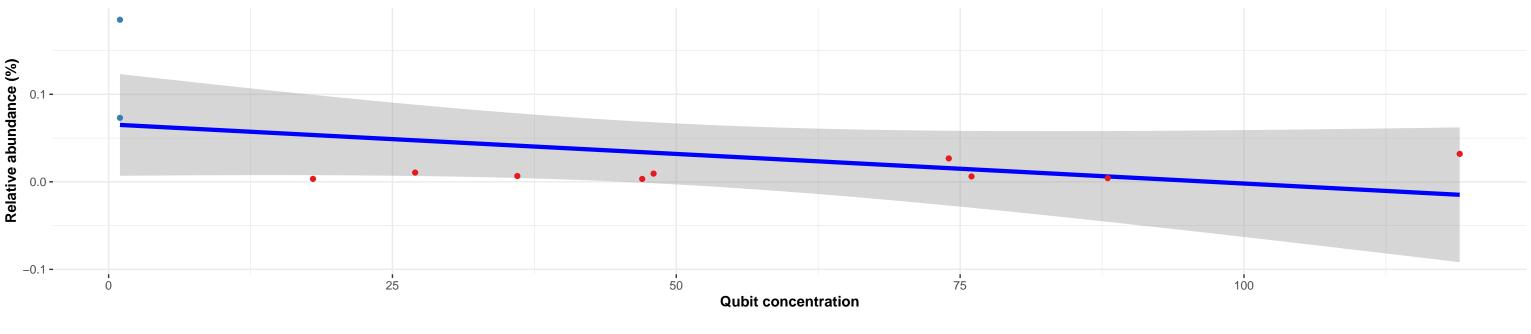




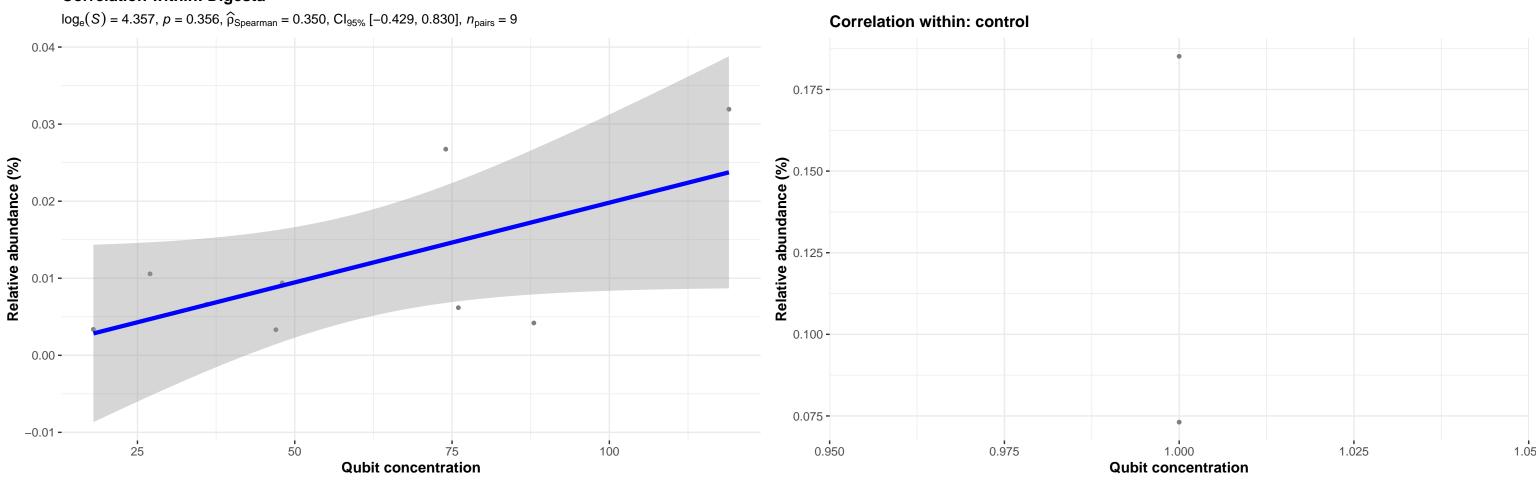
# Bacteria; Actinobacteriota; Actinobacteria; Corynebacteriales; Corynebacteriaceae; Corynebacterium; NA



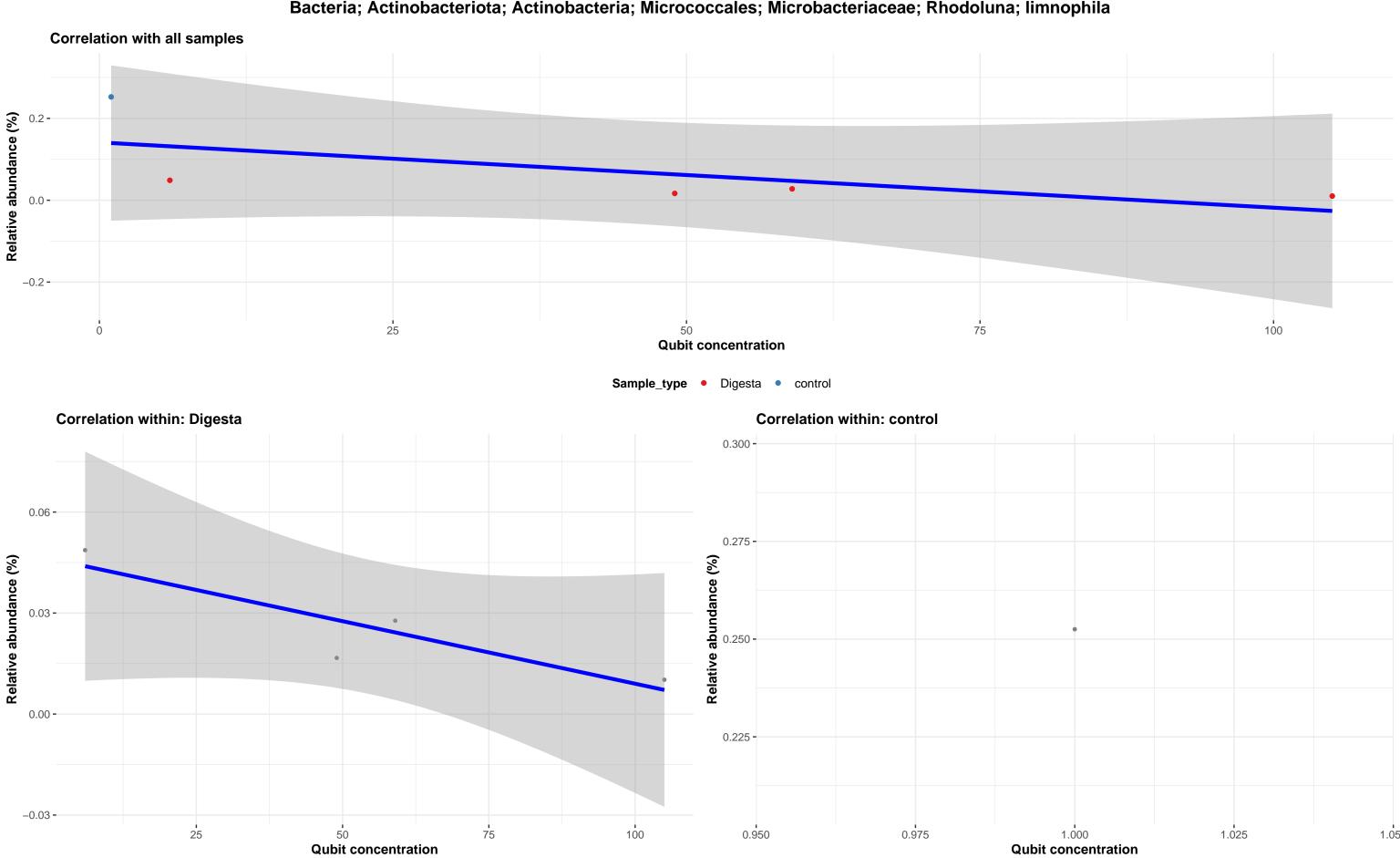




Sample\_type • Digesta • control

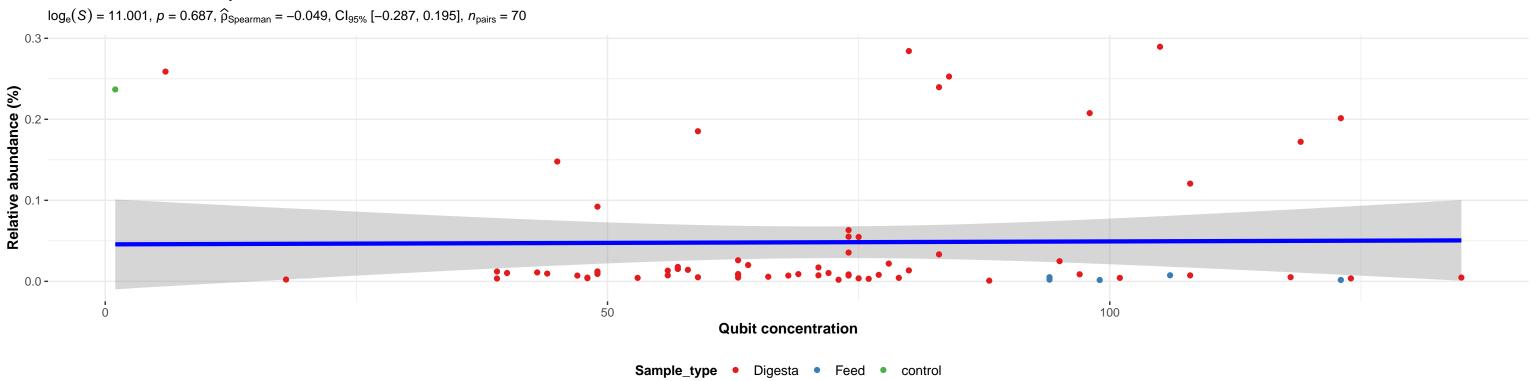


# Bacteria; Actinobacteriota; Actinobacteria; Micrococcales; Microbacteriaceae; Rhodoluna; limnophila

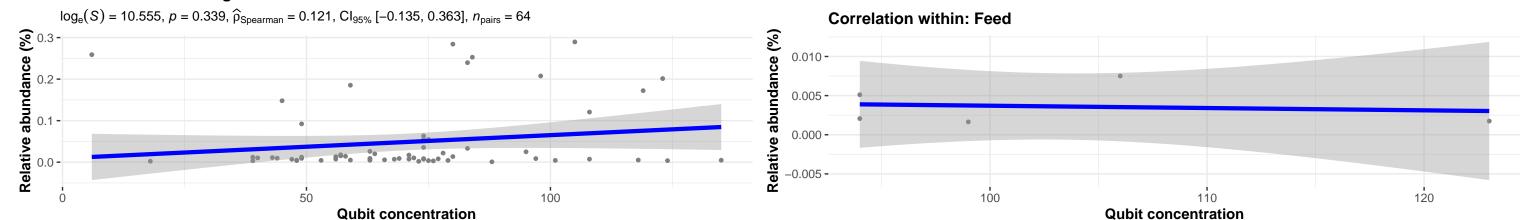


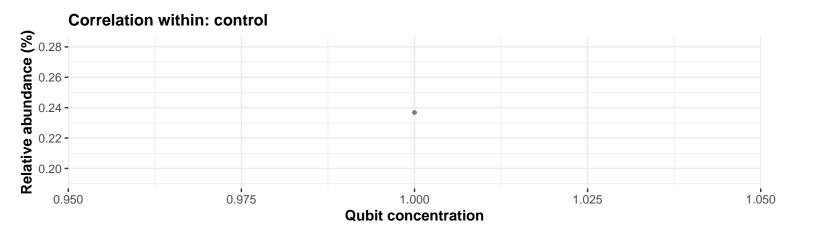
# Bacteria; Firmicutes; Clostridia; Peptococcales; Peptococcaceae; Peptococcus; NA





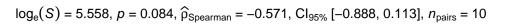


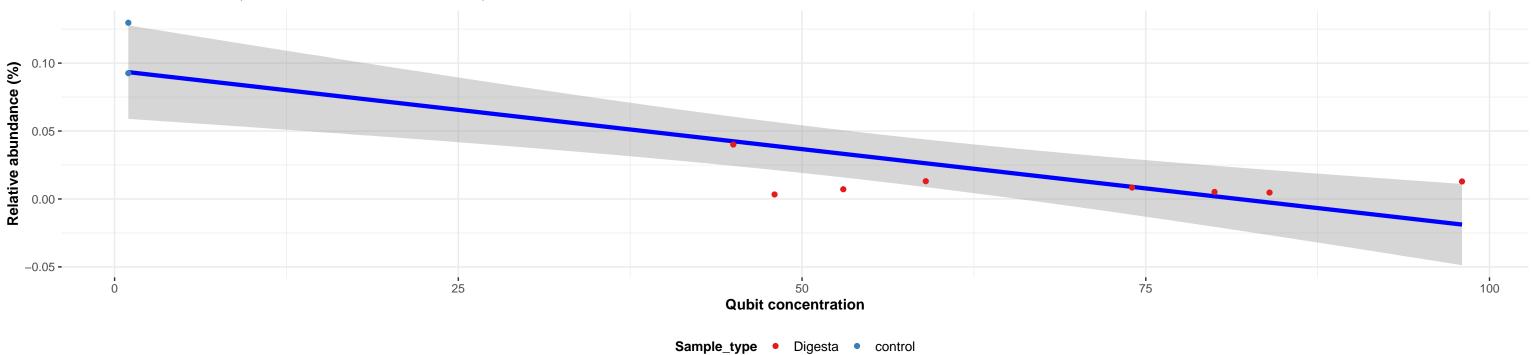


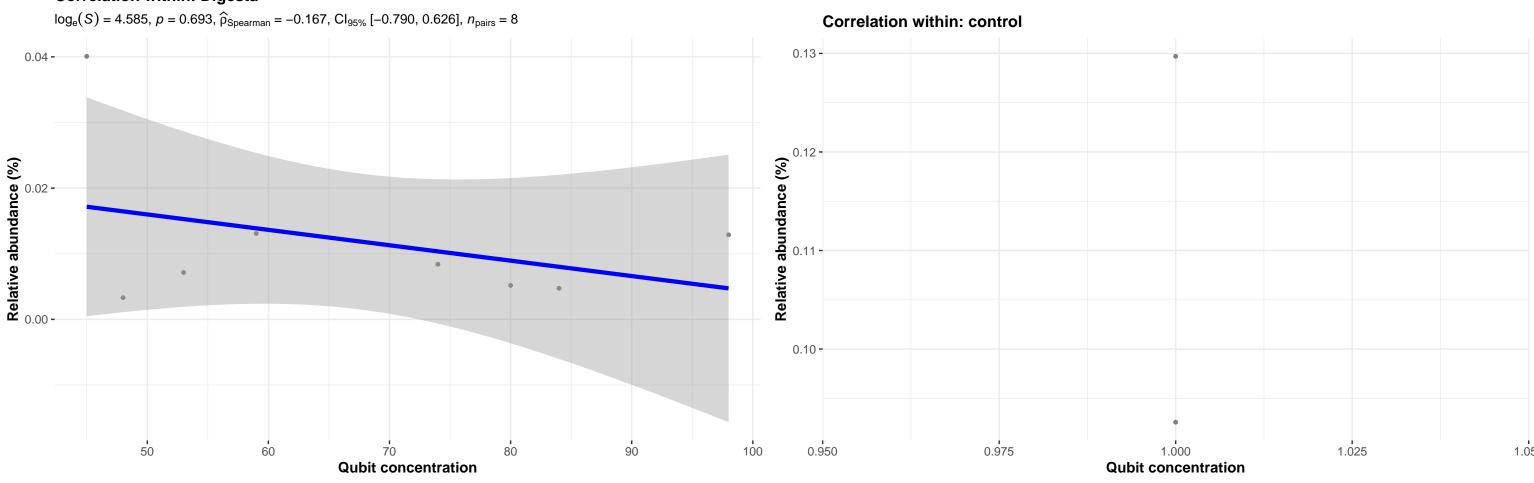


### Bacteria; Actinobacteriota; Actinobacteria; Micrococcales; Micrococcaceae; Paenarthrobacter; NA



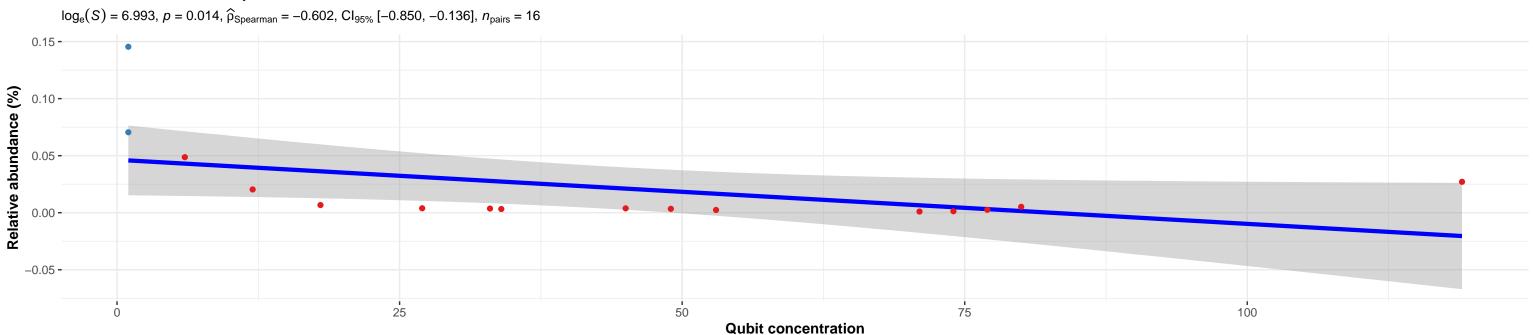






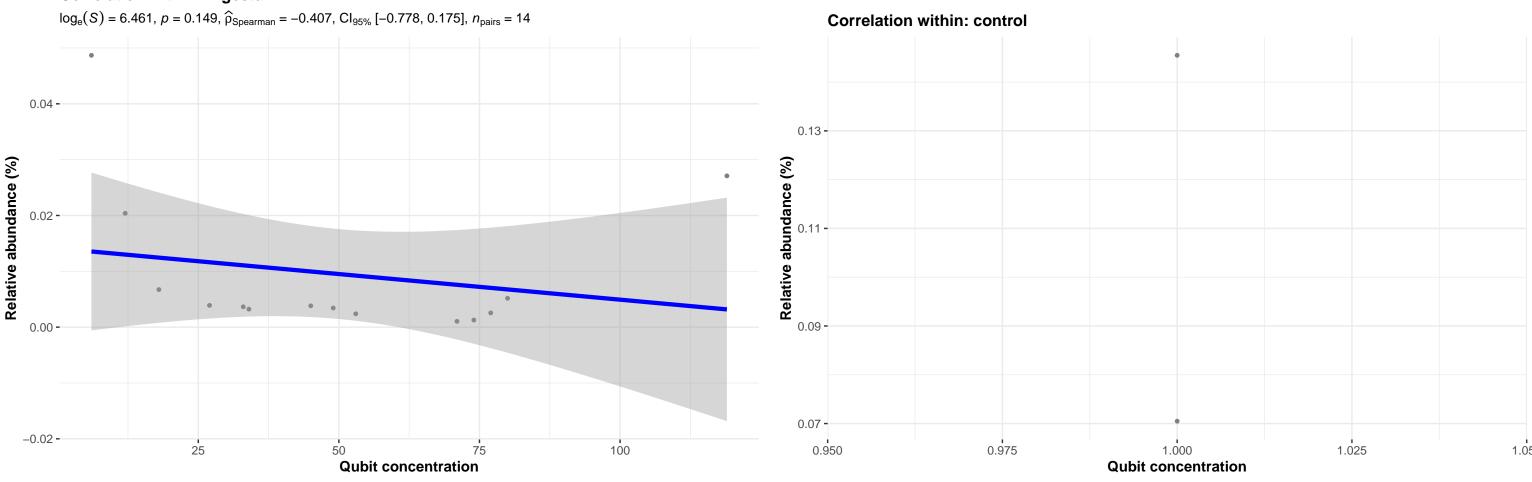
# Bacteria; Patescibacteria; Parcubacteria; Candidatus Nomurabacteria; NA; NA; NA

### Correlation with all samples



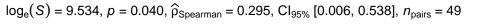
Sample\_type • Digesta • control

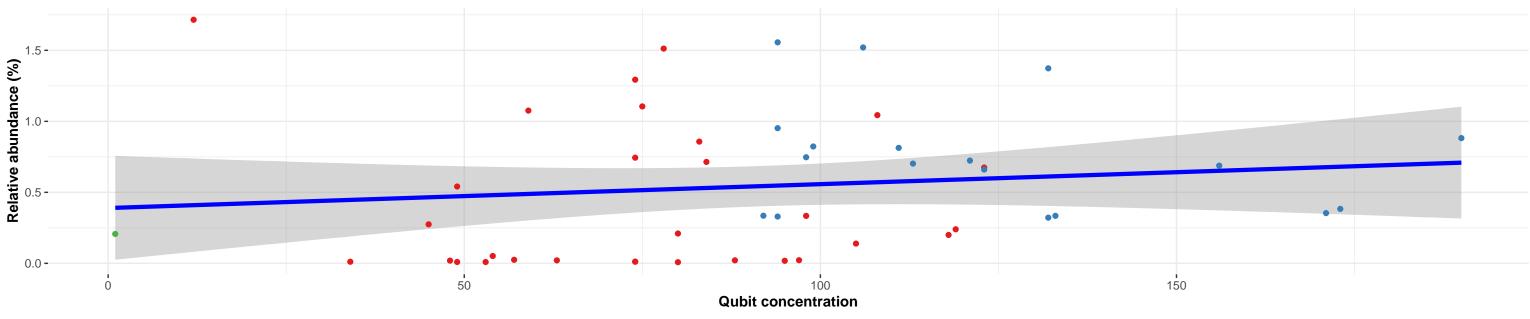




# Bacteria; Firmicutes; Bacilli; Lactobacillales; Lactobacillaceae; Lactobacillus; NA

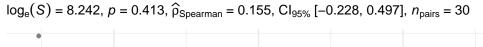


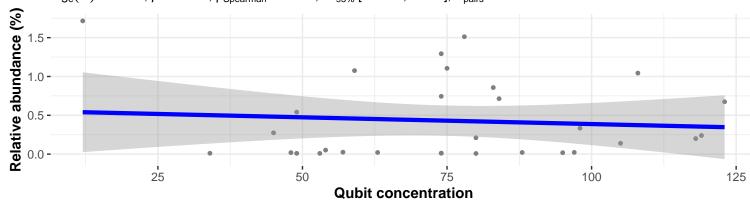




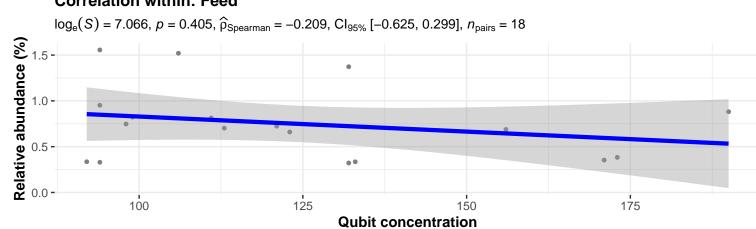
Sample\_type • Digesta • Feed • control

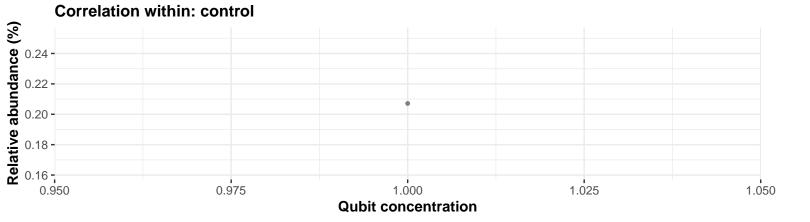
### **Correlation within: Digesta**



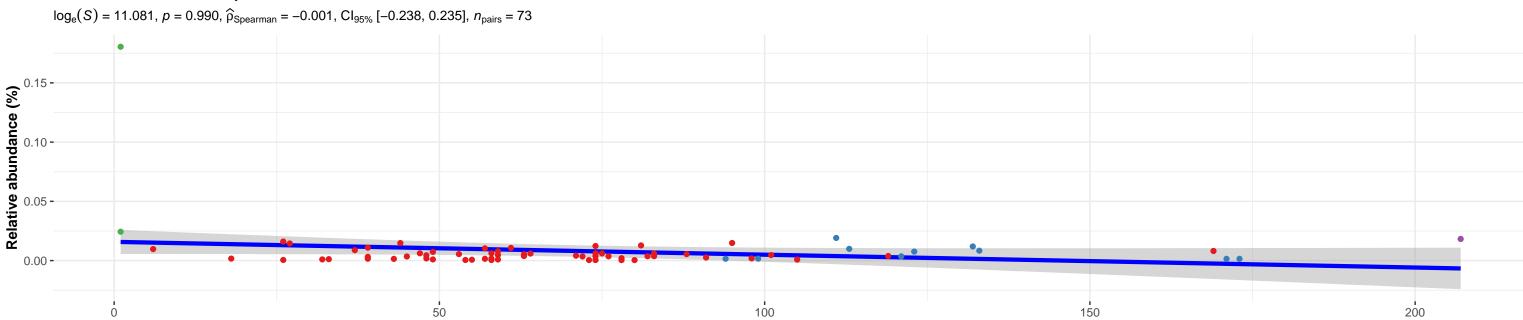


#### **Correlation within: Feed**



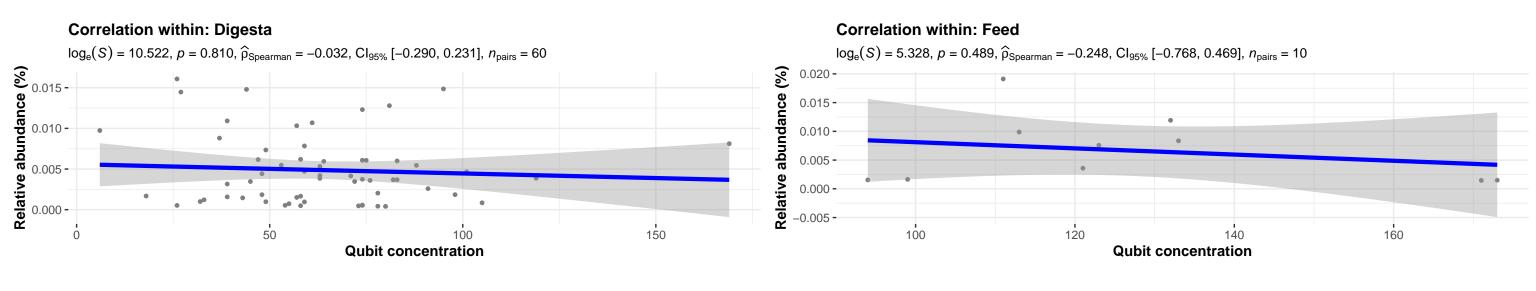


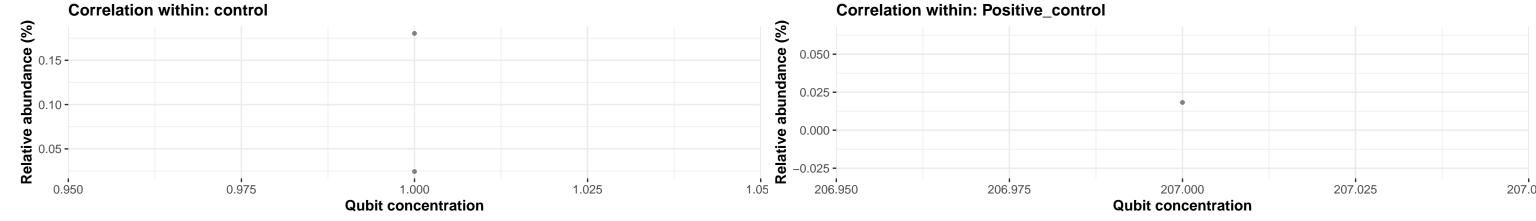




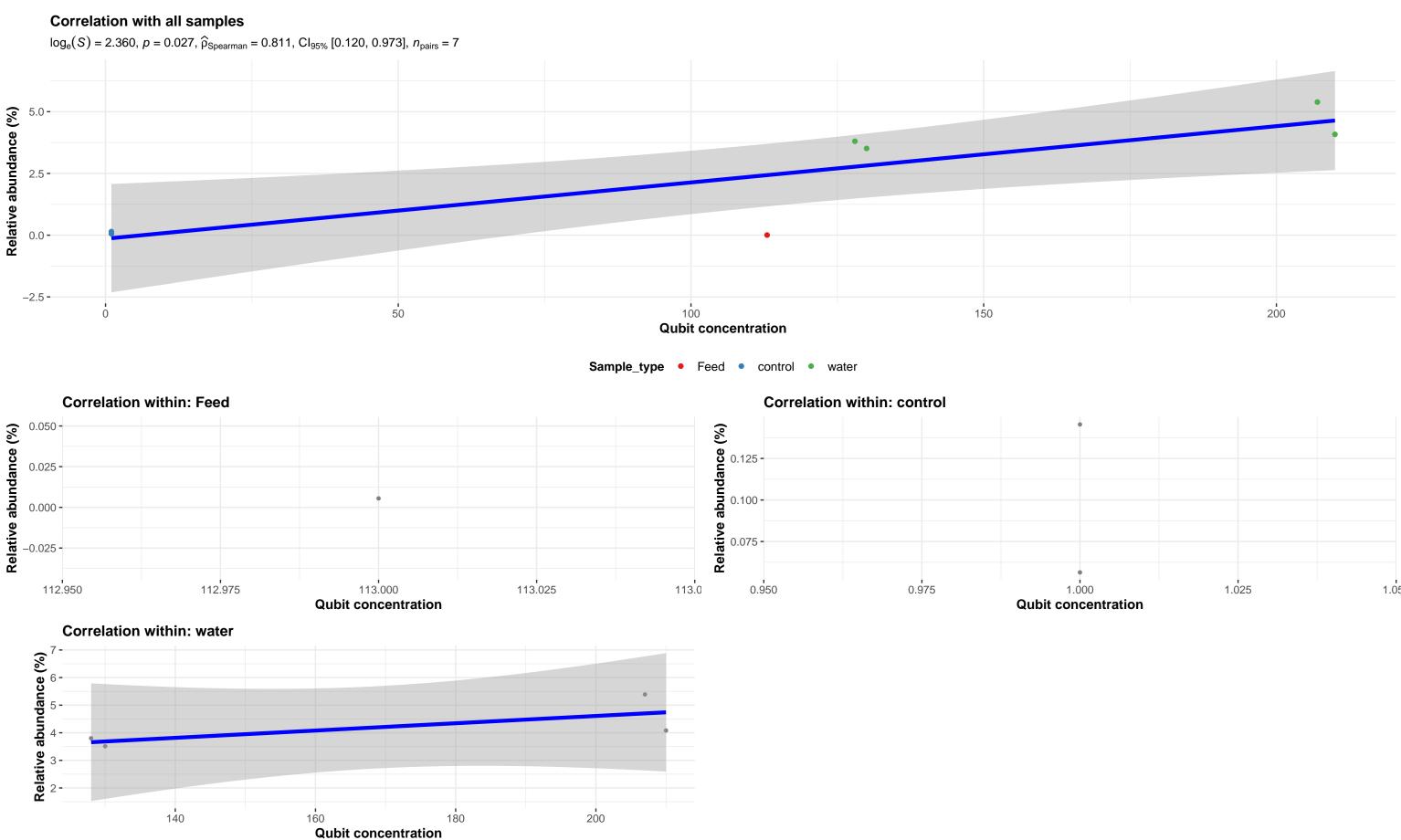
**Qubit concentration** 

Sample\_type • Digesta • Feed • control • Positive\_control



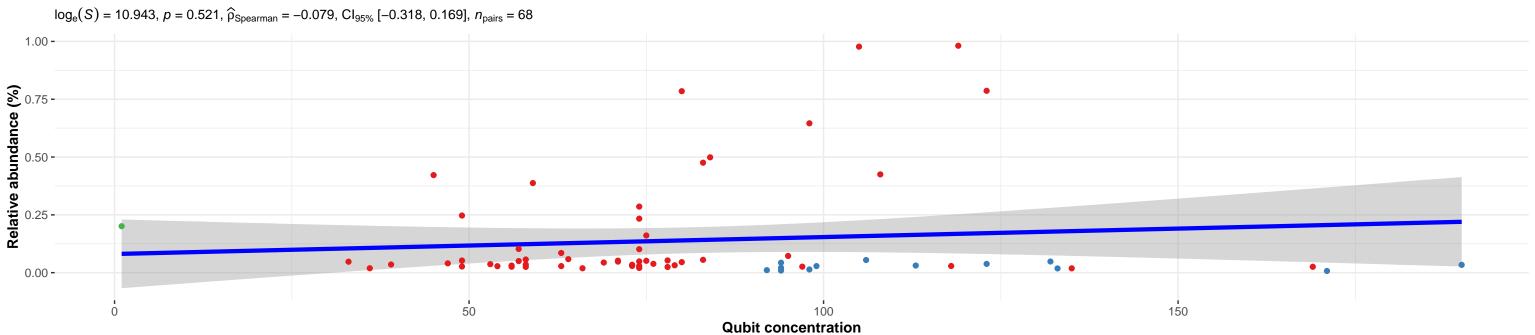


# Bacteria; Proteobacteria; Alphaproteobacteria; Caulobacterales; Hyphomonadaceae; Hellea; NA



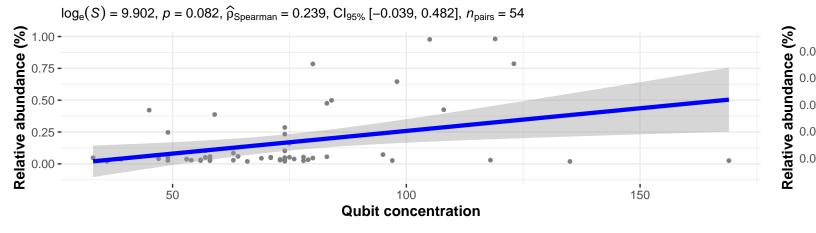
# Bacteria; Firmicutes; Clostridia; Peptostreptococcales-Tissierellales; Peptostreptococcaceae; Peptostreptococcus; NA



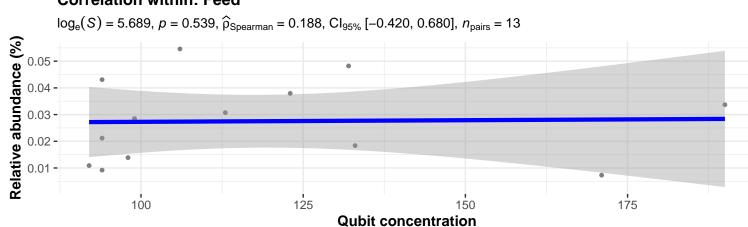


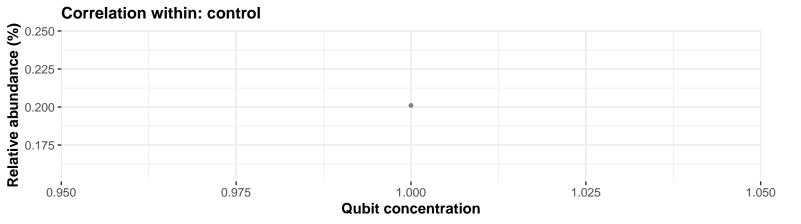
Sample\_type • Digesta • Feed • control



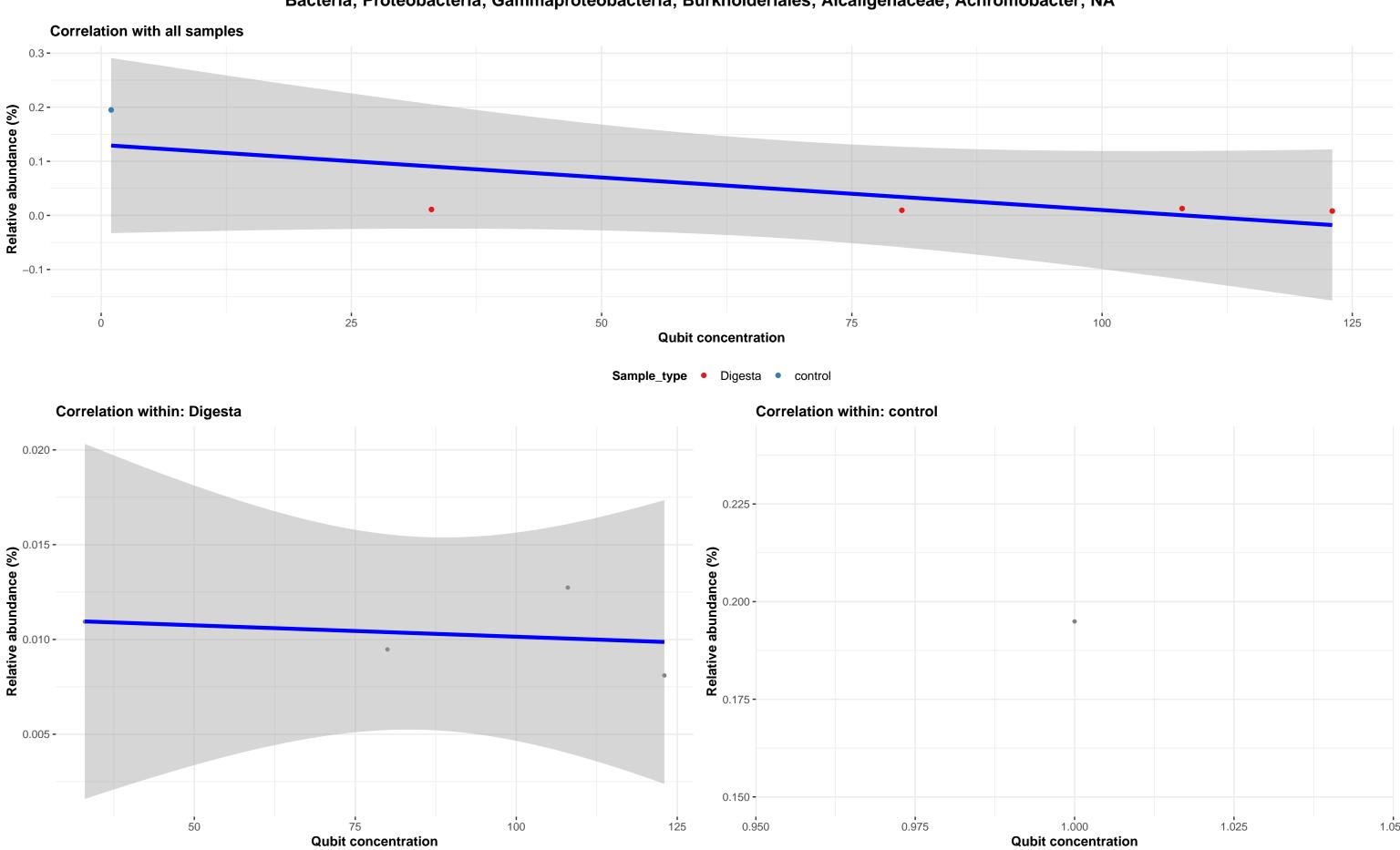


#### **Correlation within: Feed**



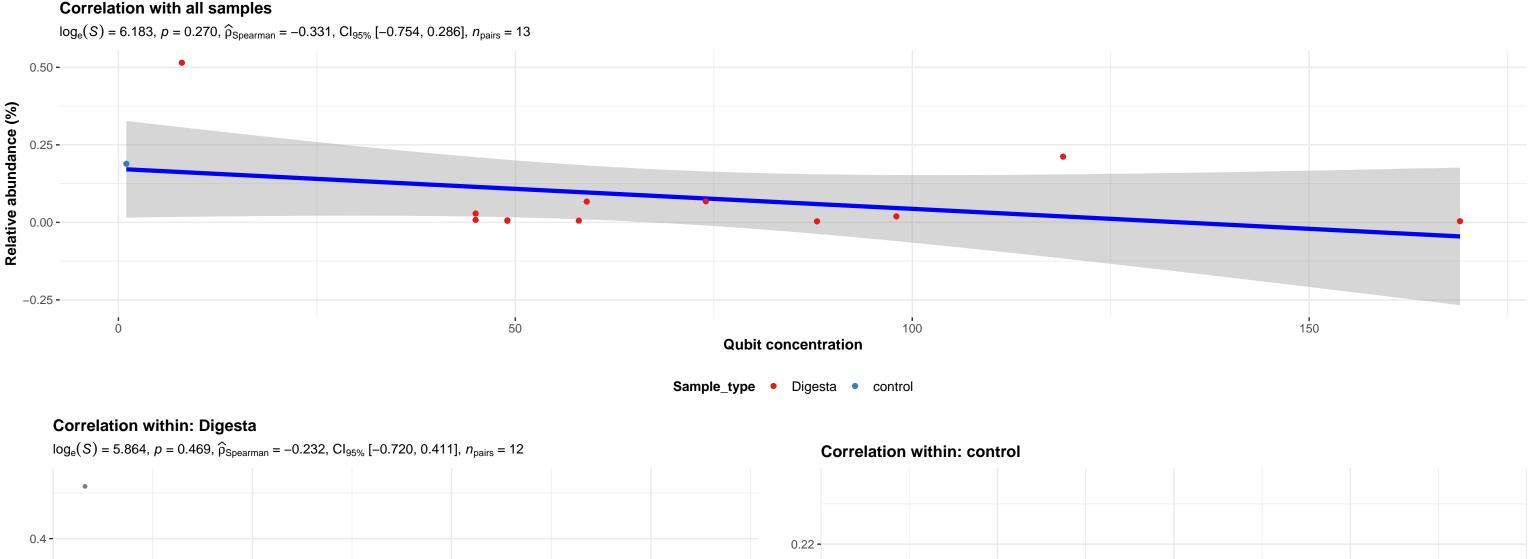


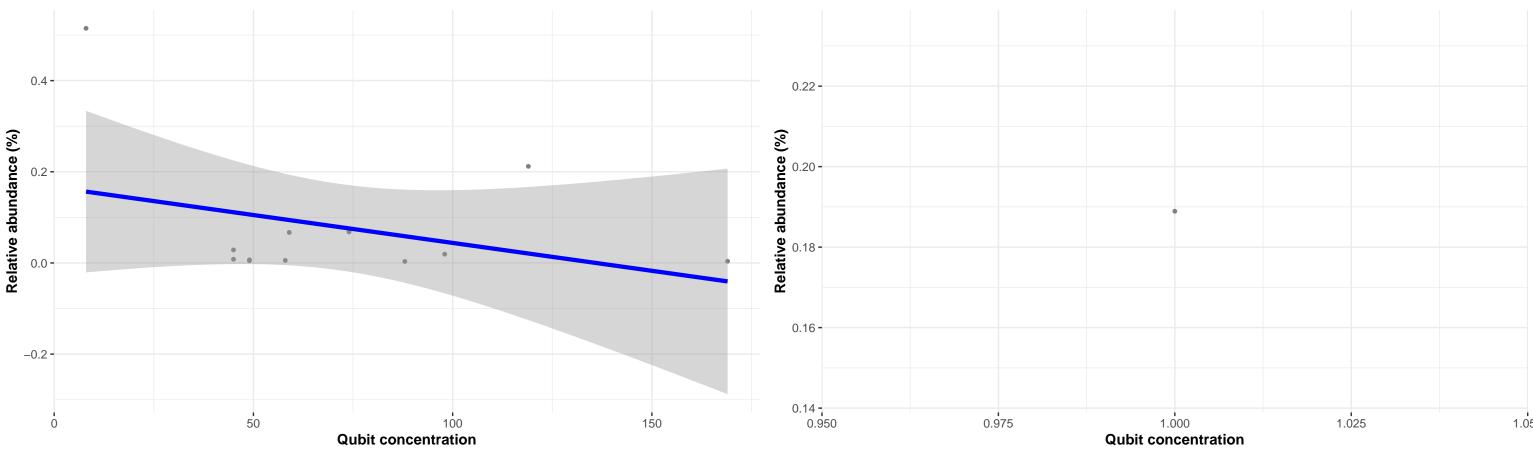
Bacteria; Proteobacteria; Gammaproteobacteria; Burkholderiales; Alcaligenaceae; Achromobacter; NA



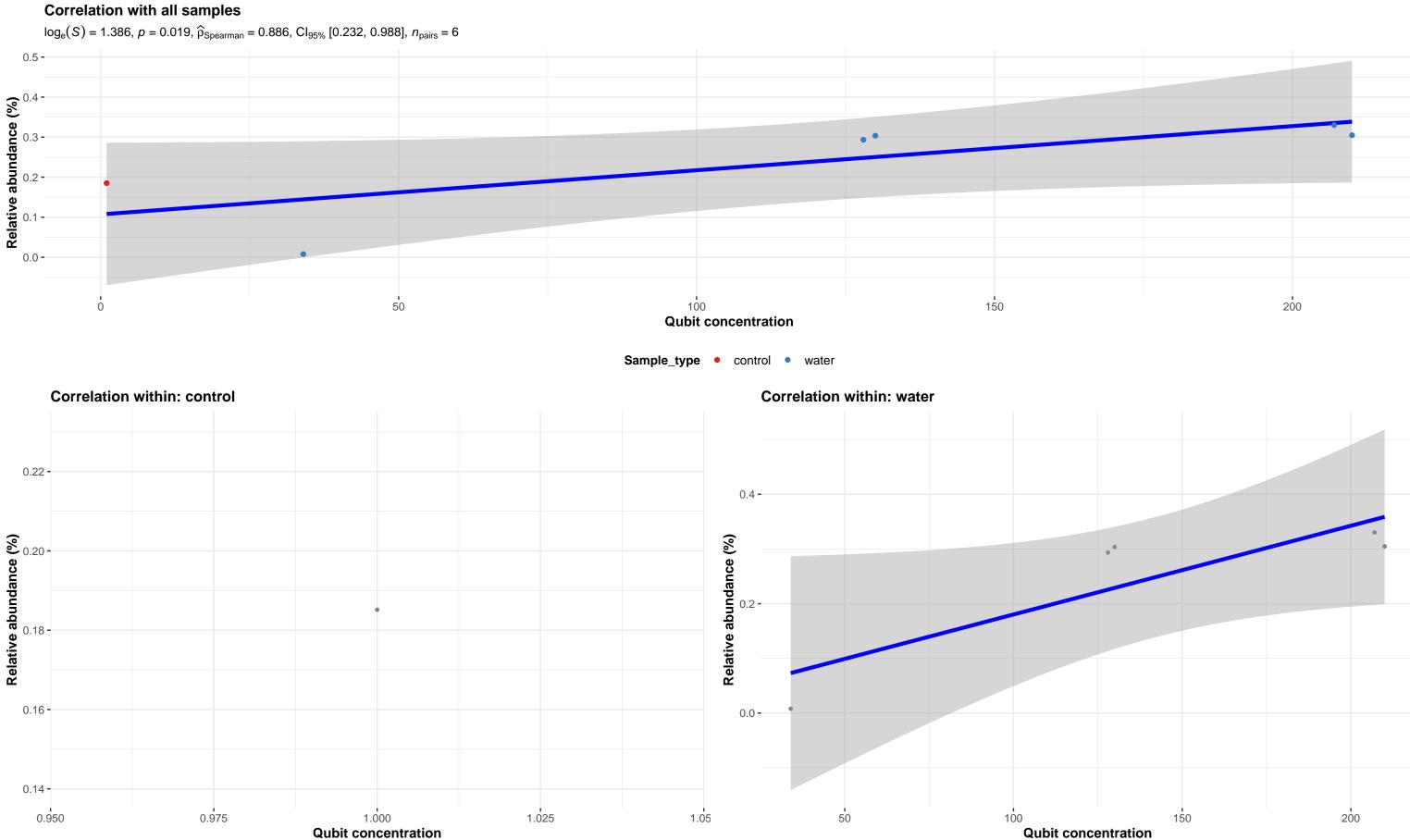
# Bacteria; Proteobacteria; Gammaproteobacteria; Pseudomonadales; Moraxellaceae; Acinetobacter; junii





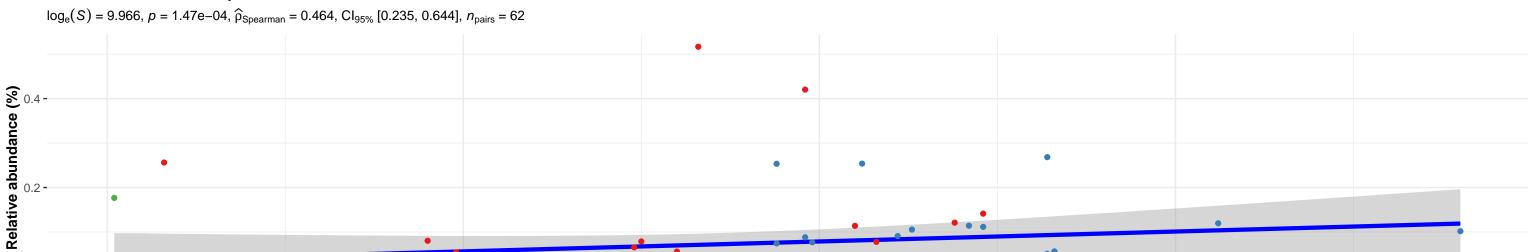






# Bacteria; Fusobacteriota; Fusobacteriia; Fusobacteriales; Fusobacteriaceae; Fusobacterium; NA



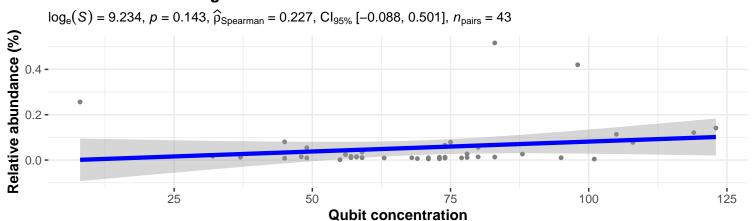




**Qubit concentration** 

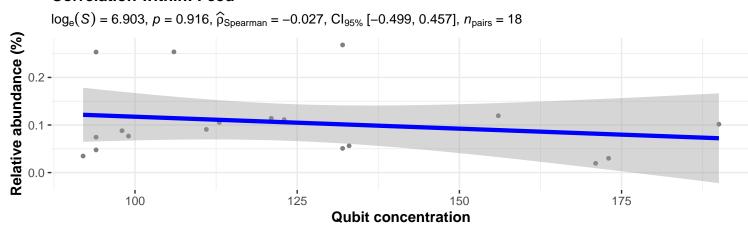
#### **Correlation within: Digesta**

0.0 -

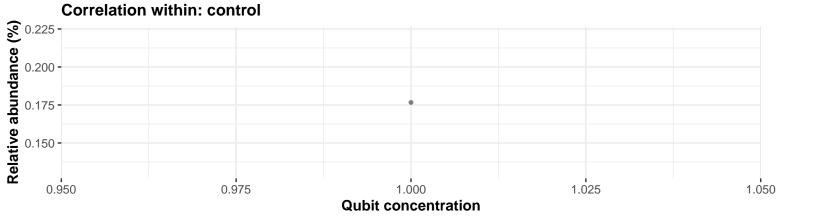


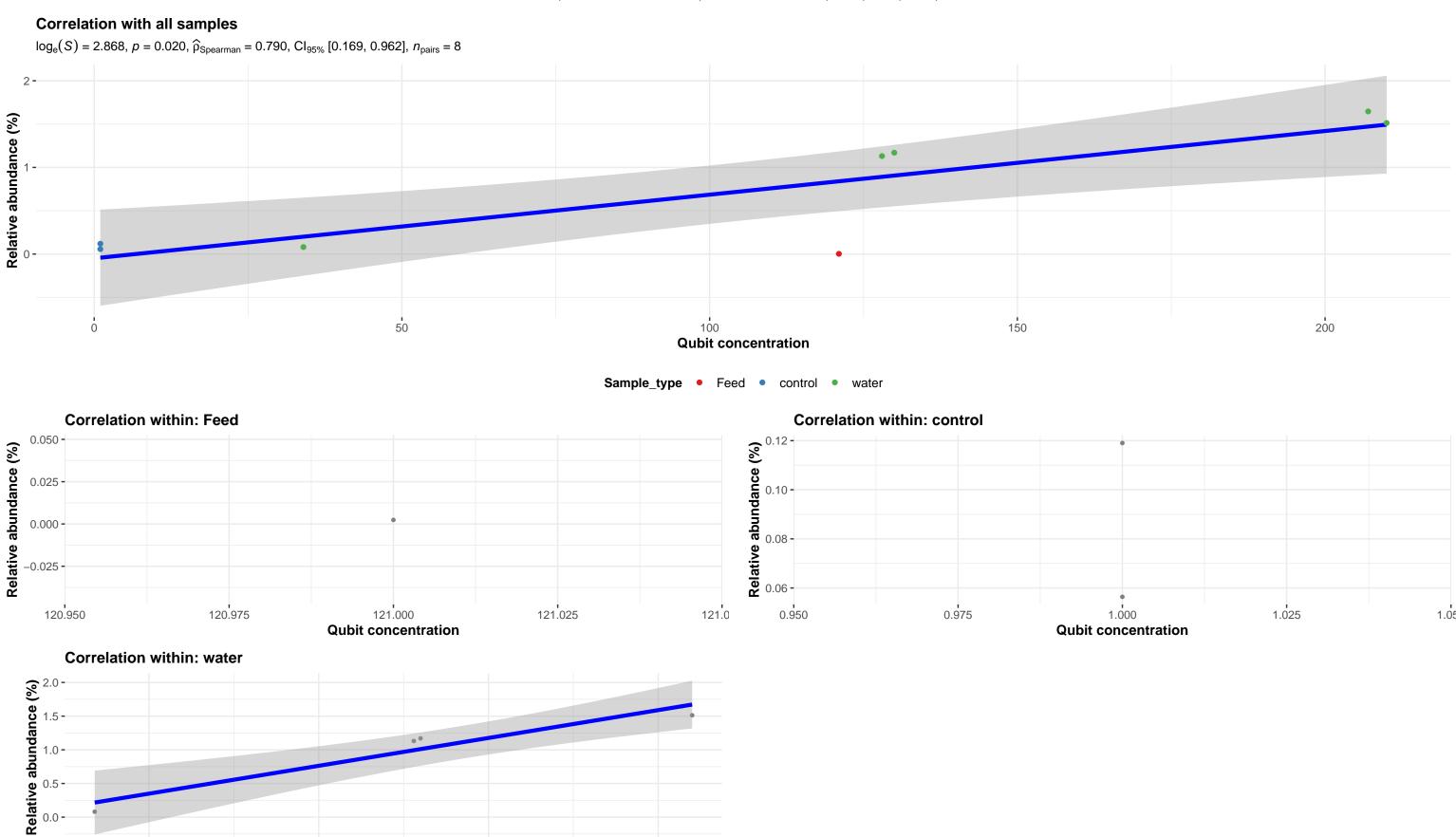
50

#### **Correlation within: Feed**



150





200

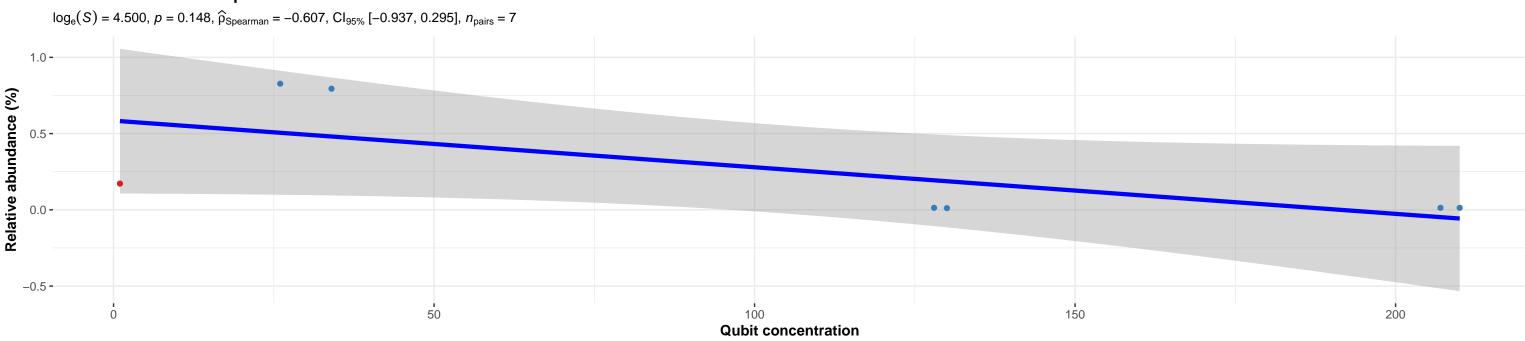
150

**Qubit concentration** 

50

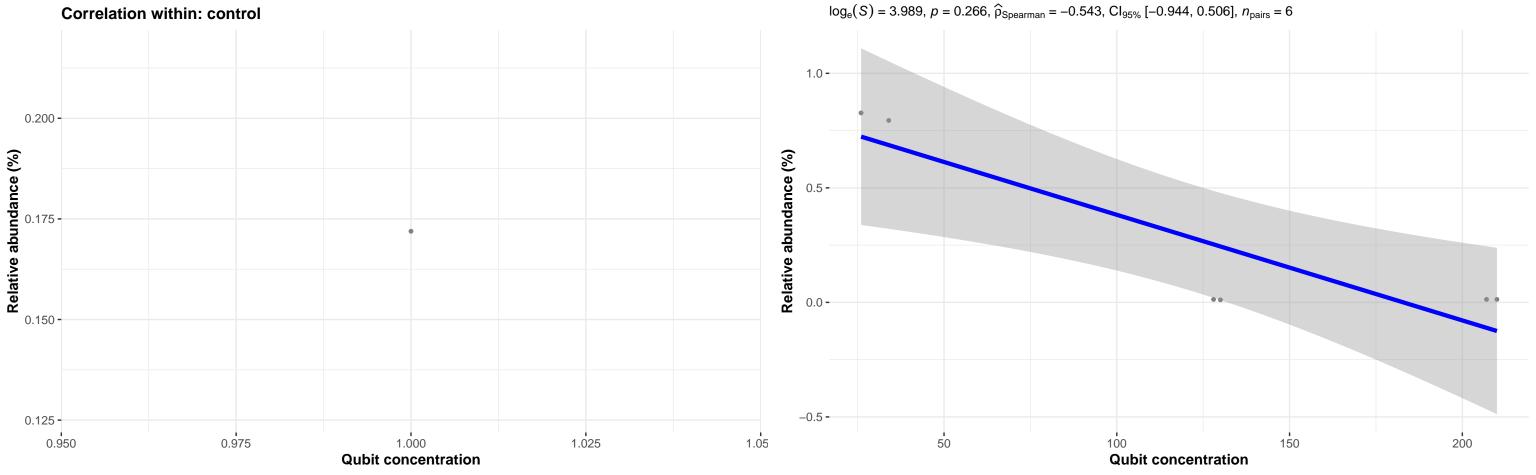
# Bacteria; Proteobacteria; Gammaproteobacteria; Enterobacterales; Vibrionaceae; Aliivibrio; NA



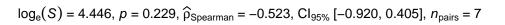


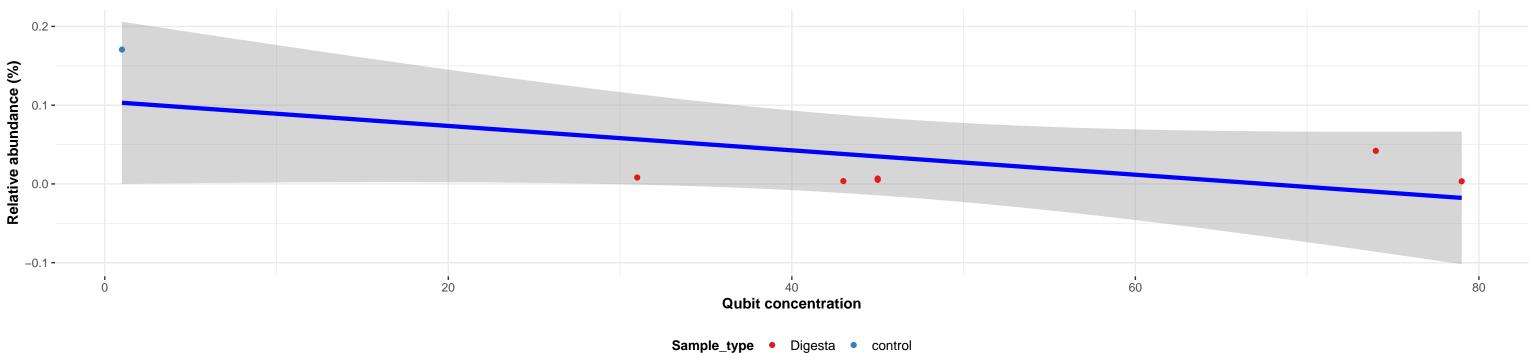
Sample\_type • control • water



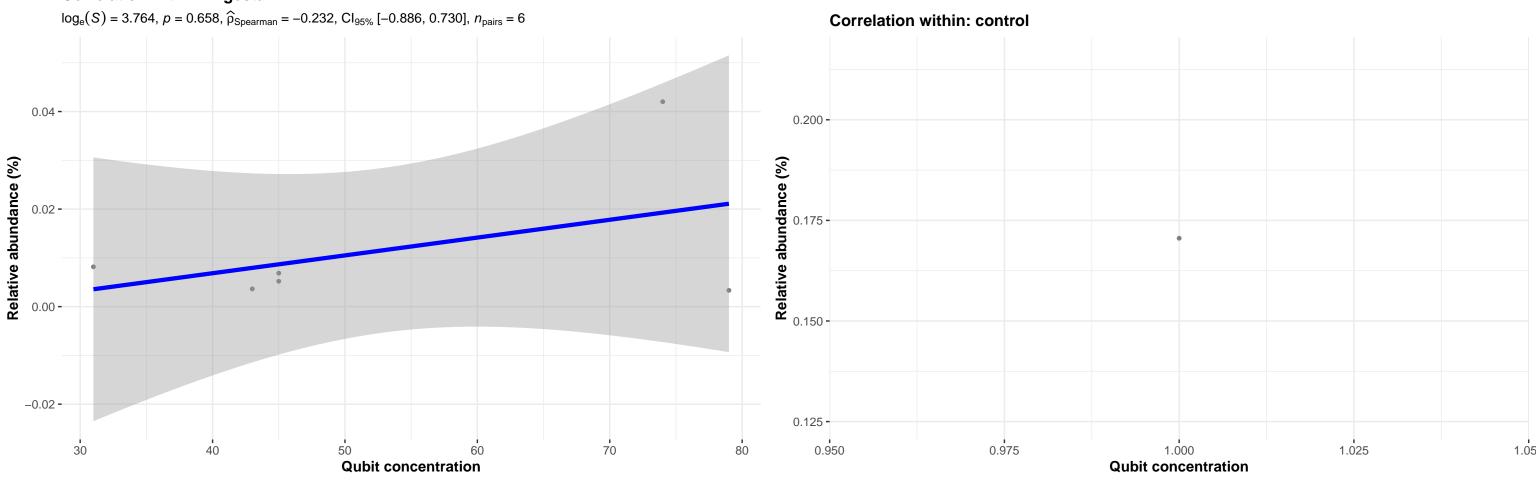






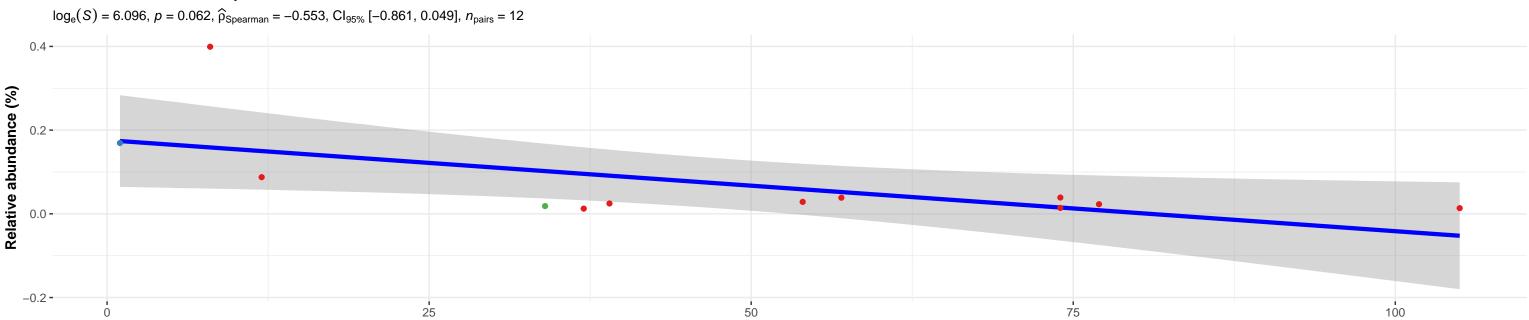






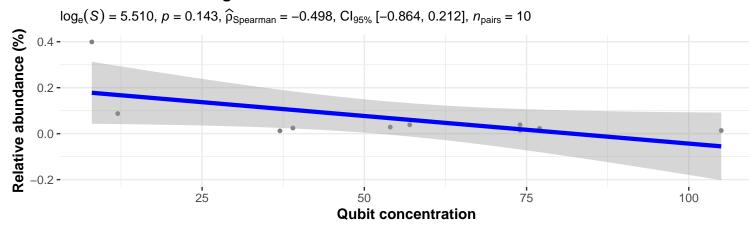
# Bacteria; Firmicutes; Bacilli; Lactobacillales; Enterococcaceae; Enterococcus; NA

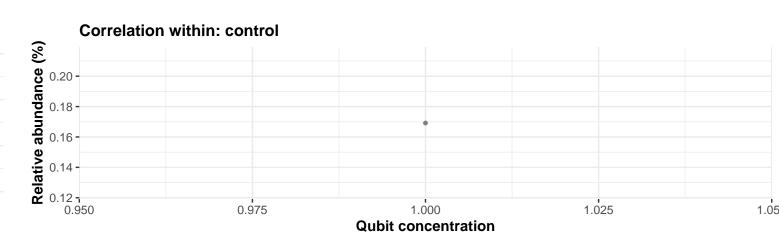


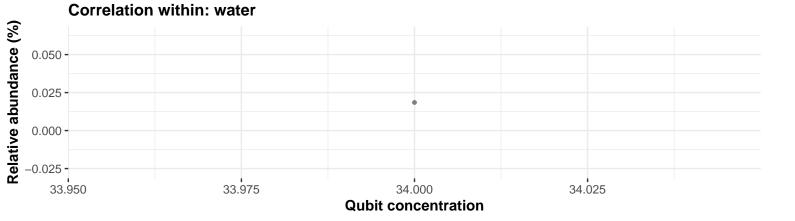




**Qubit concentration** 



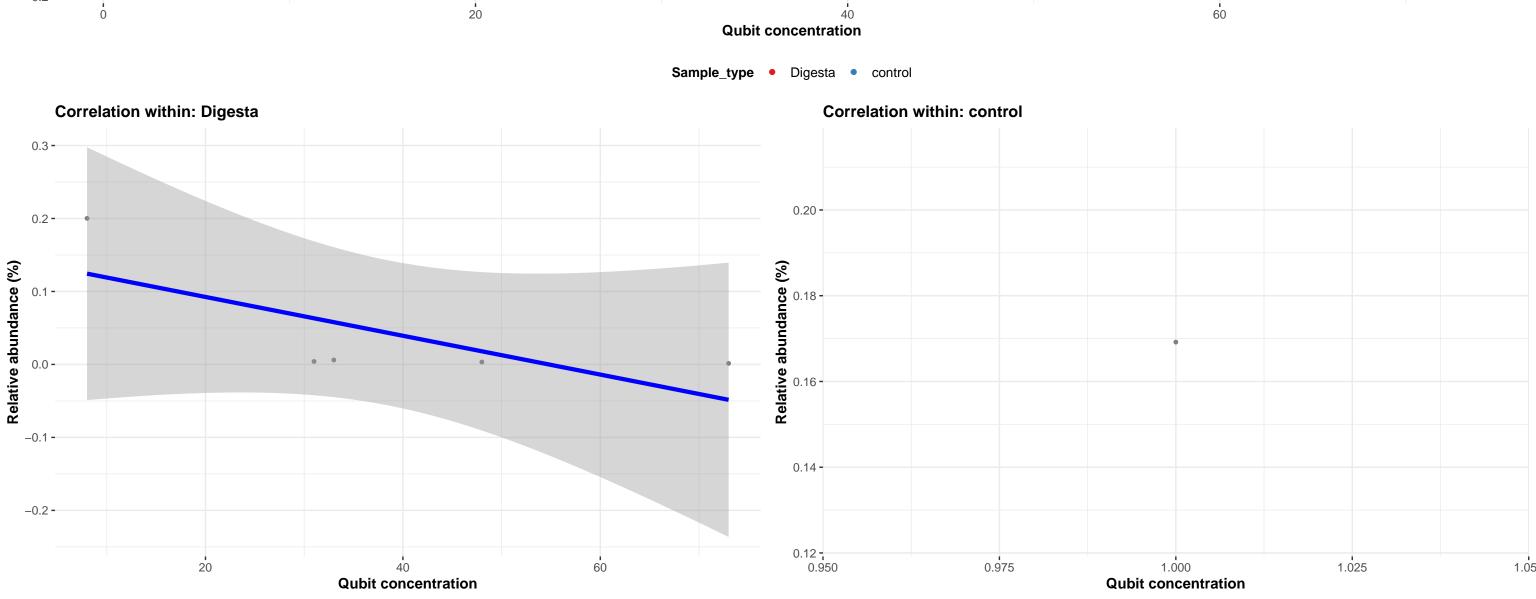




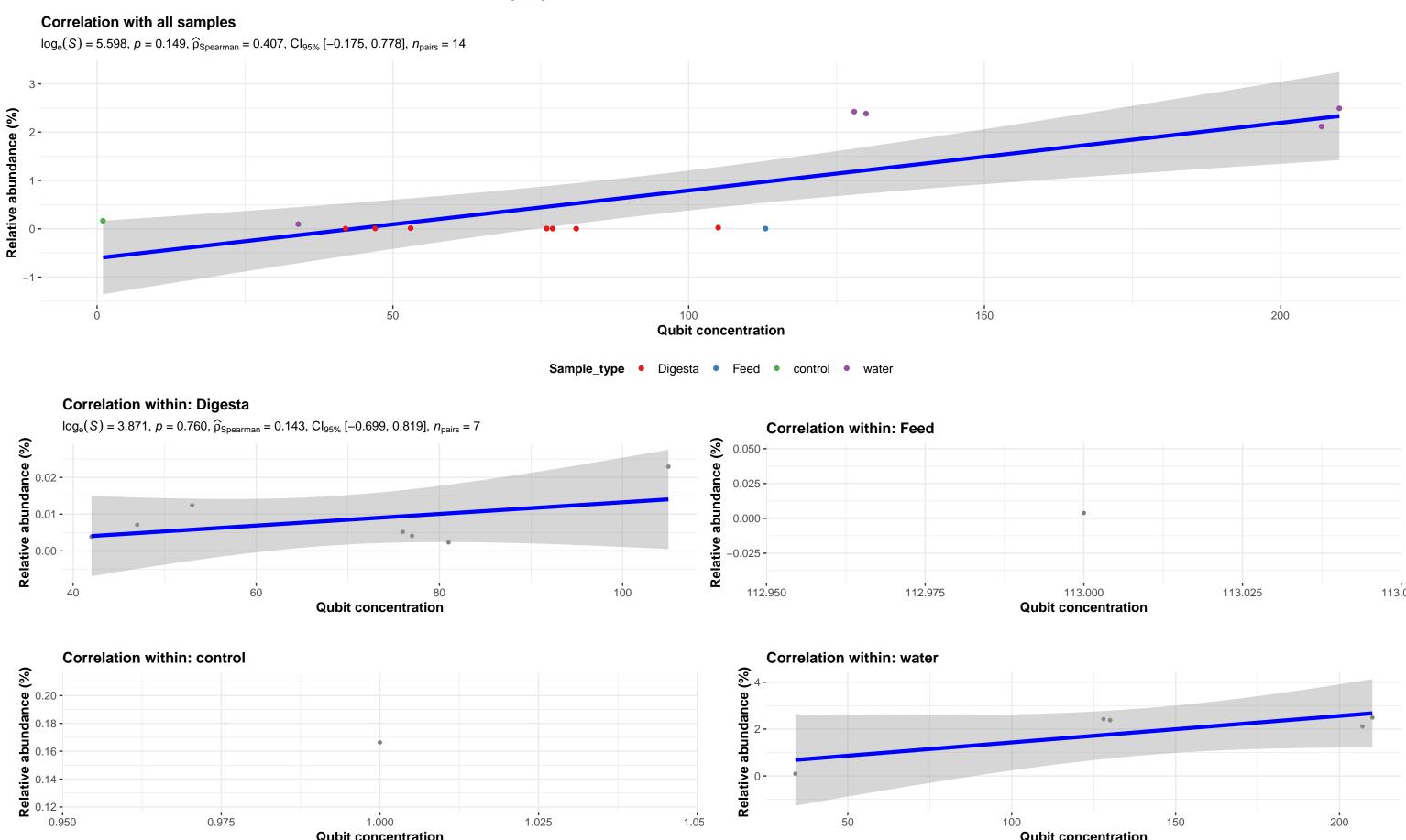


-0.2 **-**



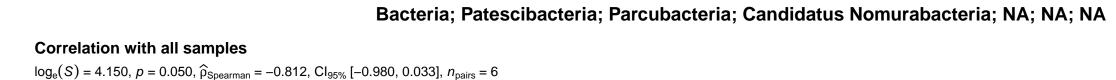


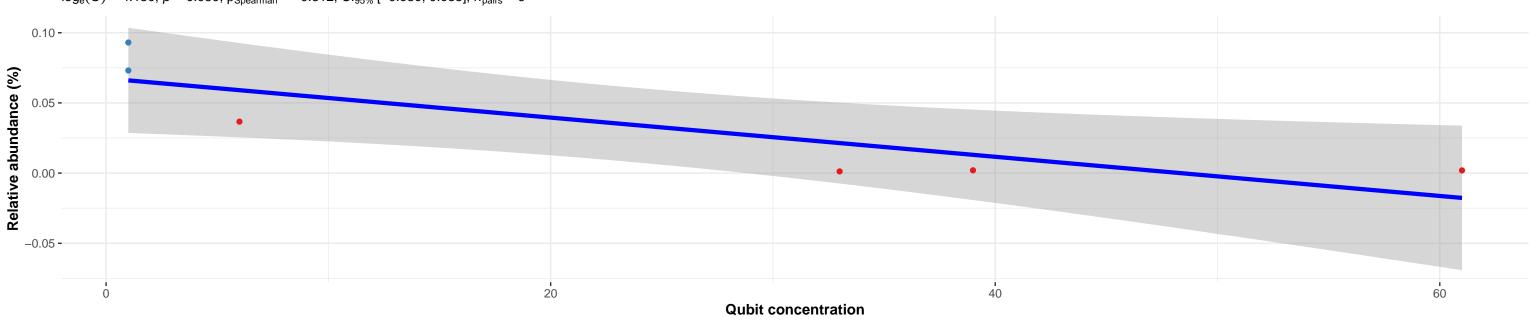
# Bacteria; Proteobacteria; Alphaproteobacteria; Rhodobacterales; Rhodobacteraceae; Sulfitobacter; NA

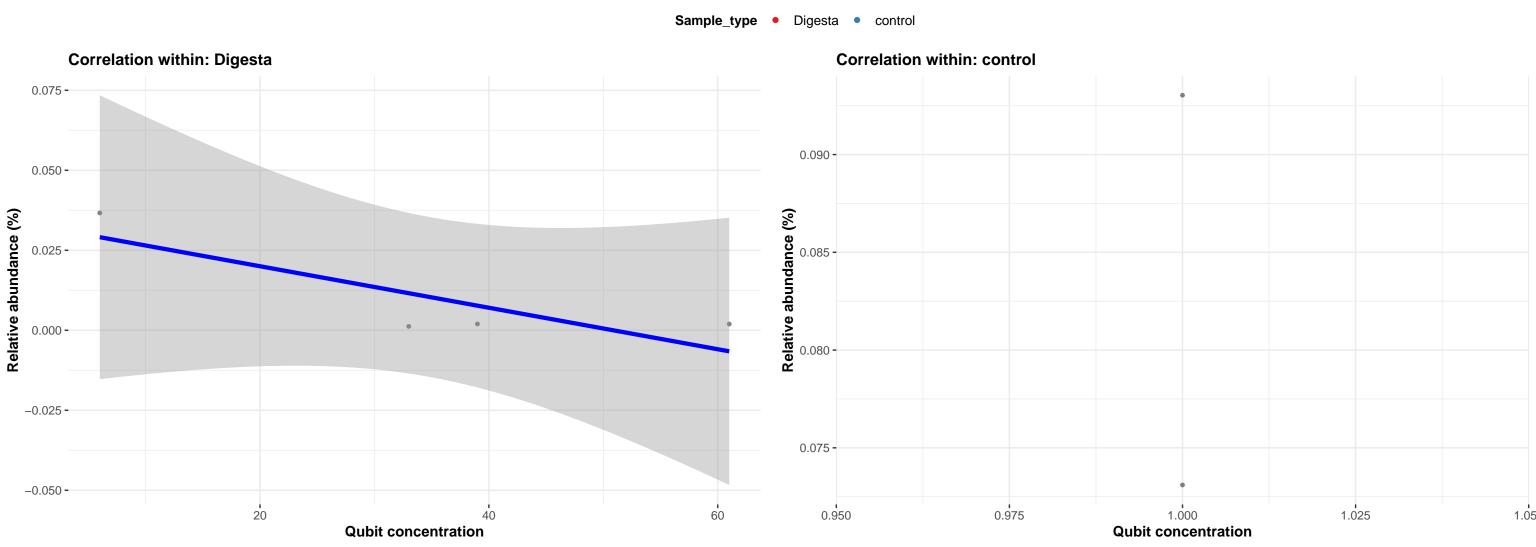


**Qubit concentration** 

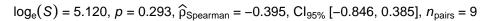
**Qubit concentration** 

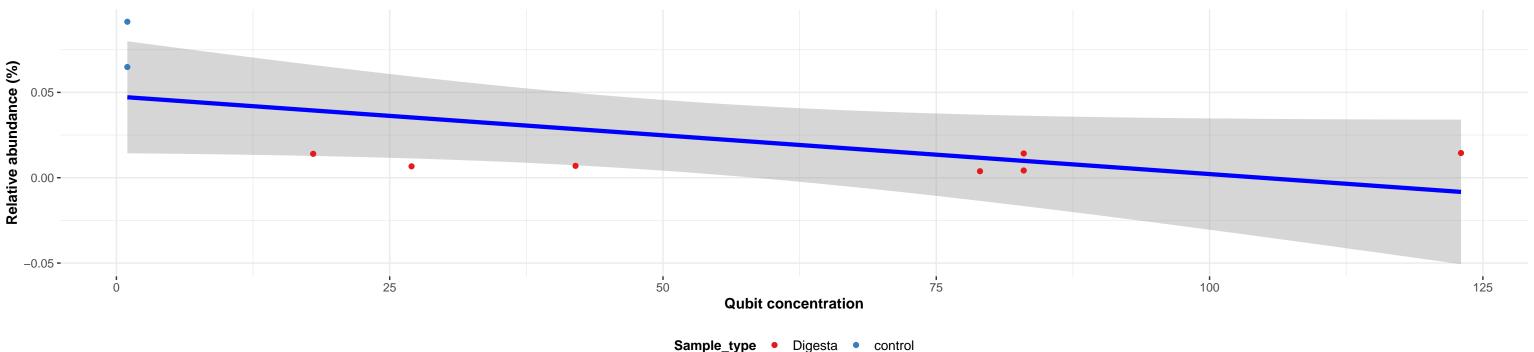


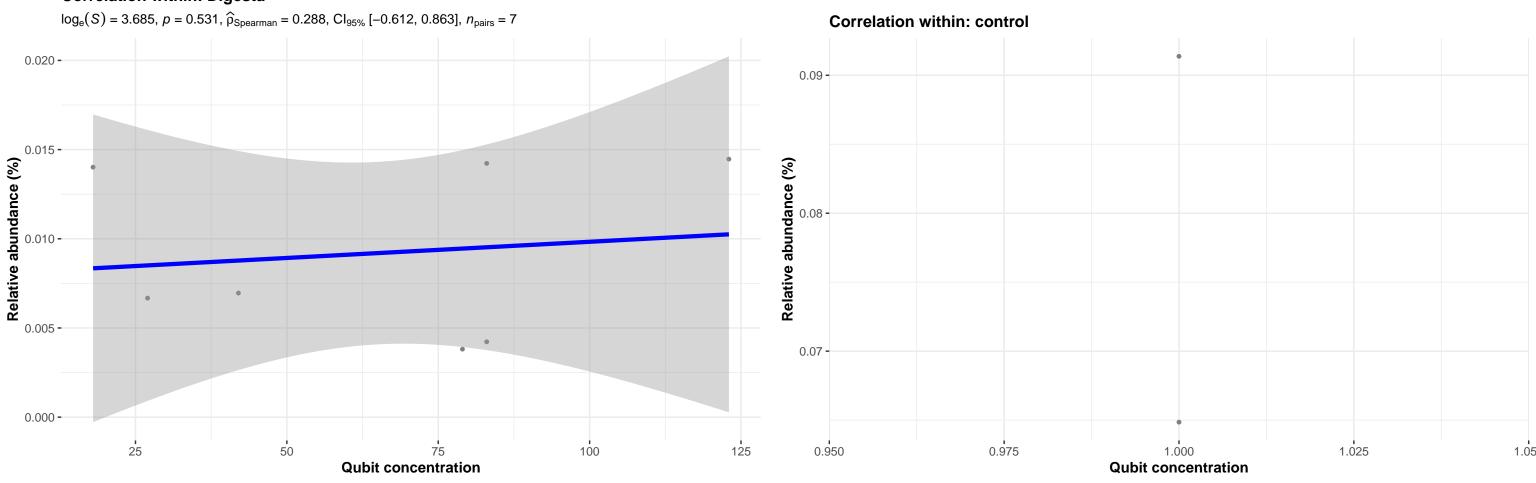






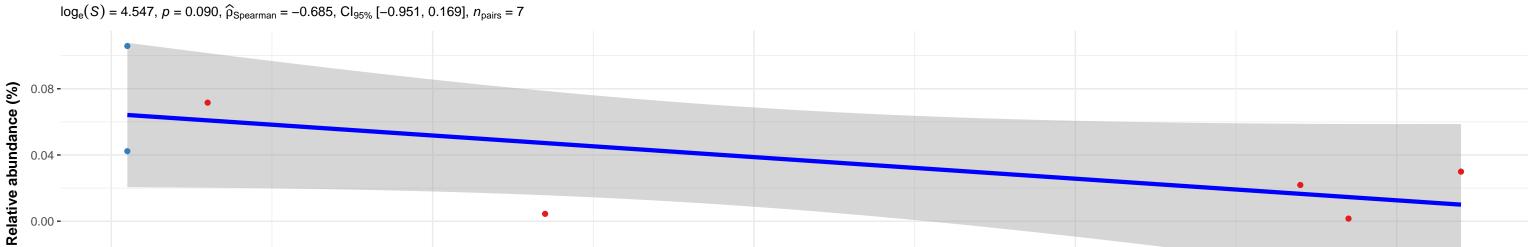


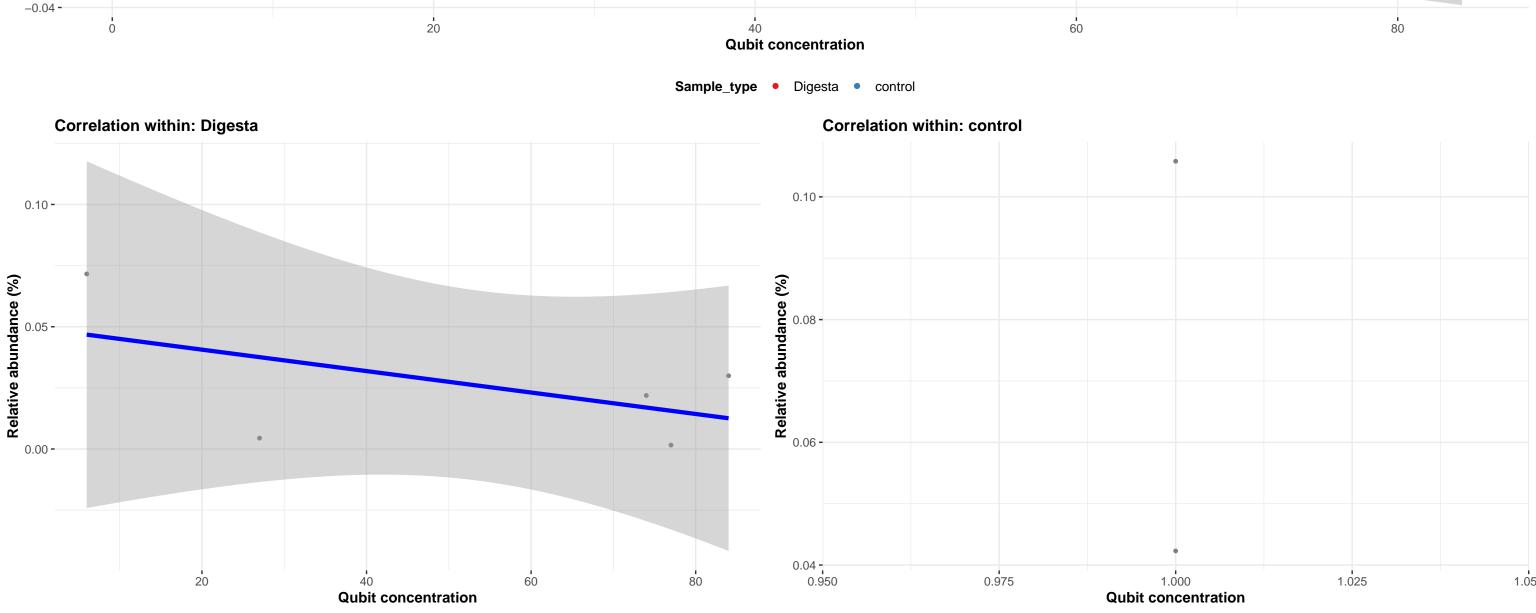




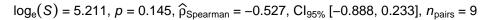


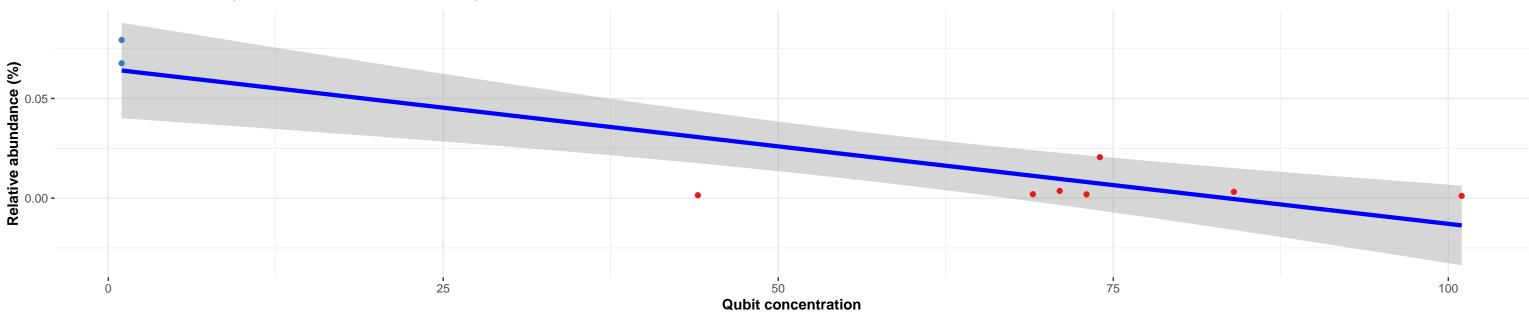
0.00 -



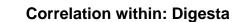


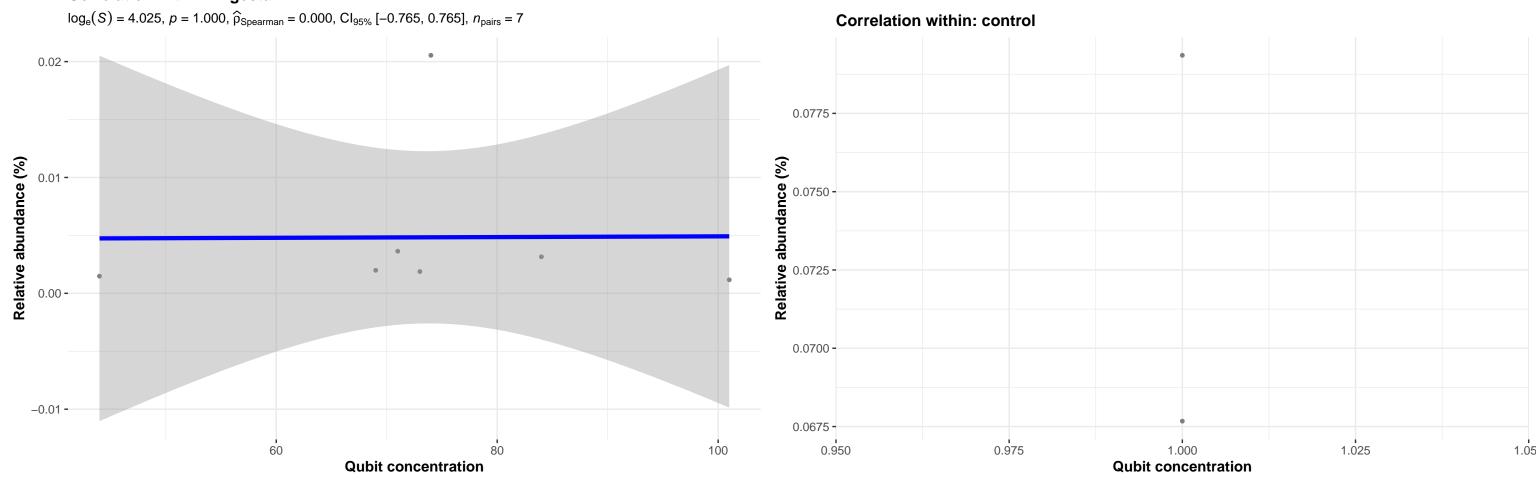
### Correlation with all samples





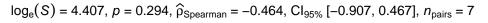
Sample\_type • Digesta • control

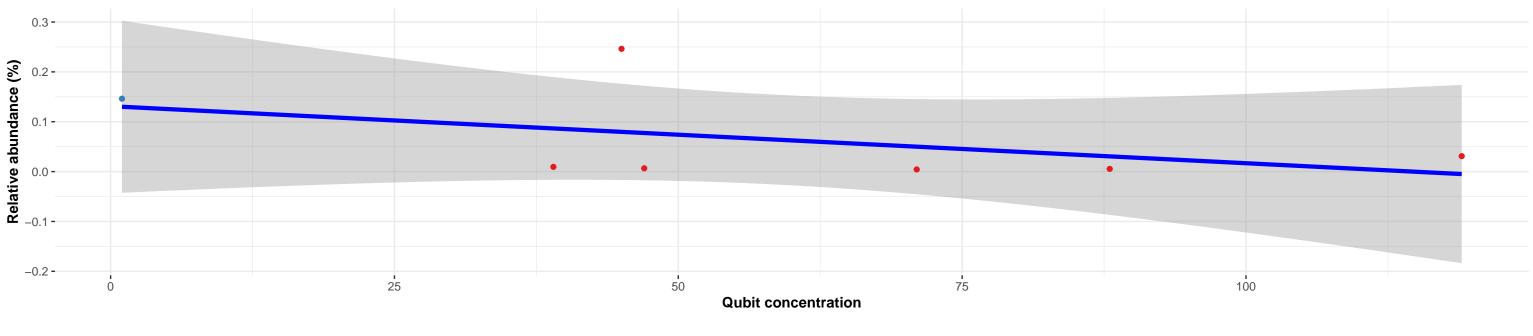




## Bacteria; Proteobacteria; Gammaproteobacteria; Burkholderiales; Oxalobacteraceae; Massilia; NA

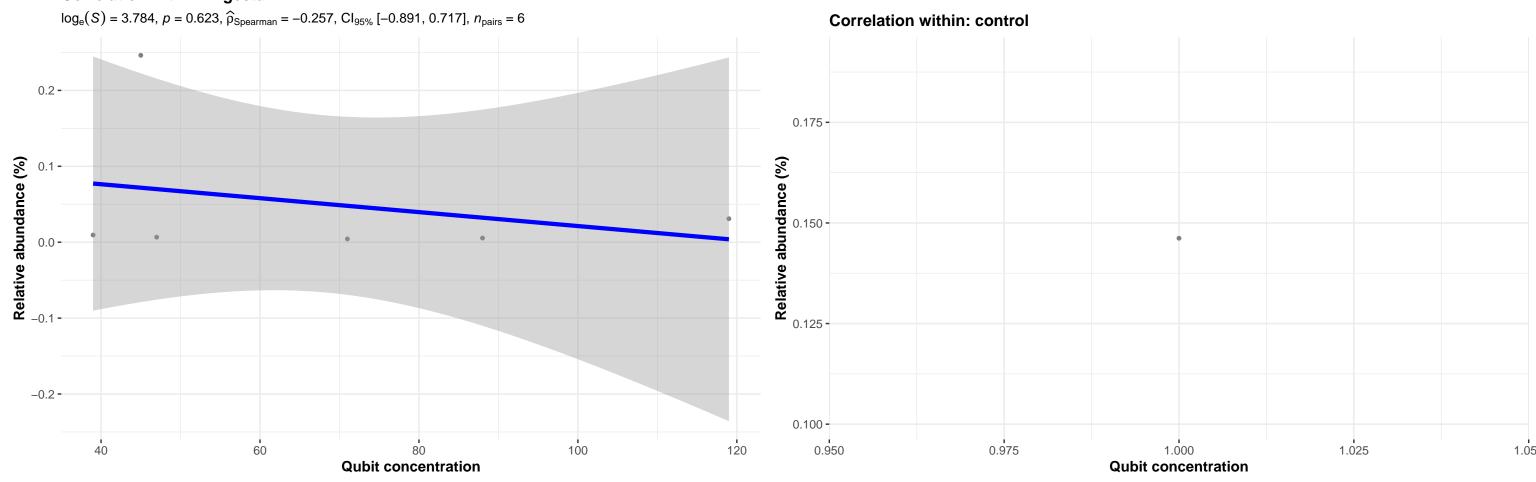






Sample\_type • Digesta • control

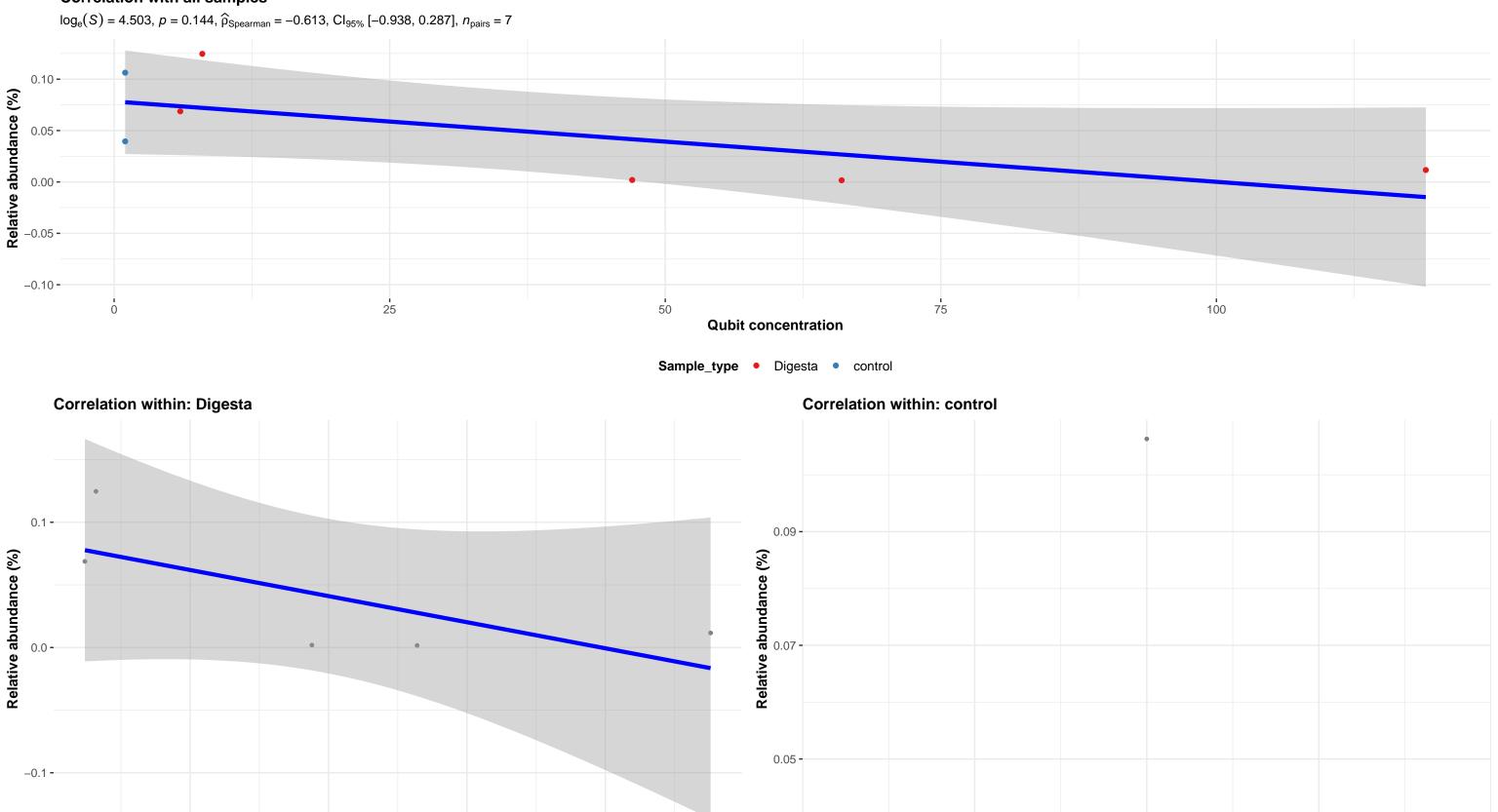






25

**Qubit concentration** 



0.950

100

0.975

1.05

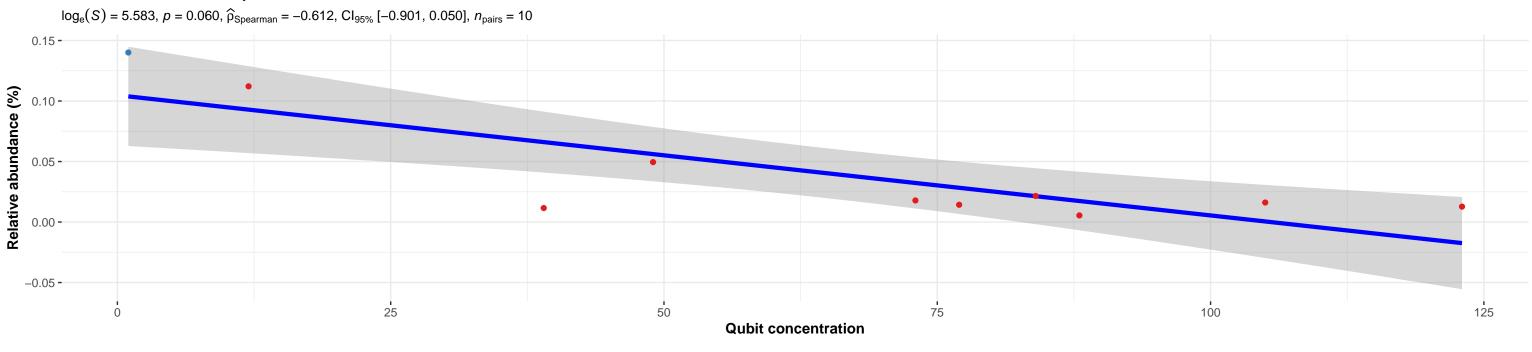
1.025

1.000

**Qubit concentration** 

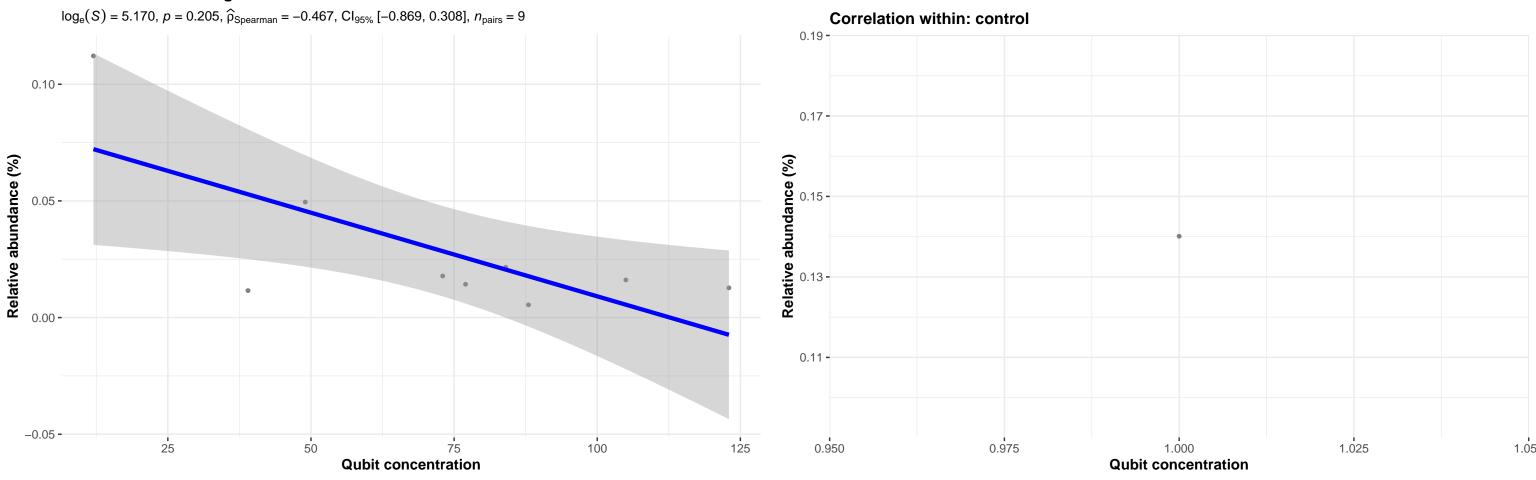
## Bacteria; Actinobacteriota; Actinobacteria; Micrococcales; Brevibacteriaceae; Brevibacterium; NA





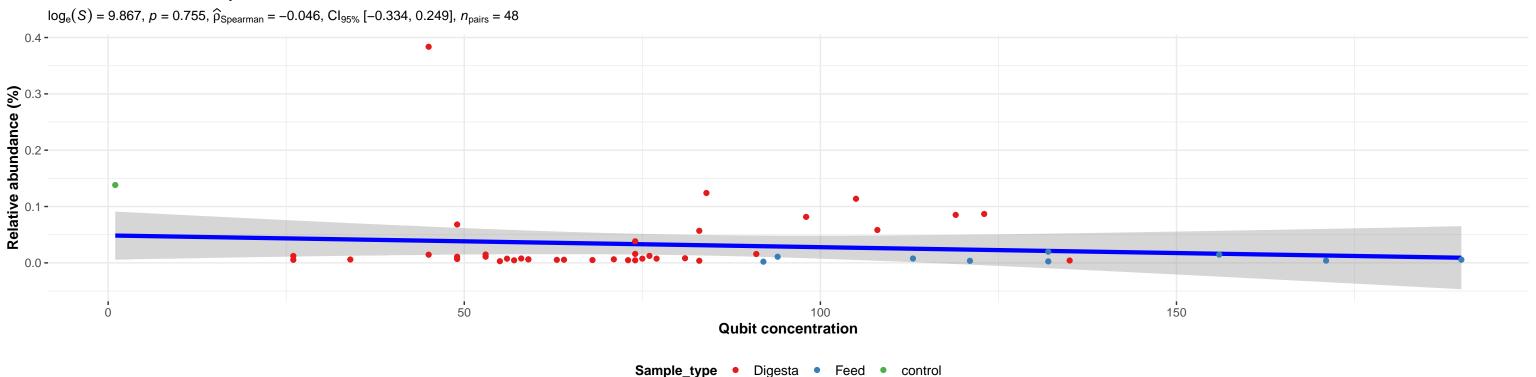
Sample\_type • Digesta • control



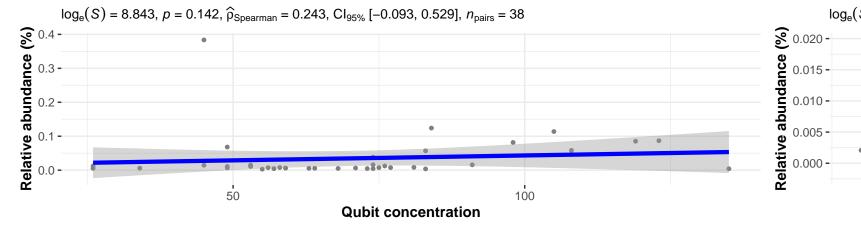


## Bacteria; Firmicutes; Clostridia; Clostridiales; Clostridiaceae; Clostridium sensu stricto 7; novyi

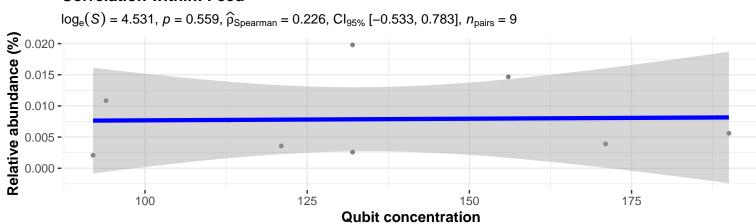


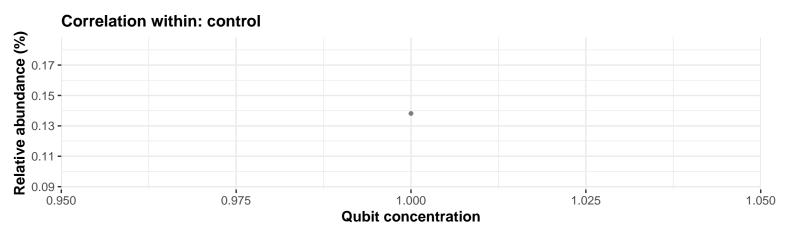


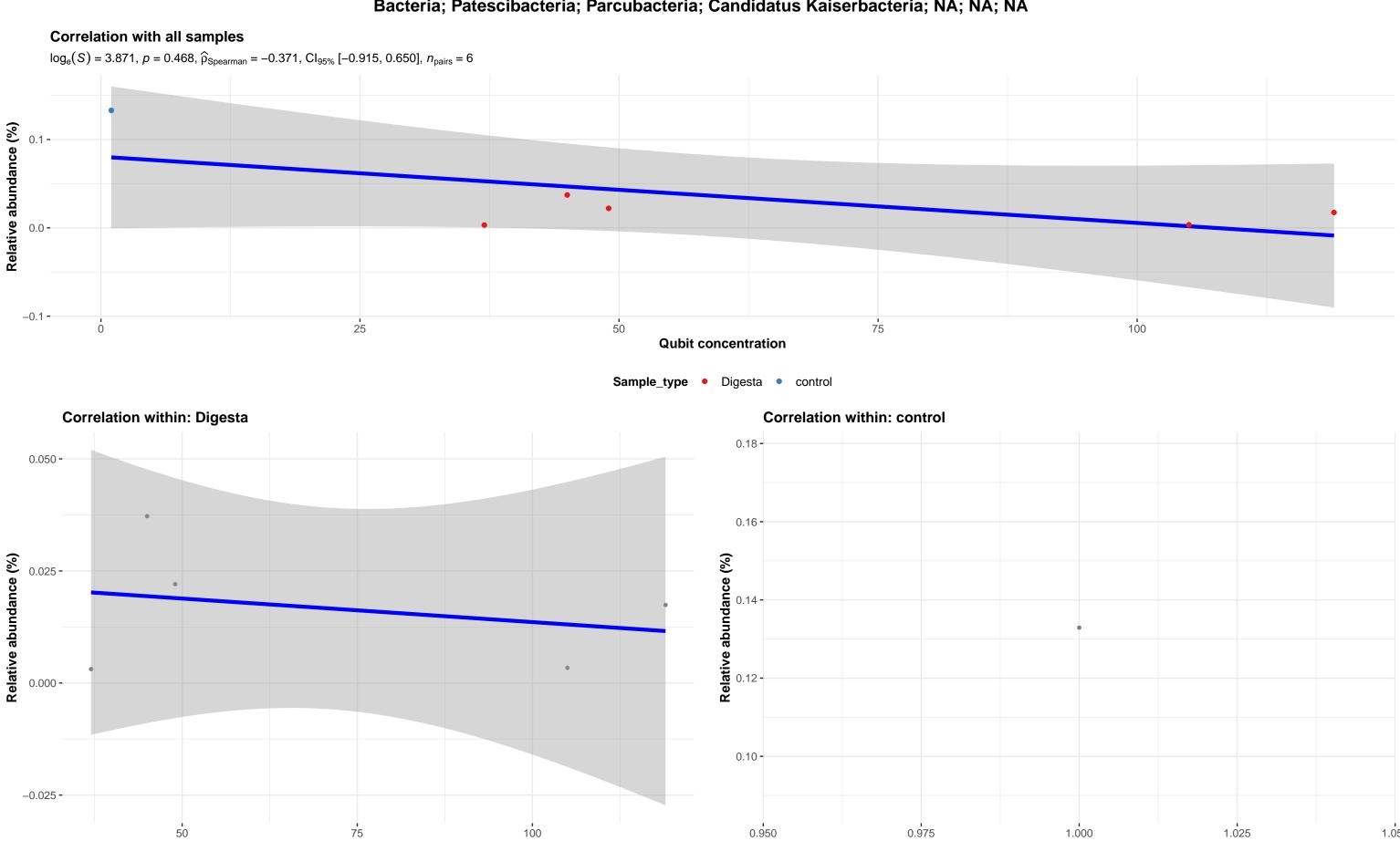
### **Correlation within: Digesta**



#### **Correlation within: Feed**



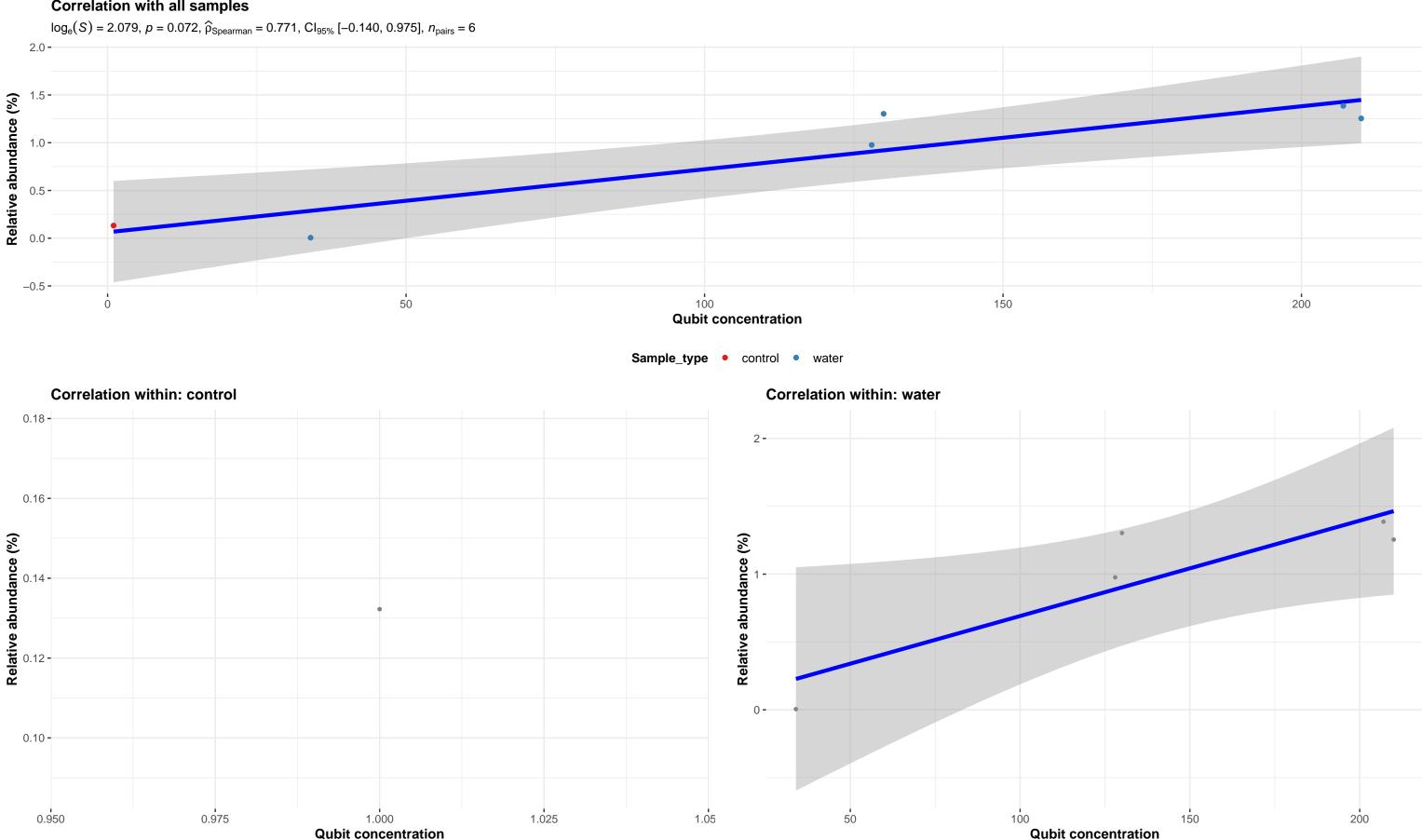




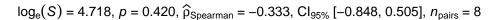
**Qubit concentration** 

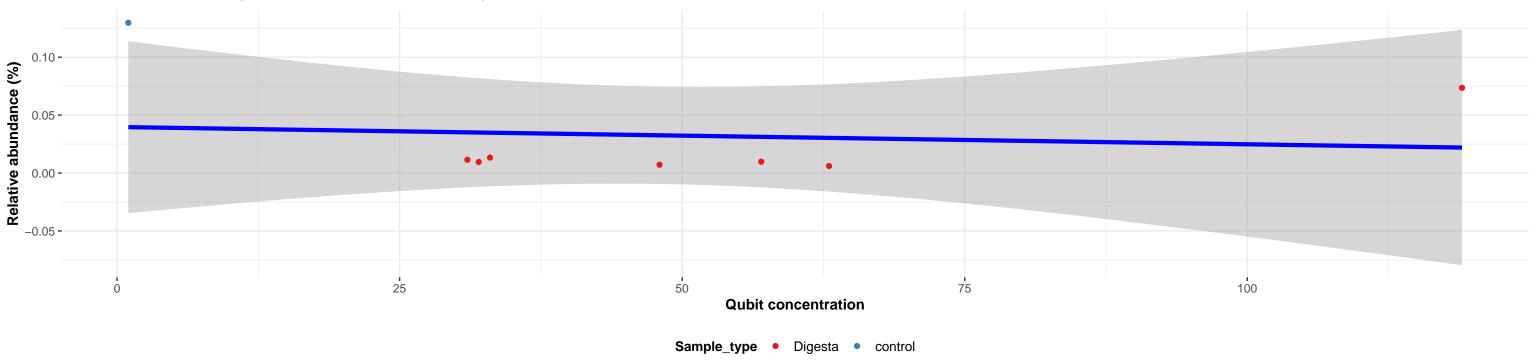
**Qubit concentration** 

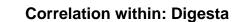


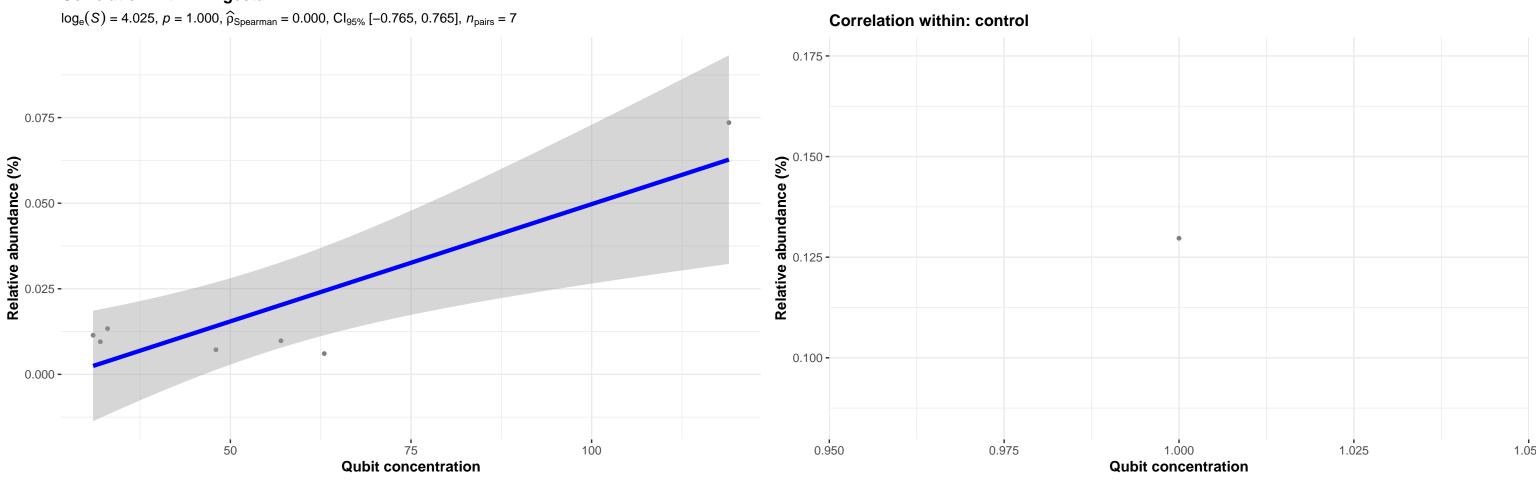


#### Correlation with all samples

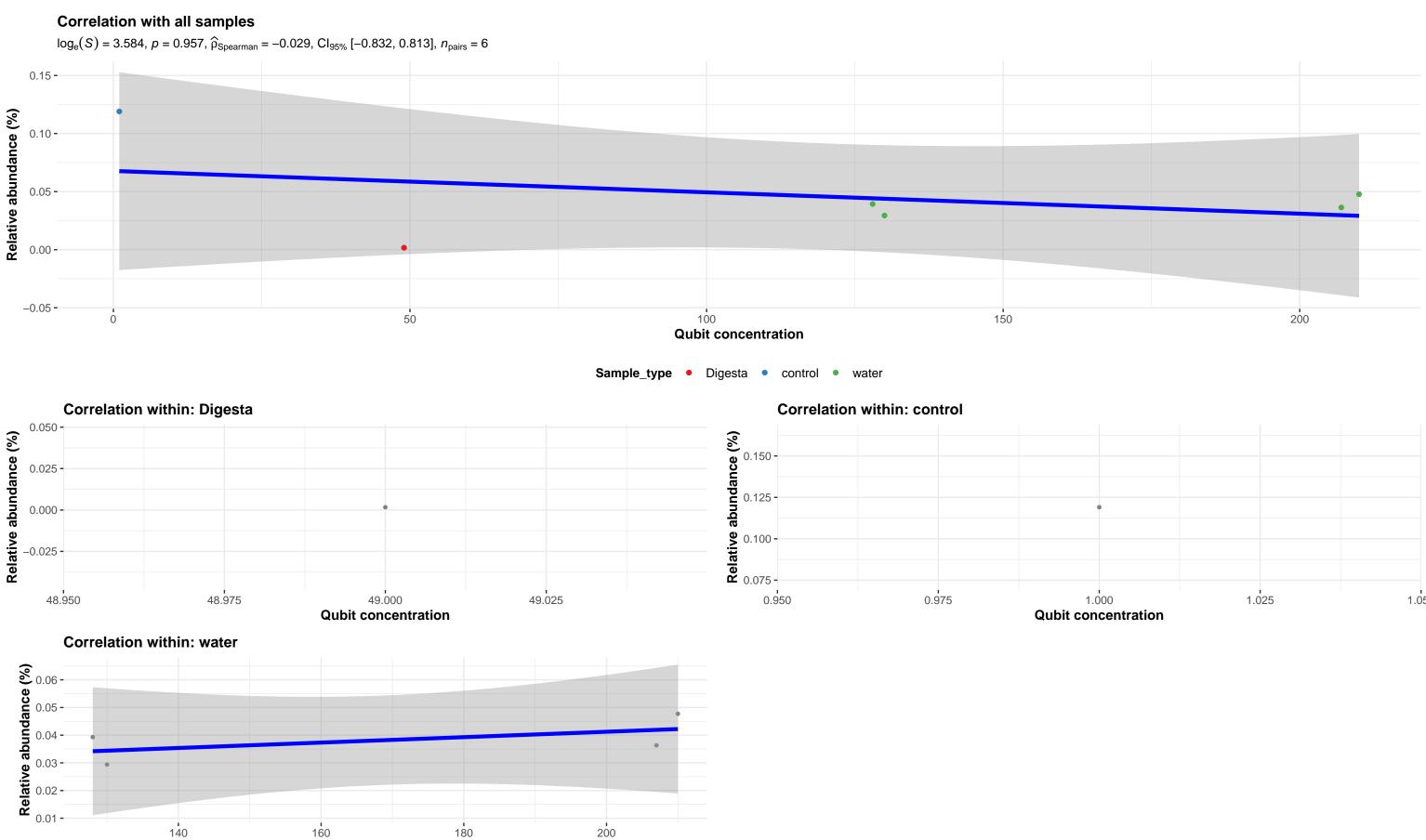








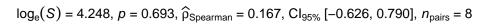
## Bacteria; Verrucomicrobiota; Verrucomicrobiae; Verrucomicrobiales; Rubritaleaceae; Rubritalea; NA

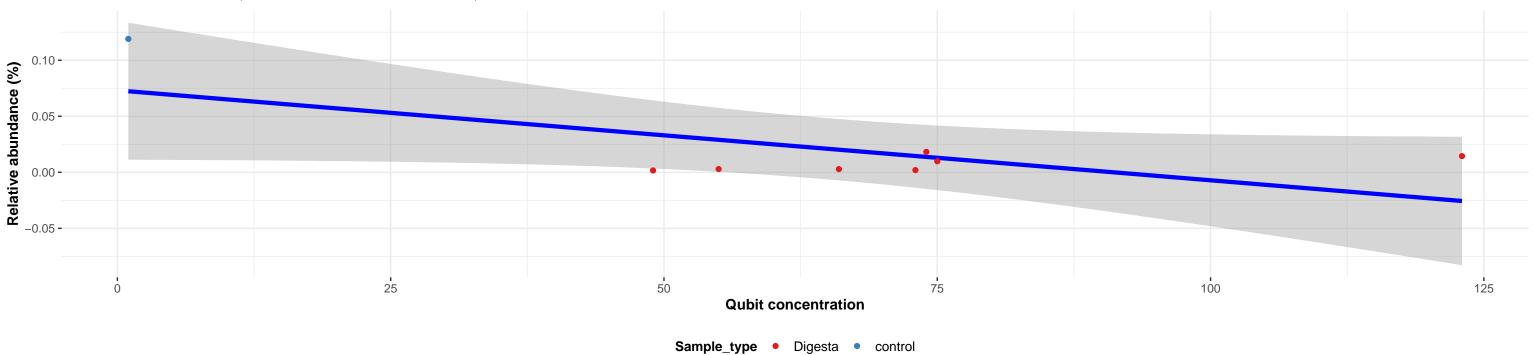


**Qubit concentration** 

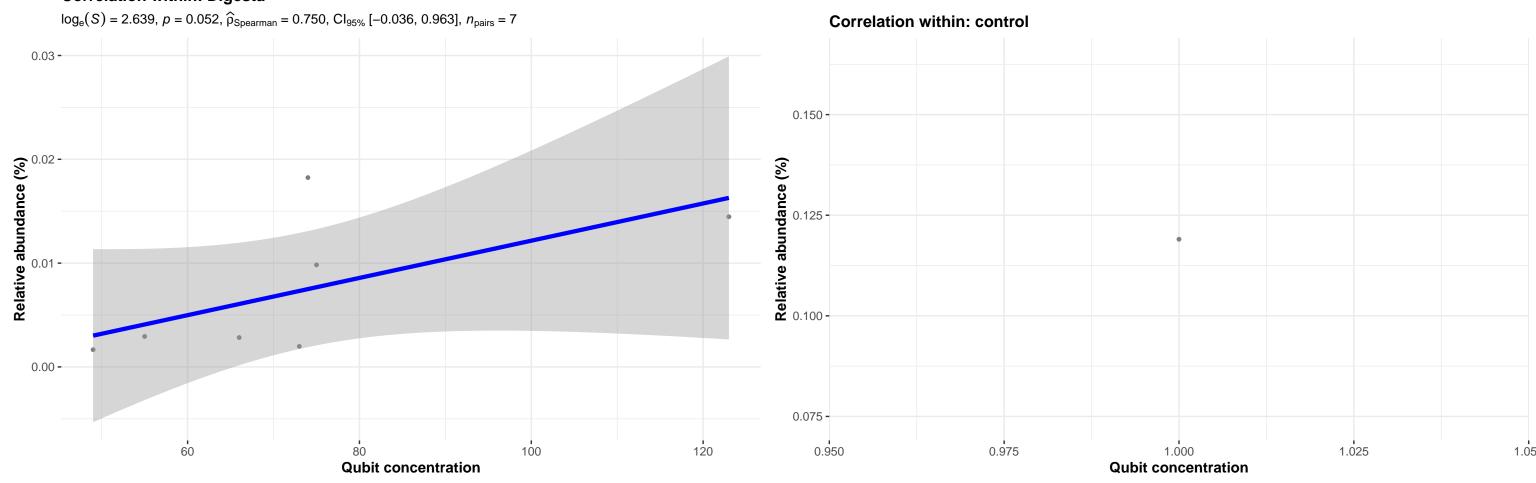
# Bacteria; Patescibacteria; Parcubacteria; Candidatus Nomurabacteria; NA; NA; NA

## **Correlation with all samples**



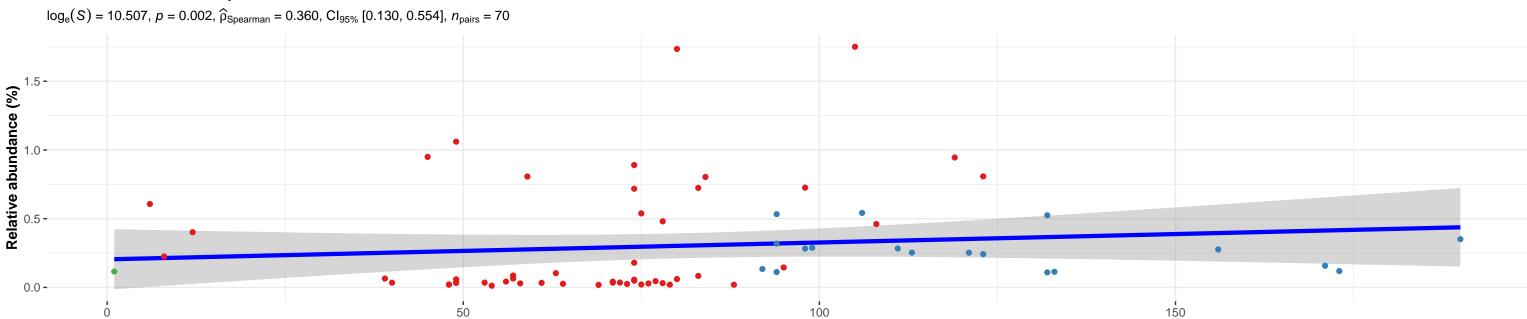


## Correlation within: Digesta



## Bacteria; Firmicutes; Bacilli; Lactobacillales; Lactobacillaceae; Limosilactobacillus; NA

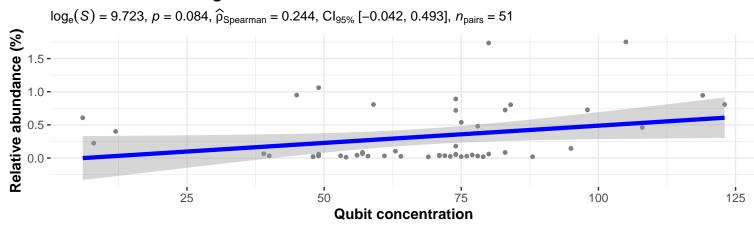




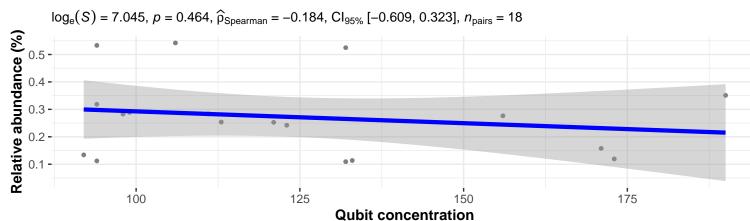


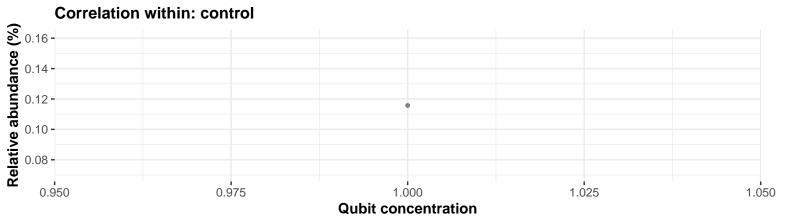
**Qubit concentration** 

#### **Correlation within: Digesta**



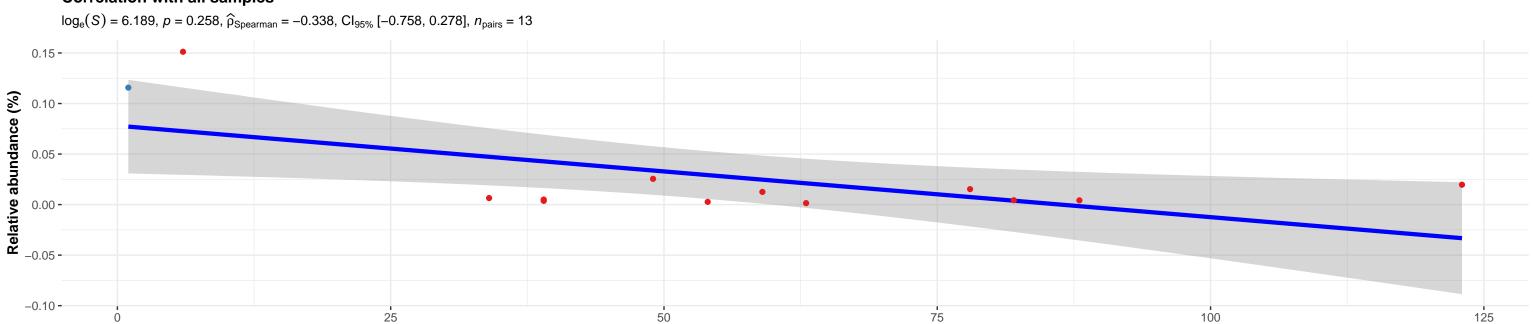
#### **Correlation within: Feed**

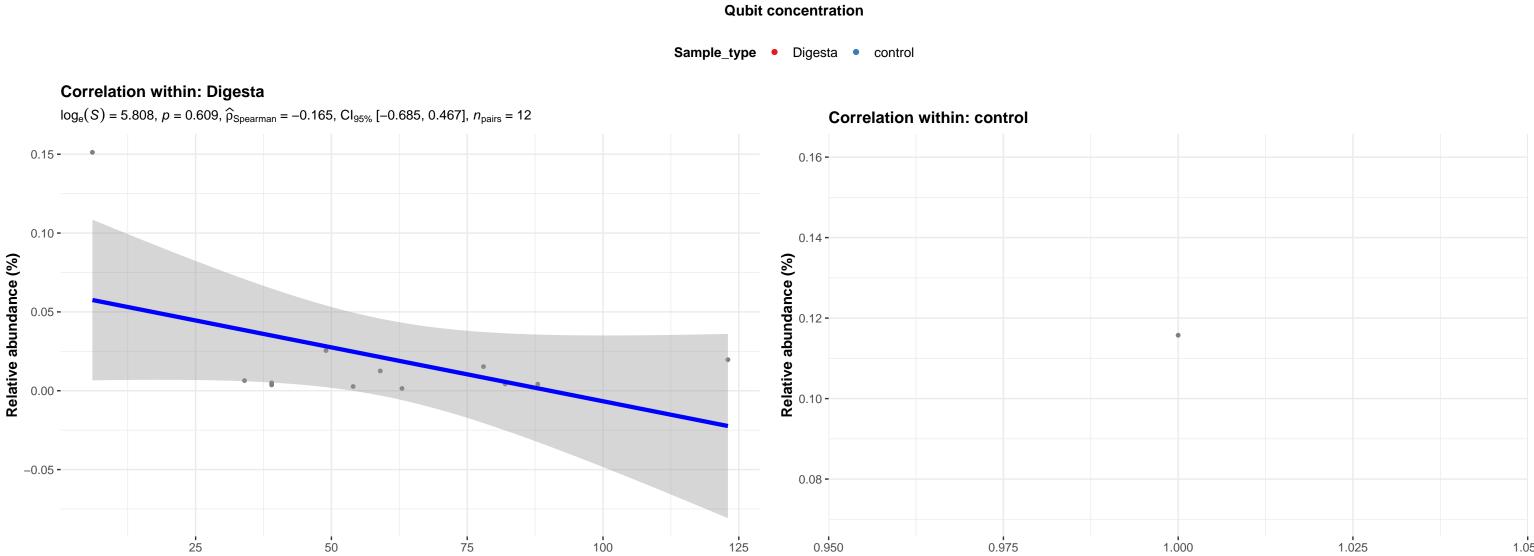




# Bacteria; Proteobacteria; Alphaproteobacteria; Sphingomonadales; Sphingomonadaceae; Sphingomonas; NA

#### Correlation with all samples





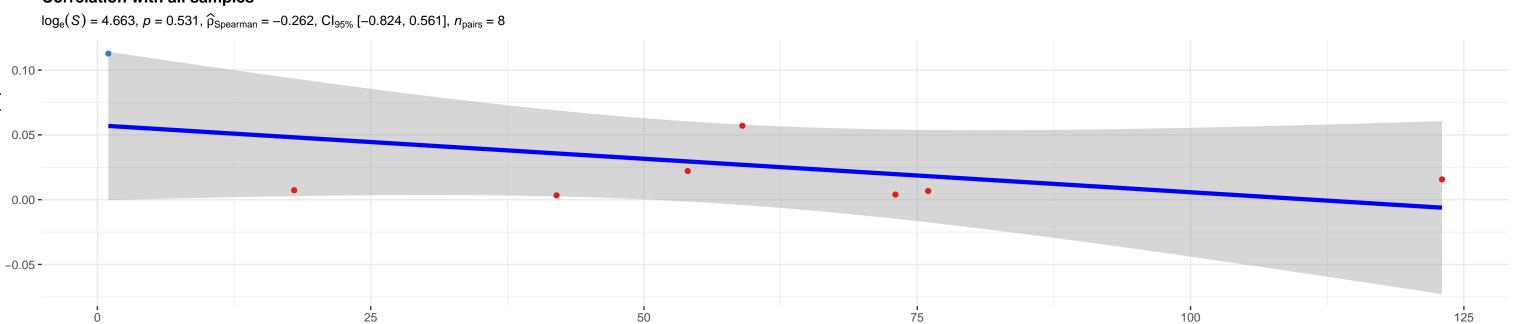
**Qubit concentration** 

**Qubit concentration** 

## Bacteria; Actinobacteriota; Actinobacteria; Micrococcales; Microbacteriaceae; Leucobacter; NA

#### **Correlation with all samples**

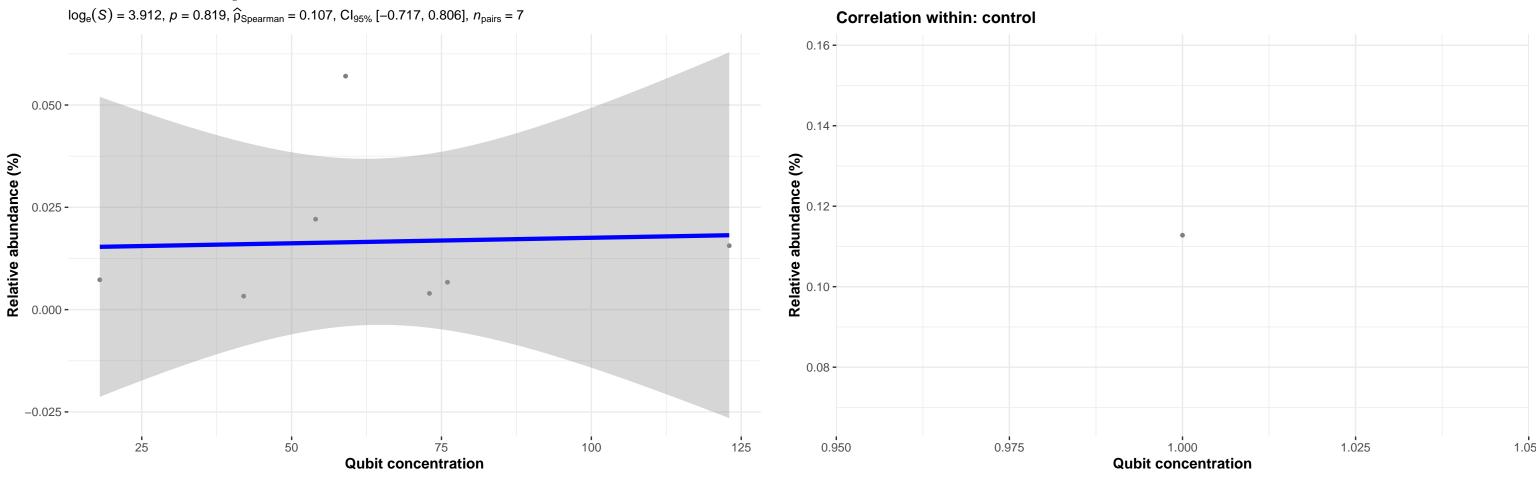
Relative abundance (%)



**Qubit concentration** 

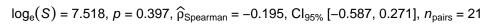


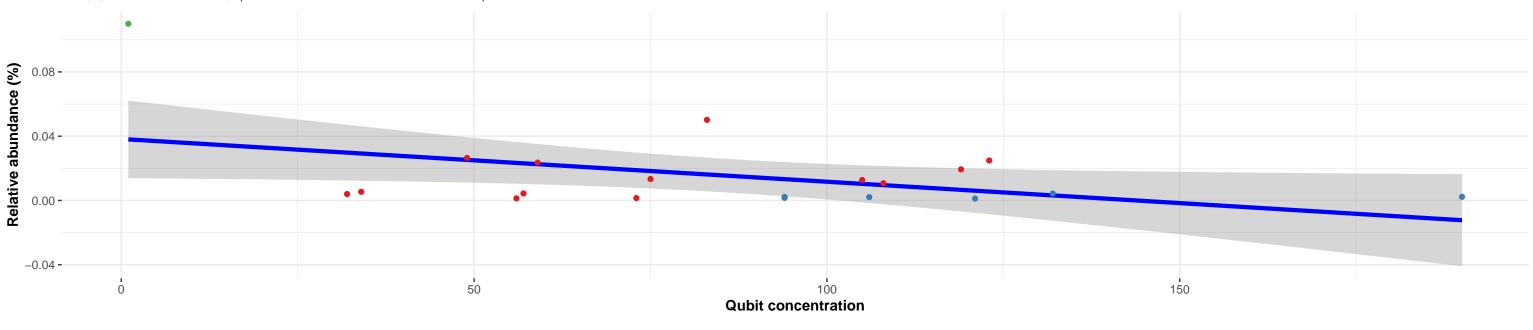




## Bacteria; Firmicutes; Bacilli; Staphylococcales; Staphylococcaceae; Nosocomiicoccus; NA

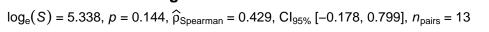


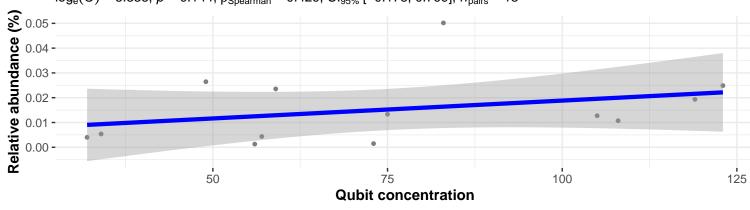




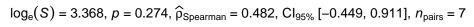
Sample\_type • Digesta • Feed • control

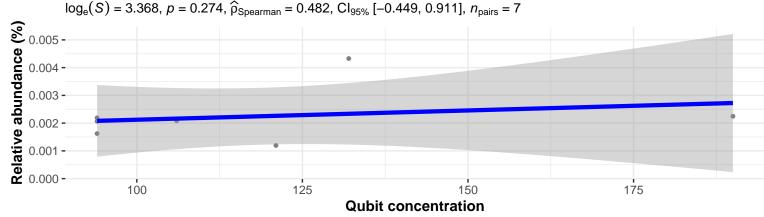
### **Correlation within: Digesta**



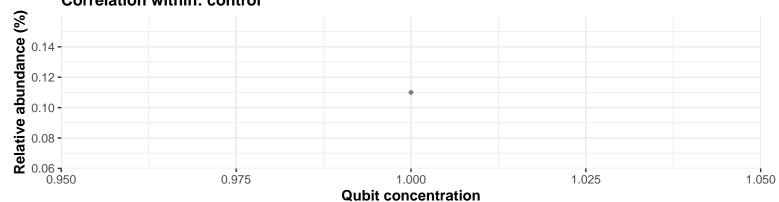


#### **Correlation within: Feed**

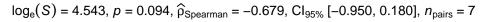


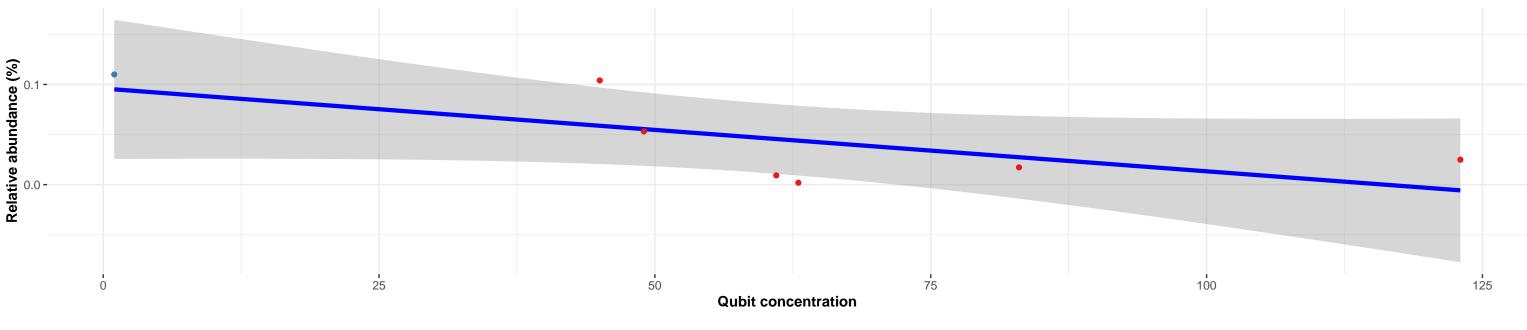




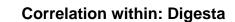


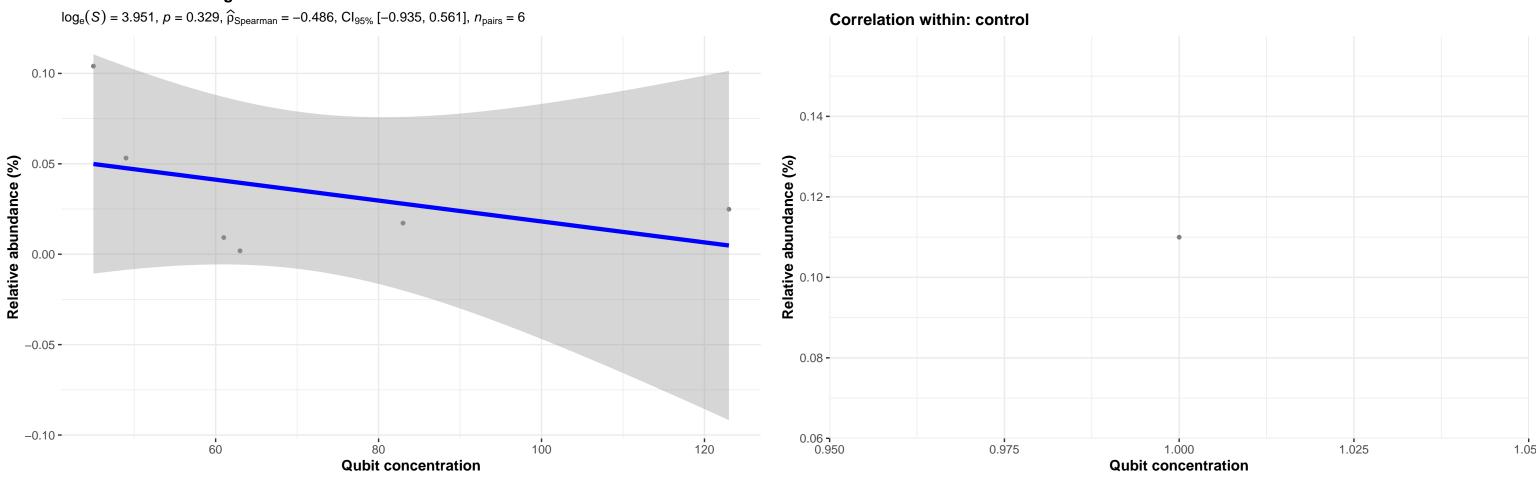






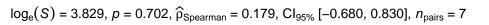
Sample\_type • Digesta • control

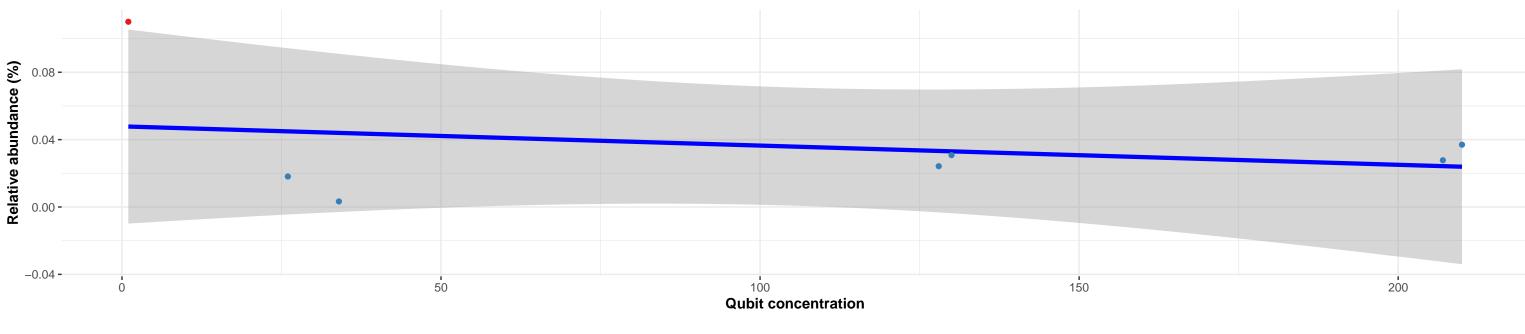




## Bacteria; Proteobacteria; Alphaproteobacteria; Micavibrionales; Micavibrionaceae; NA; NA

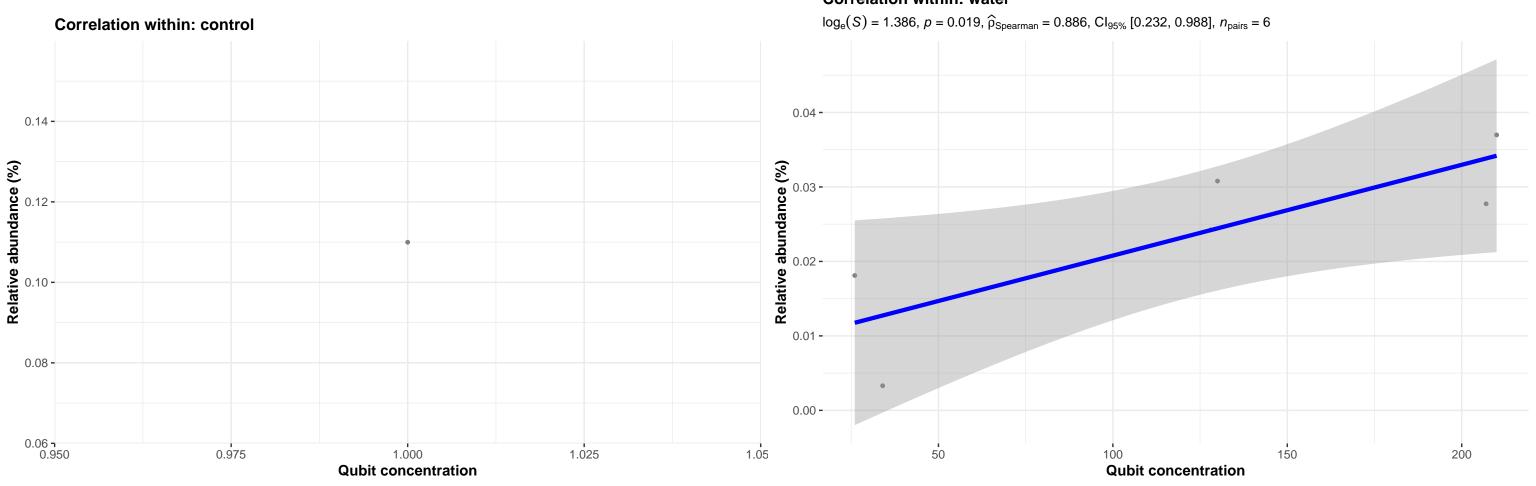
#### Correlation with all samples

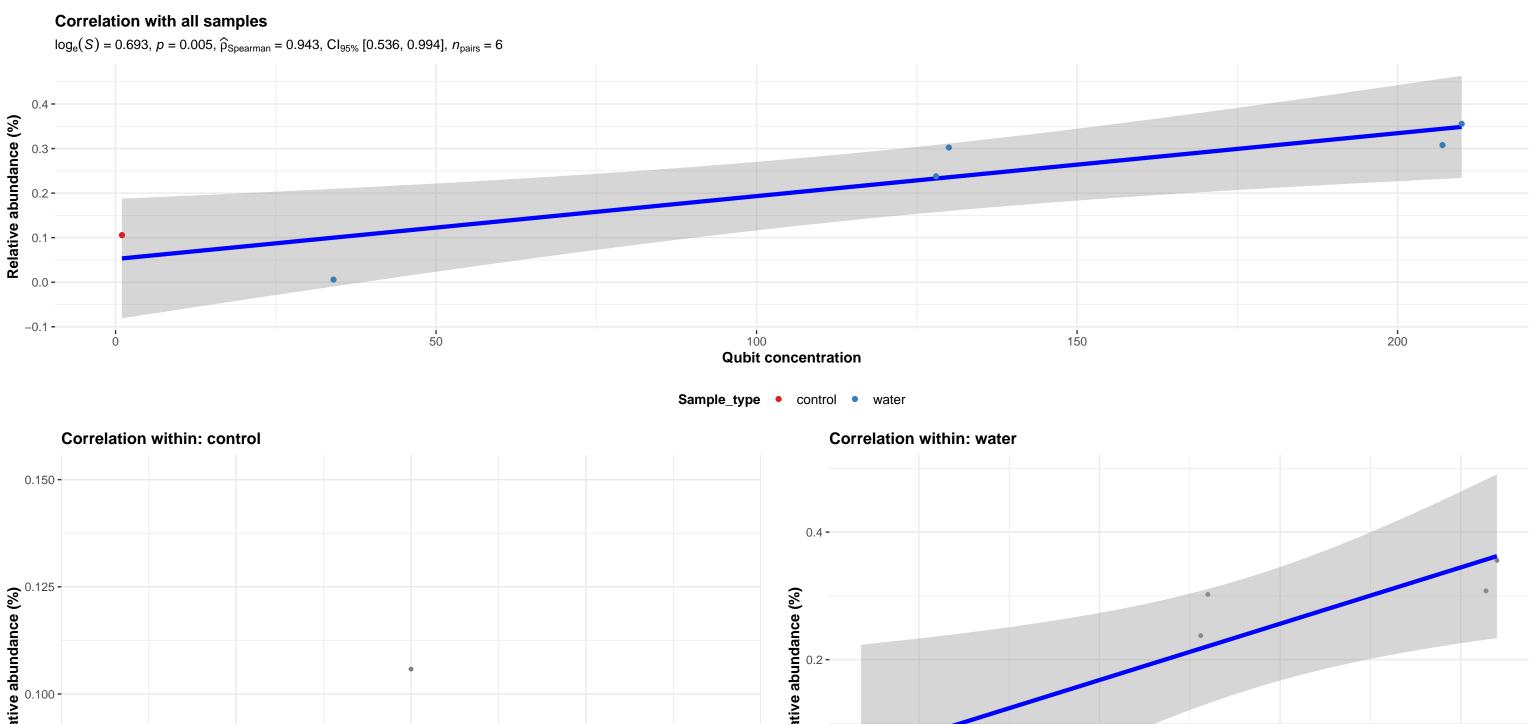


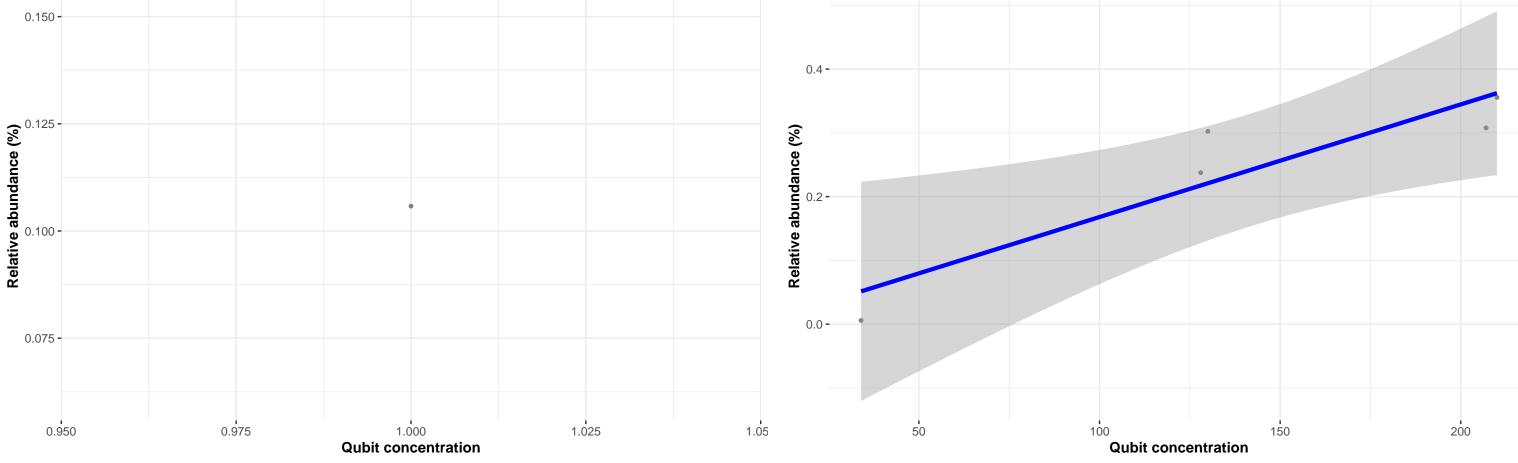


Sample\_type • control • water

# Correlation within: water

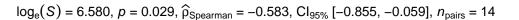


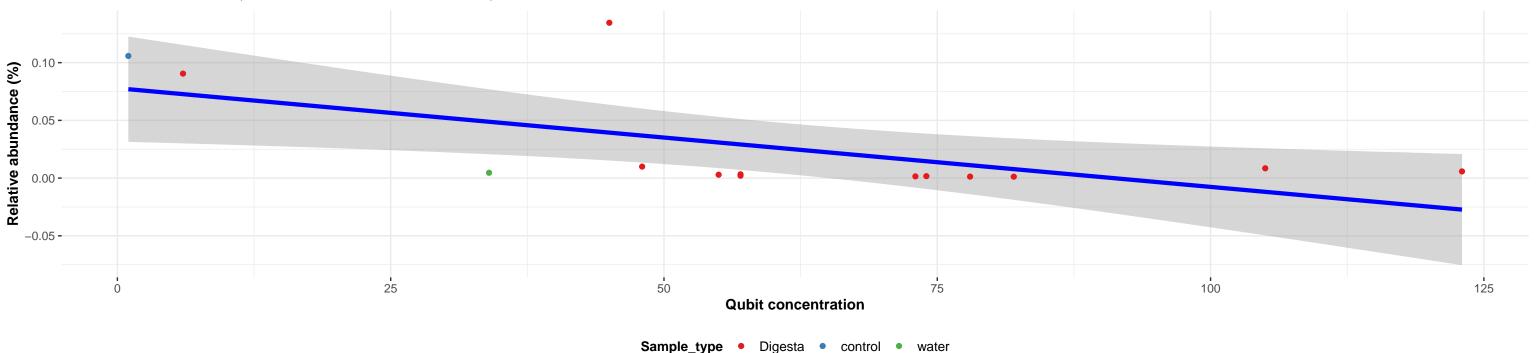




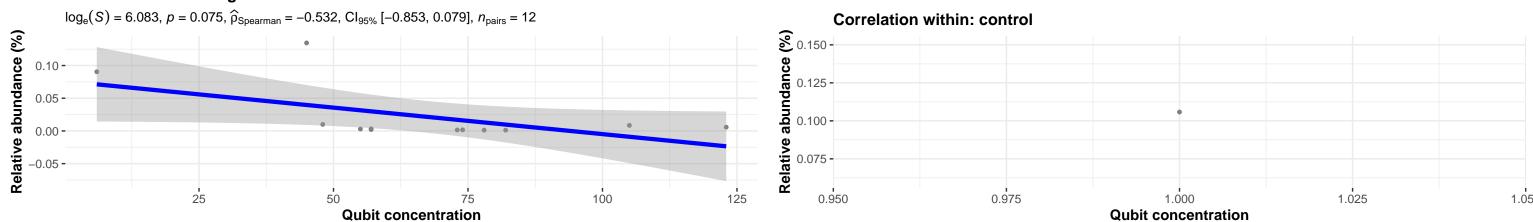
## Bacteria; Proteobacteria; Alphaproteobacteria; Caulobacterales; Caulobacteraceae; Brevundimonas; NA

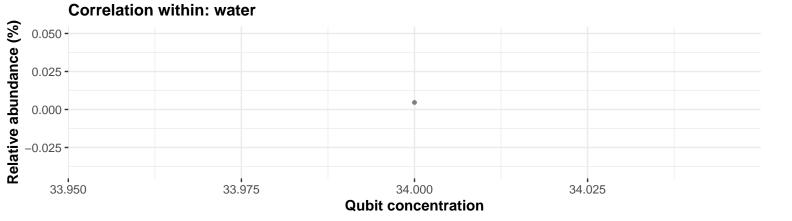






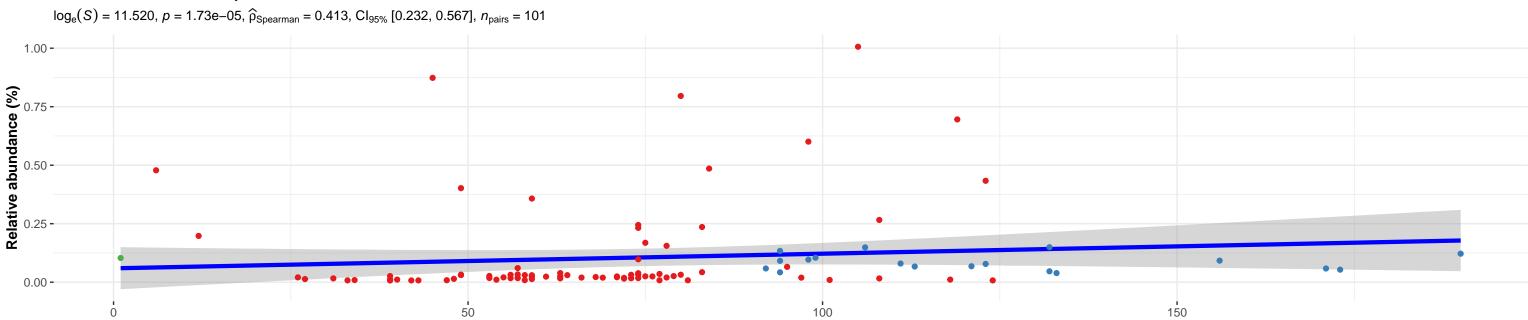
#### Correlation within: Digesta





## Bacteria; Firmicutes; Bacilli; Lactobacillales; Lactobacillaceae; Limosilactobacillus; NA

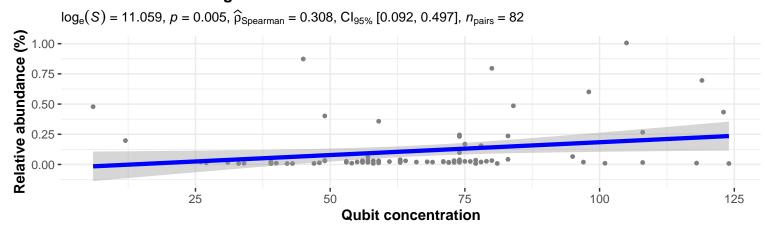




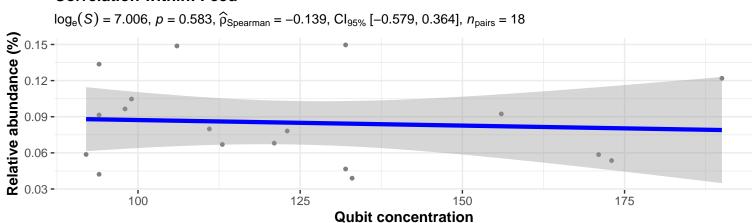
**Qubit concentration** 

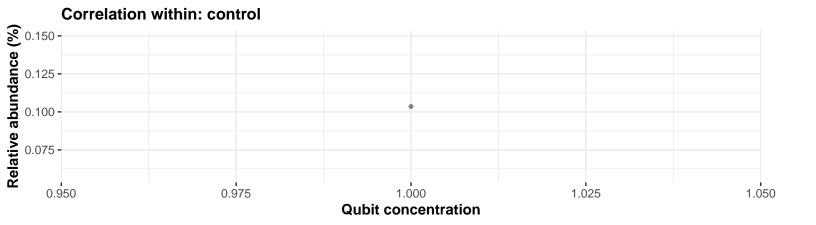


#### **Correlation within: Digesta**

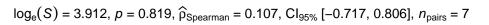


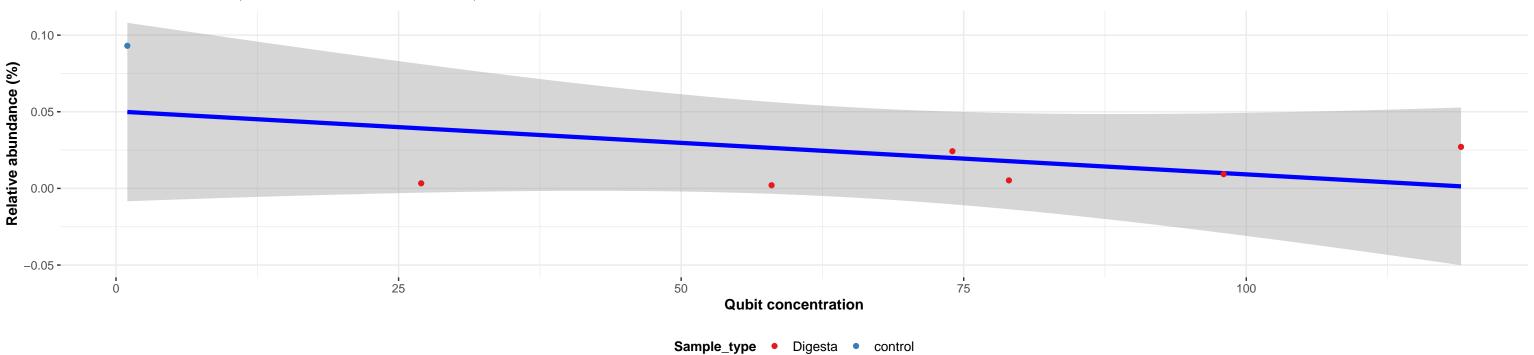
#### **Correlation within: Feed**



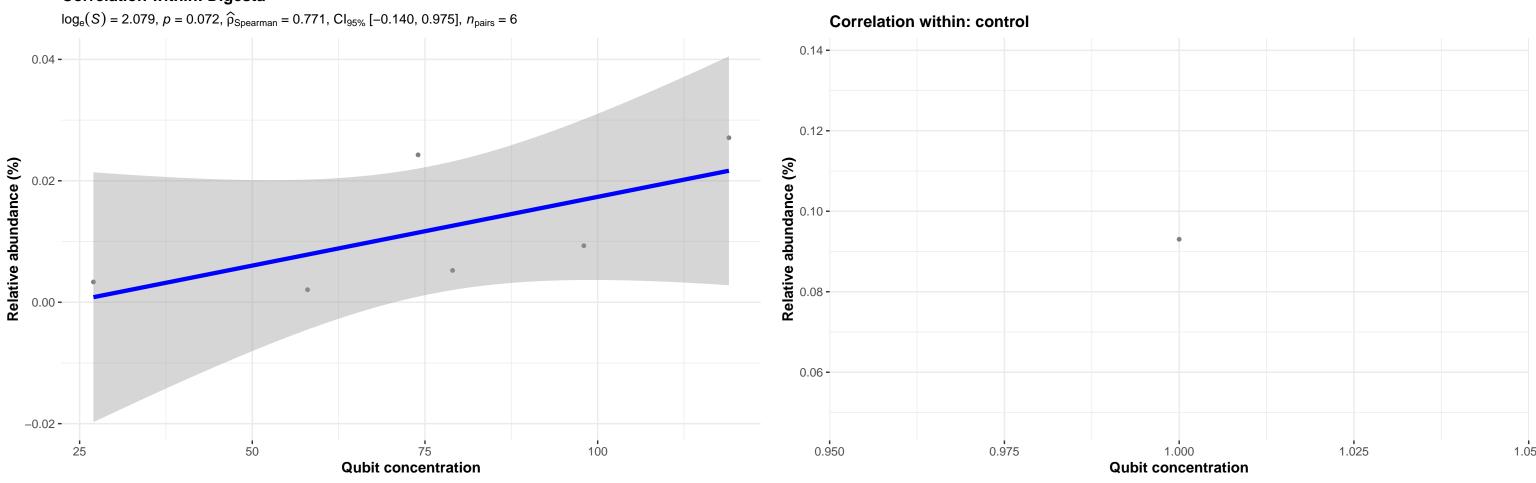


#### Correlation with all samples



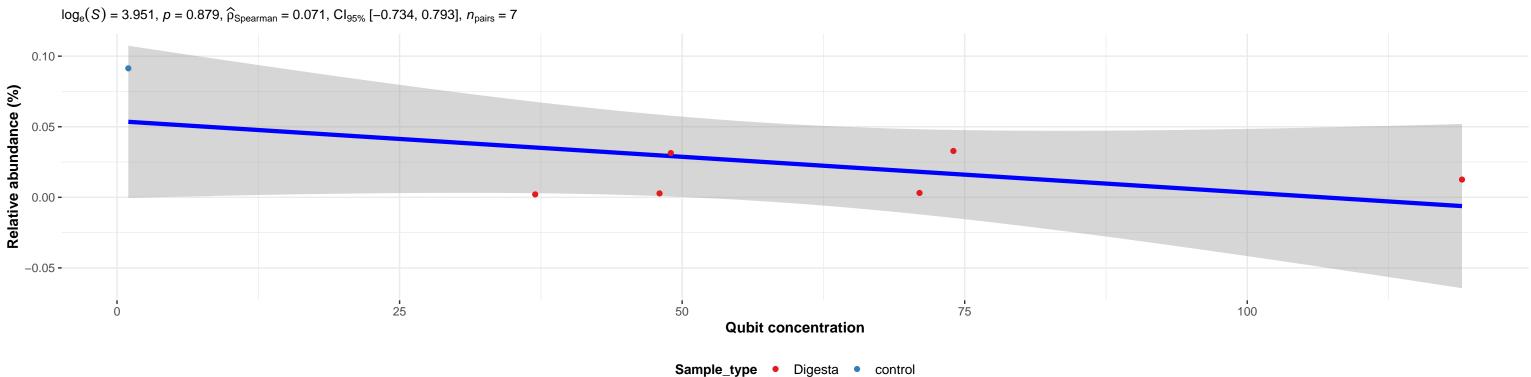


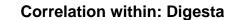
### **Correlation within: Digesta**

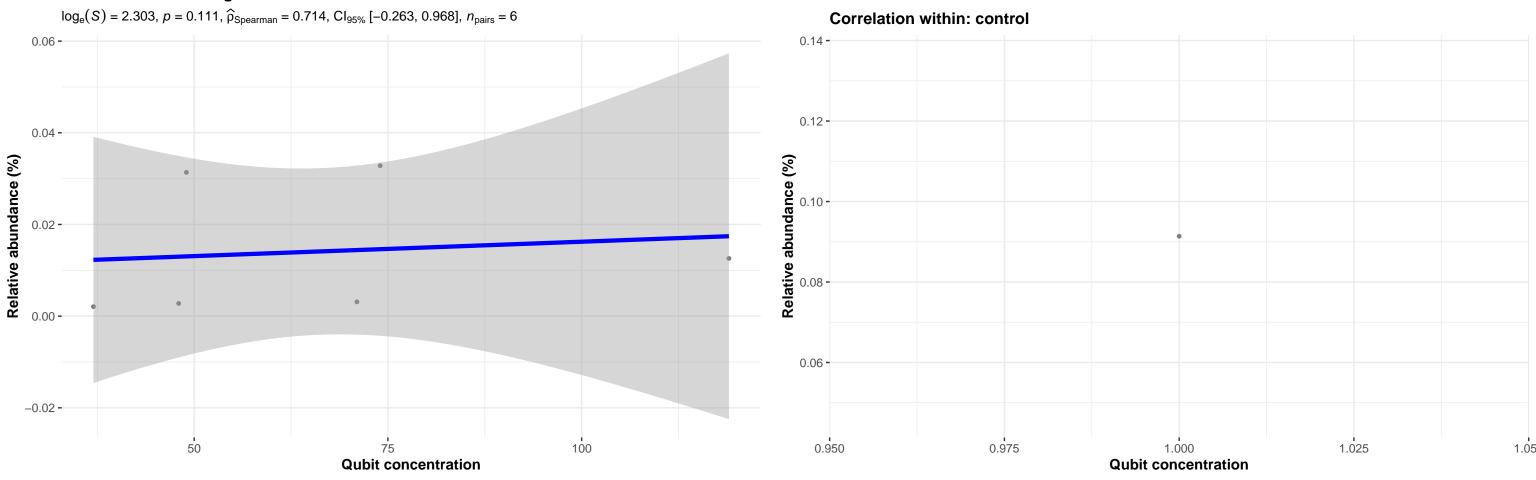


# Bacteria; Patescibacteria; Parcubacteria; Candidatus Nomurabacteria; NA; NA; NA

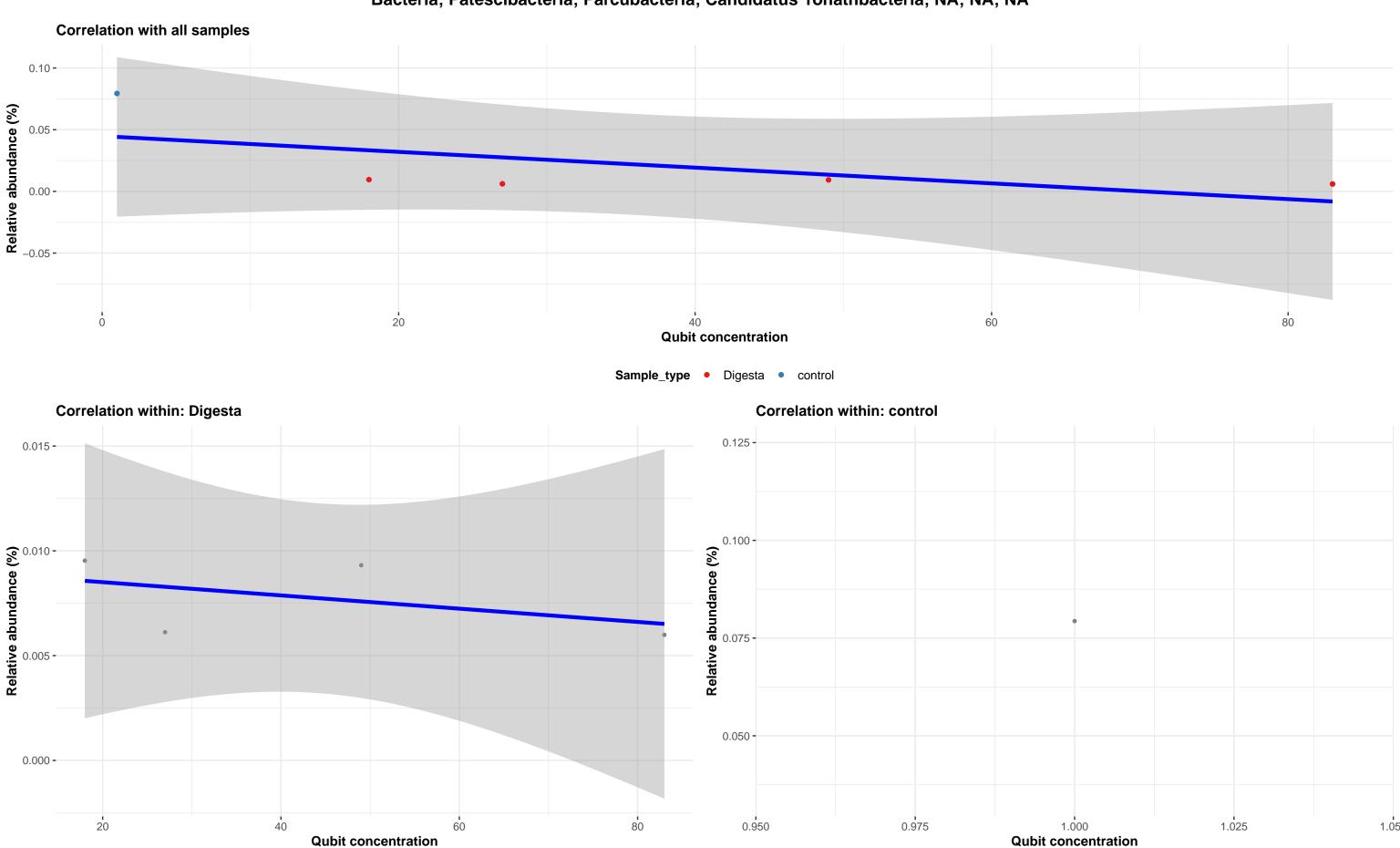




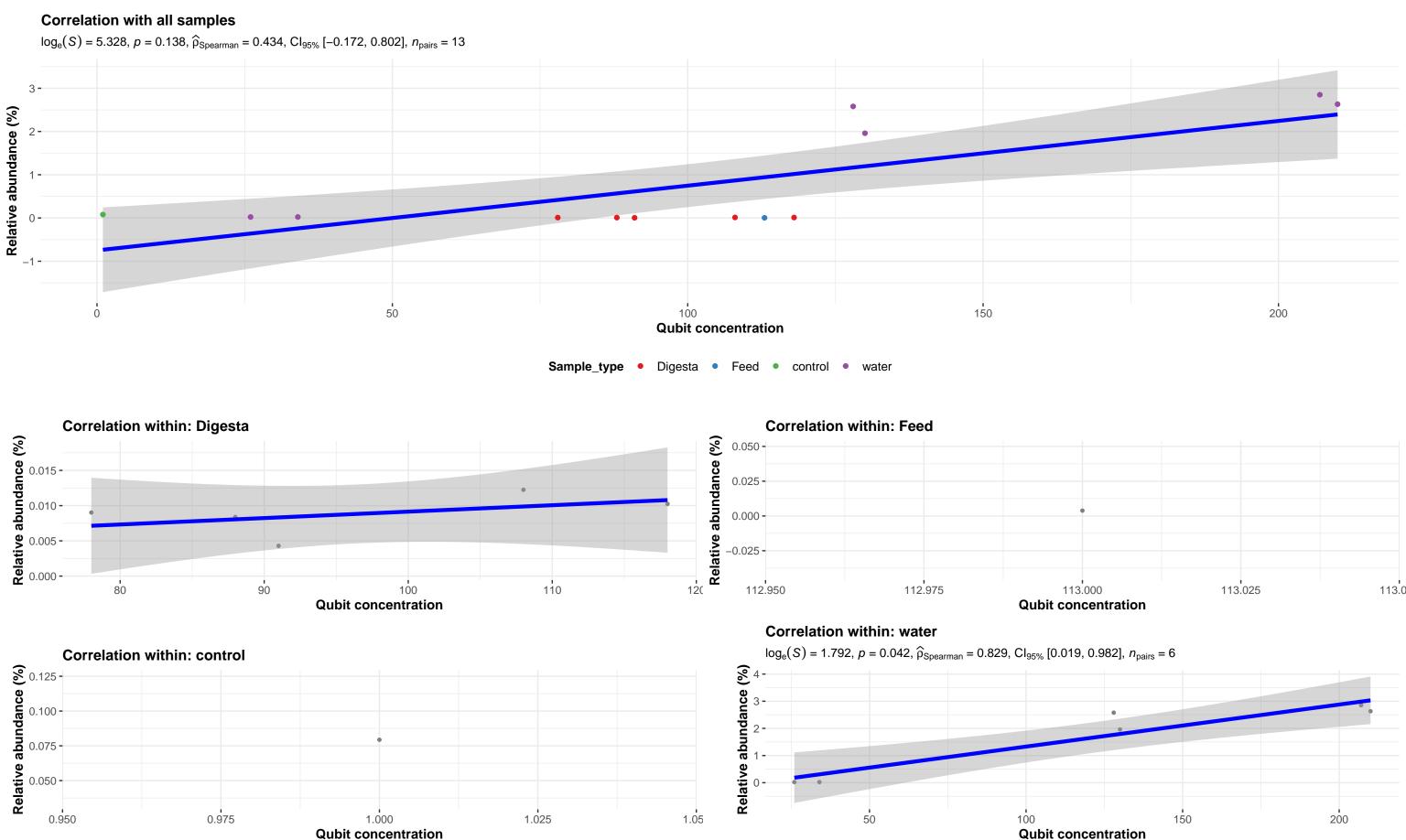




Bacteria; Patescibacteria; Parcubacteria; Candidatus Yonathbacteria; NA; NA; NA

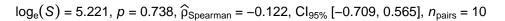


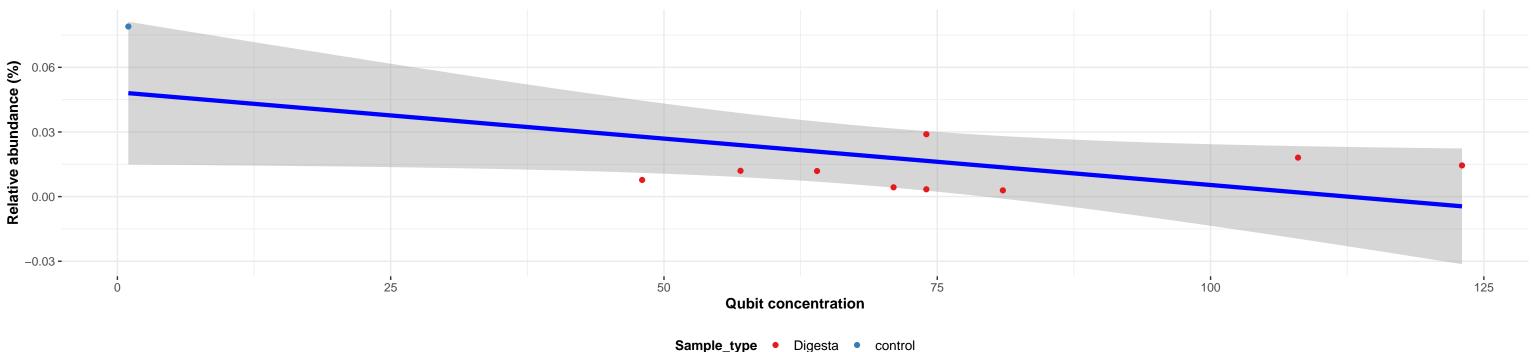
# Bacteria; Proteobacteria; Alphaproteobacteria; Rhodobacterales; Rhodobacteraceae; Octadecabacter; NA



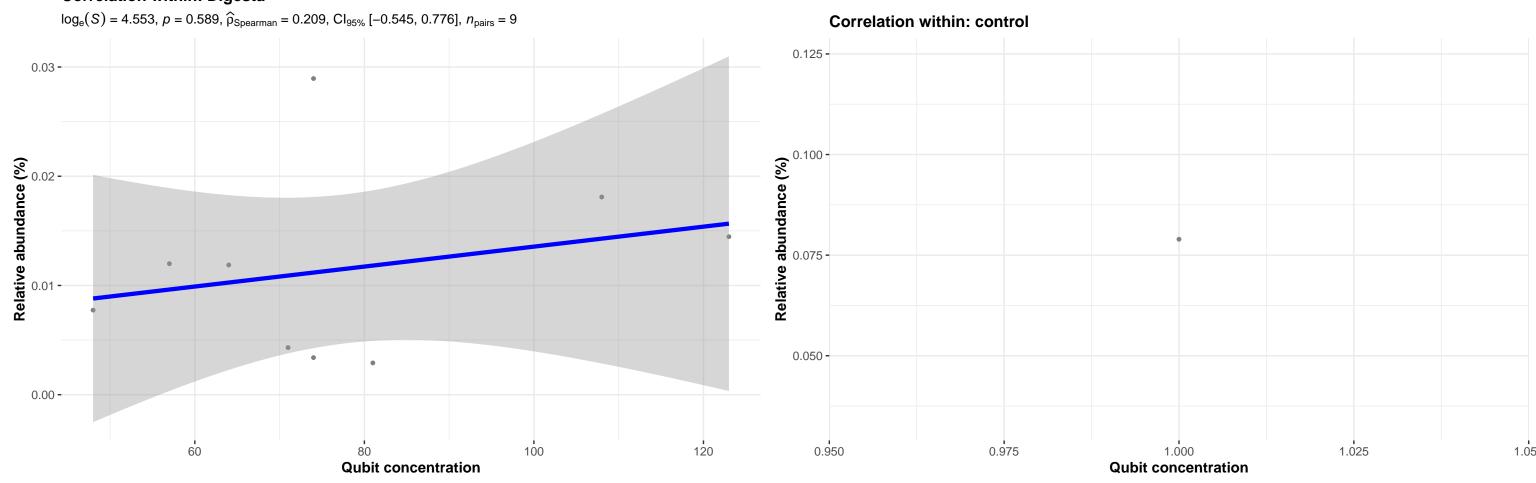
# Bacteria; Firmicutes; Bacilli; Bacillales; Planococcaceae; Chungangia; NA

## Correlation with all samples



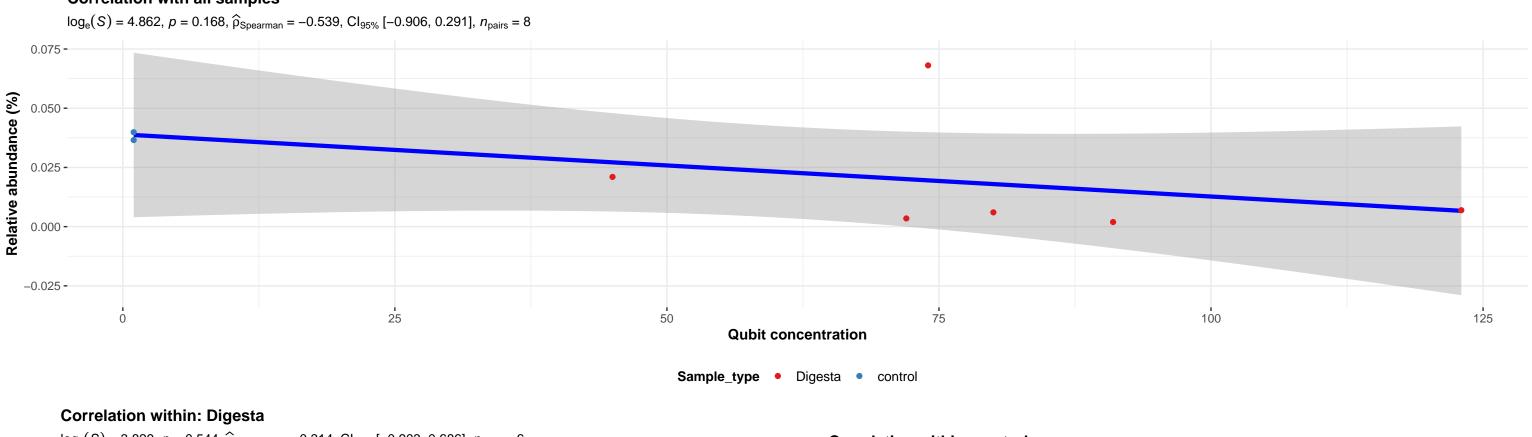


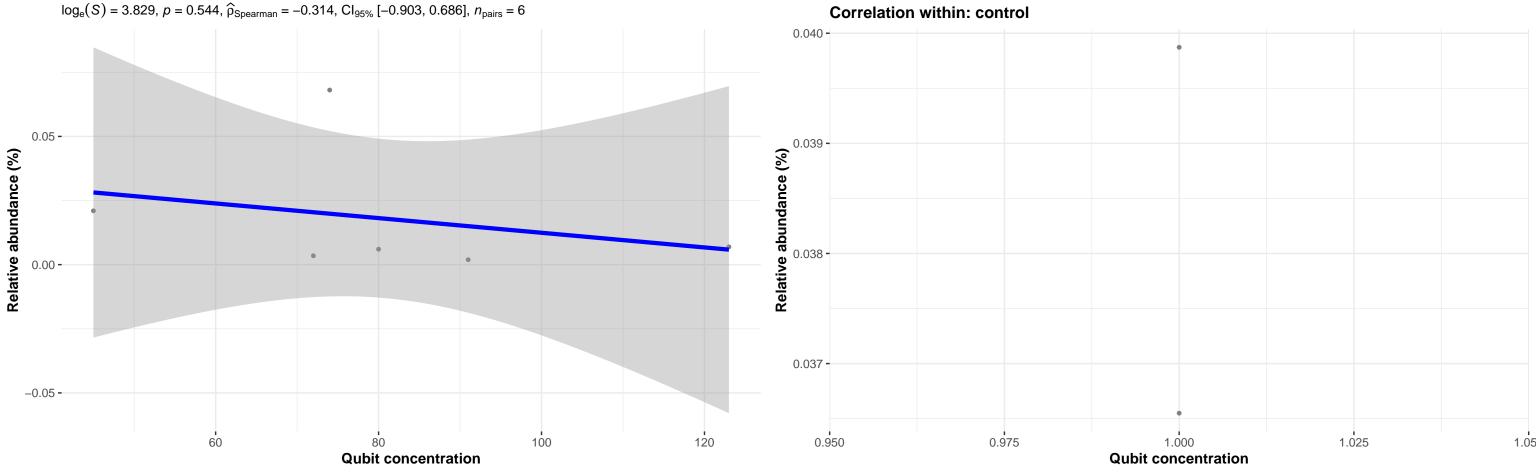
## Correlation within: Digesta



## Bacteria; Verrucomicrobiota; Verrucomicrobiae; Chthoniobacterales; Chthoniobacteraceae; Chthoniobacter; NA

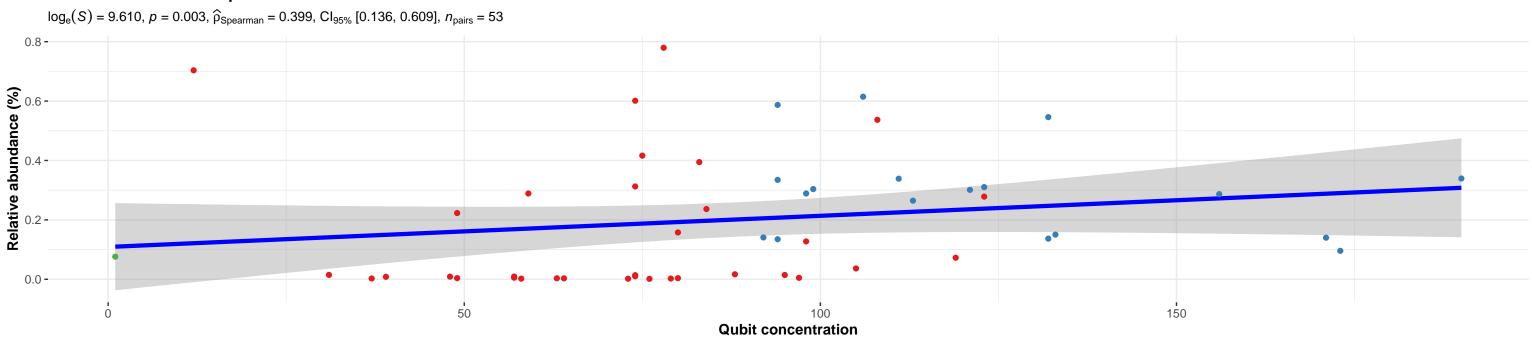






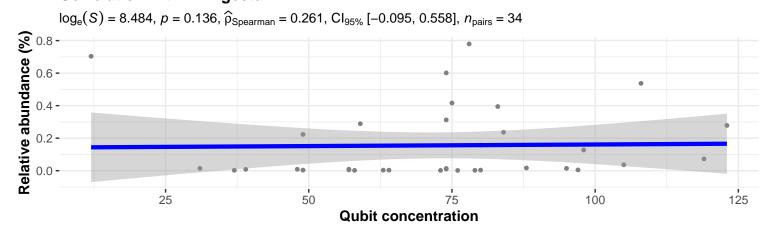
## Bacteria; Firmicutes; Bacilli; Lactobacillales; Lactobacillaceae; Lactobacillus; NA



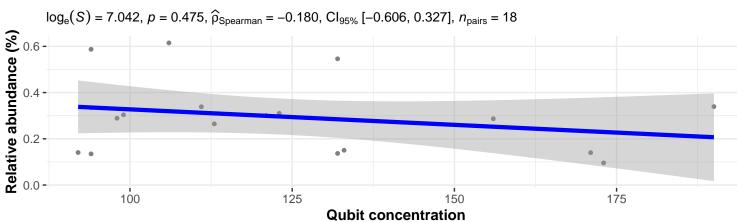


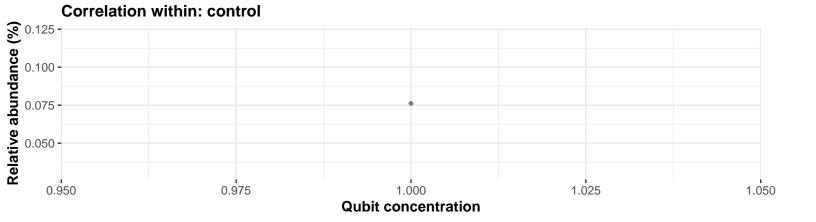
Sample\_type • Digesta • Feed • control

## **Correlation within: Digesta**



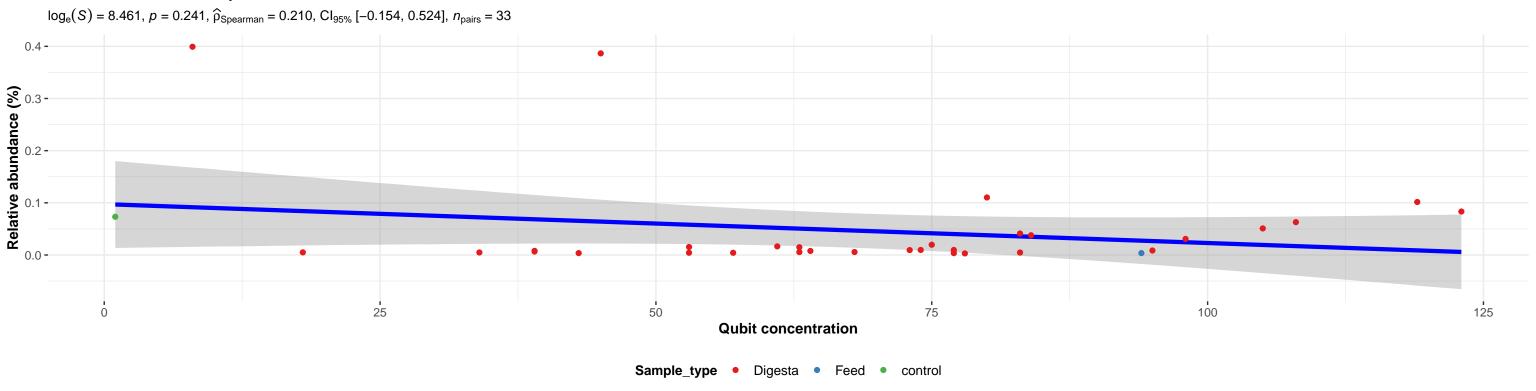
#### **Correlation within: Feed**



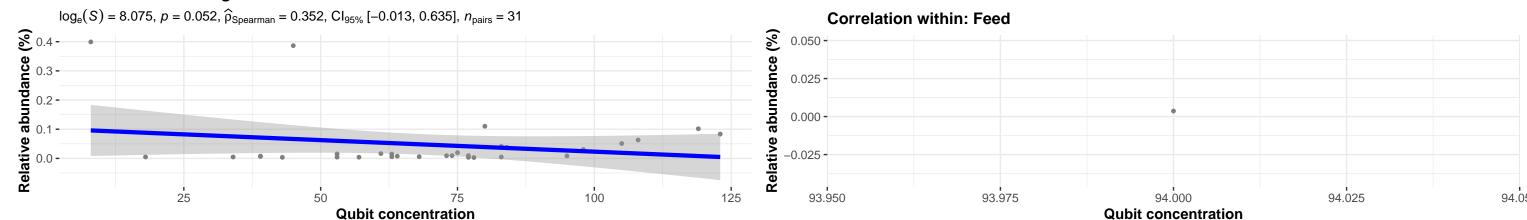


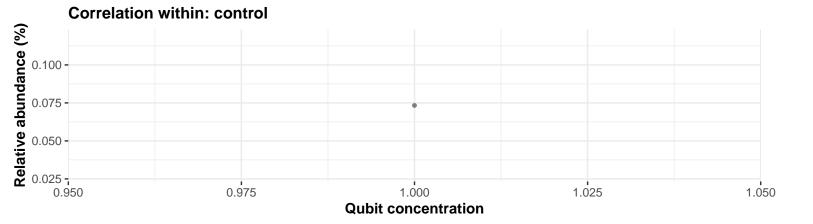
## Bacteria; Firmicutes; Clostridia; Peptostreptococcales-Tissierellales; Peptostreptococcaceae; Paraclostridium; NA



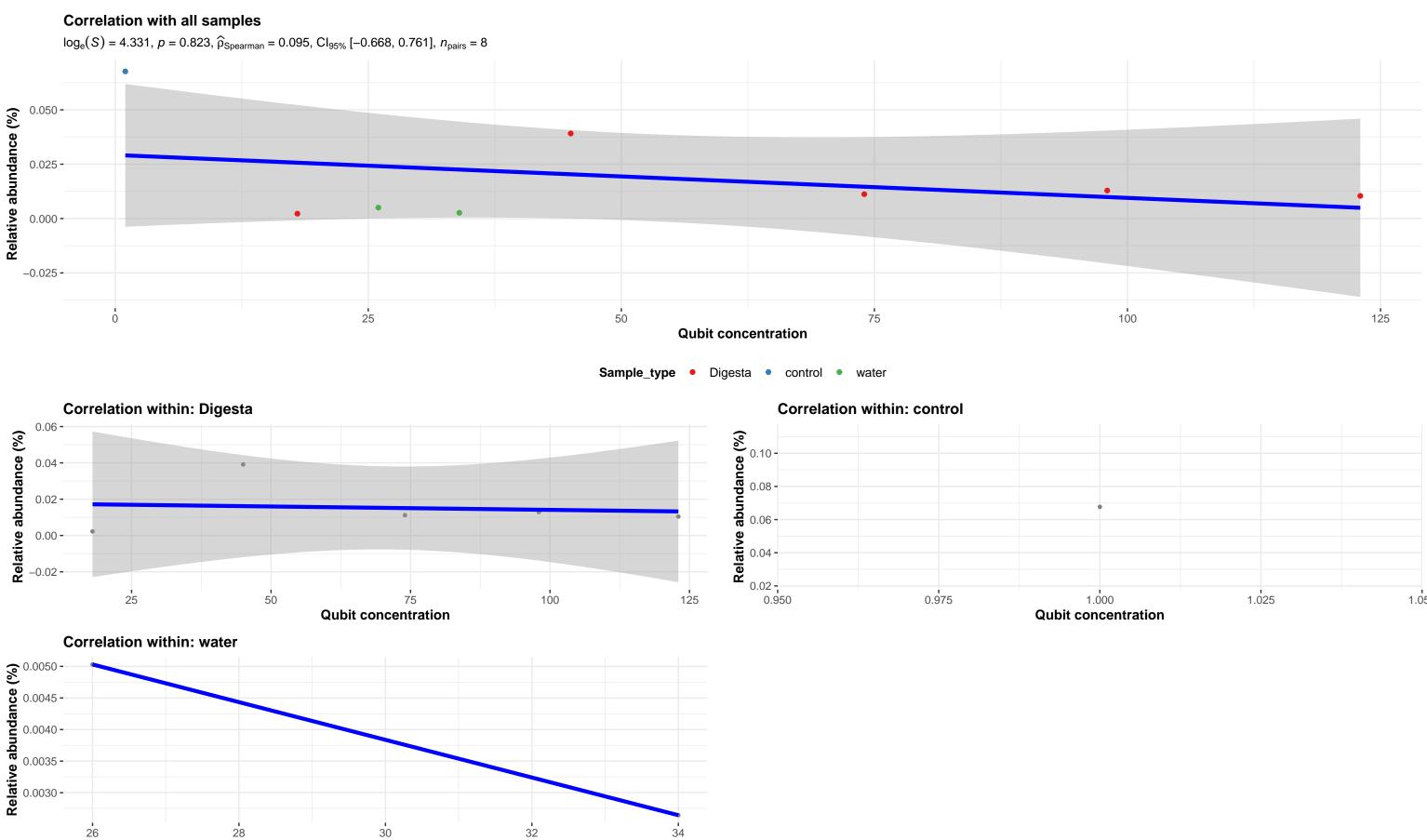


#### **Correlation within: Digesta**



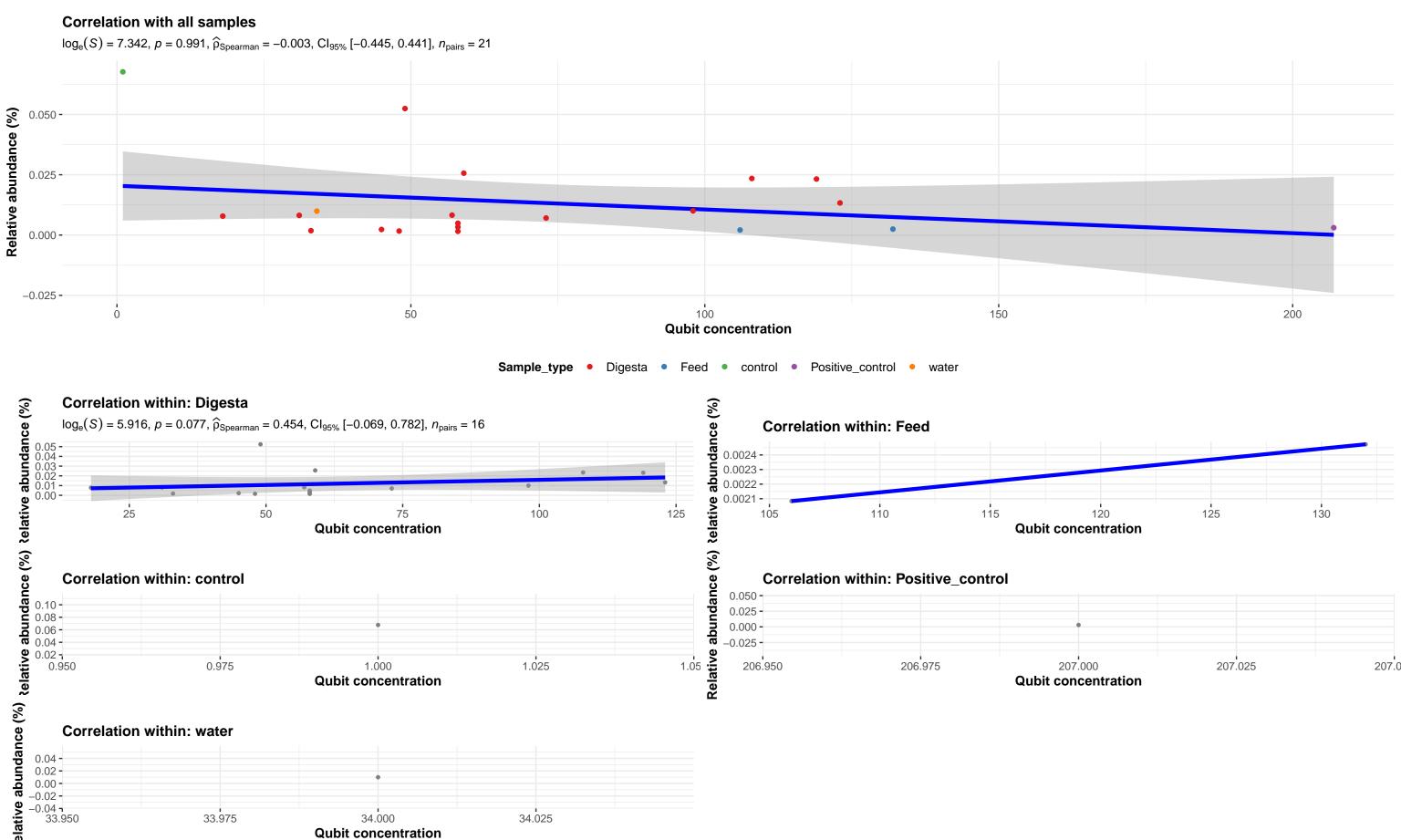


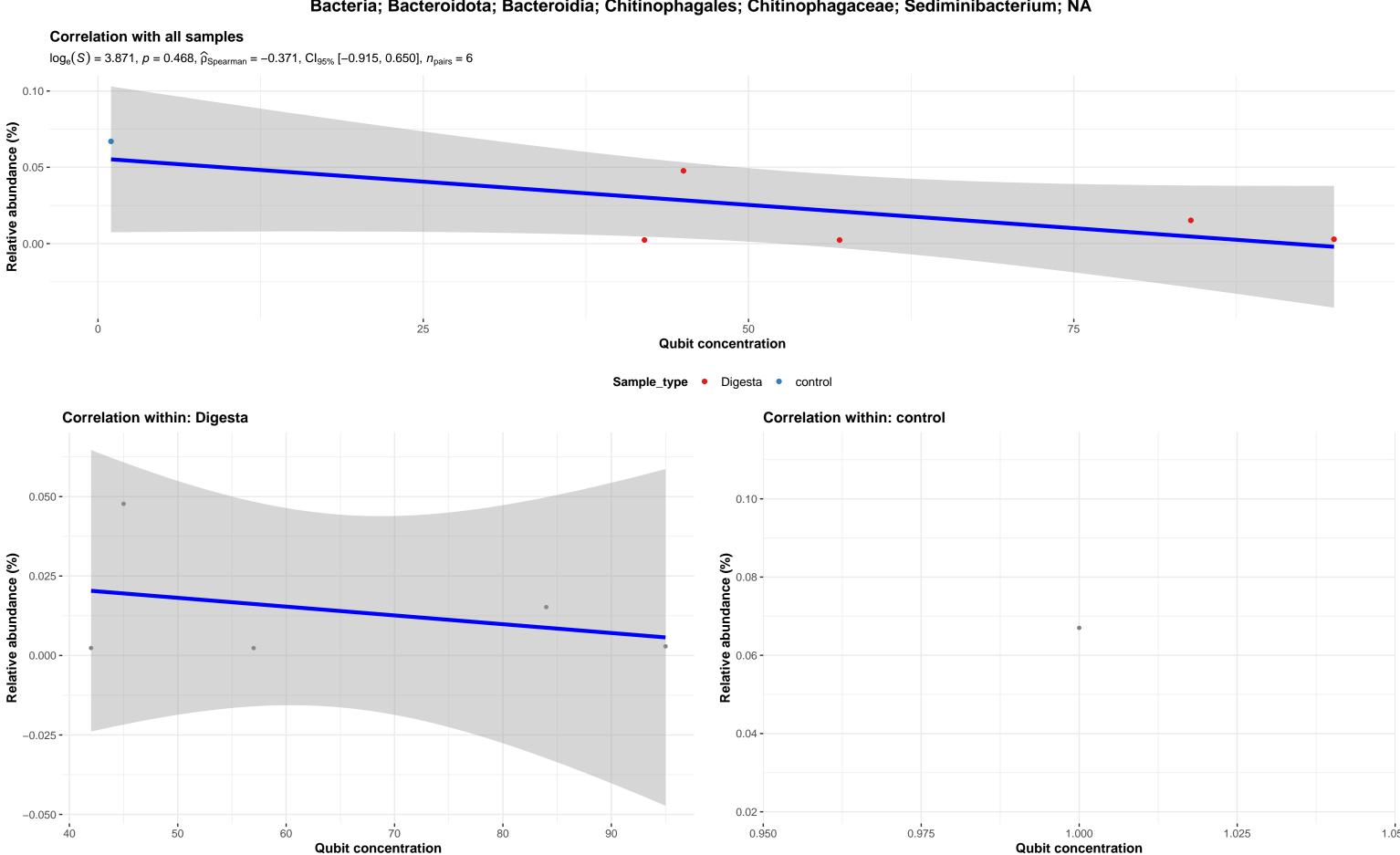
# Bacteria; Bacteroidota; Bacteroidia; Chitinophagales; Chitinophagaceae; Parasediminibacterium; NA



**Qubit concentration** 

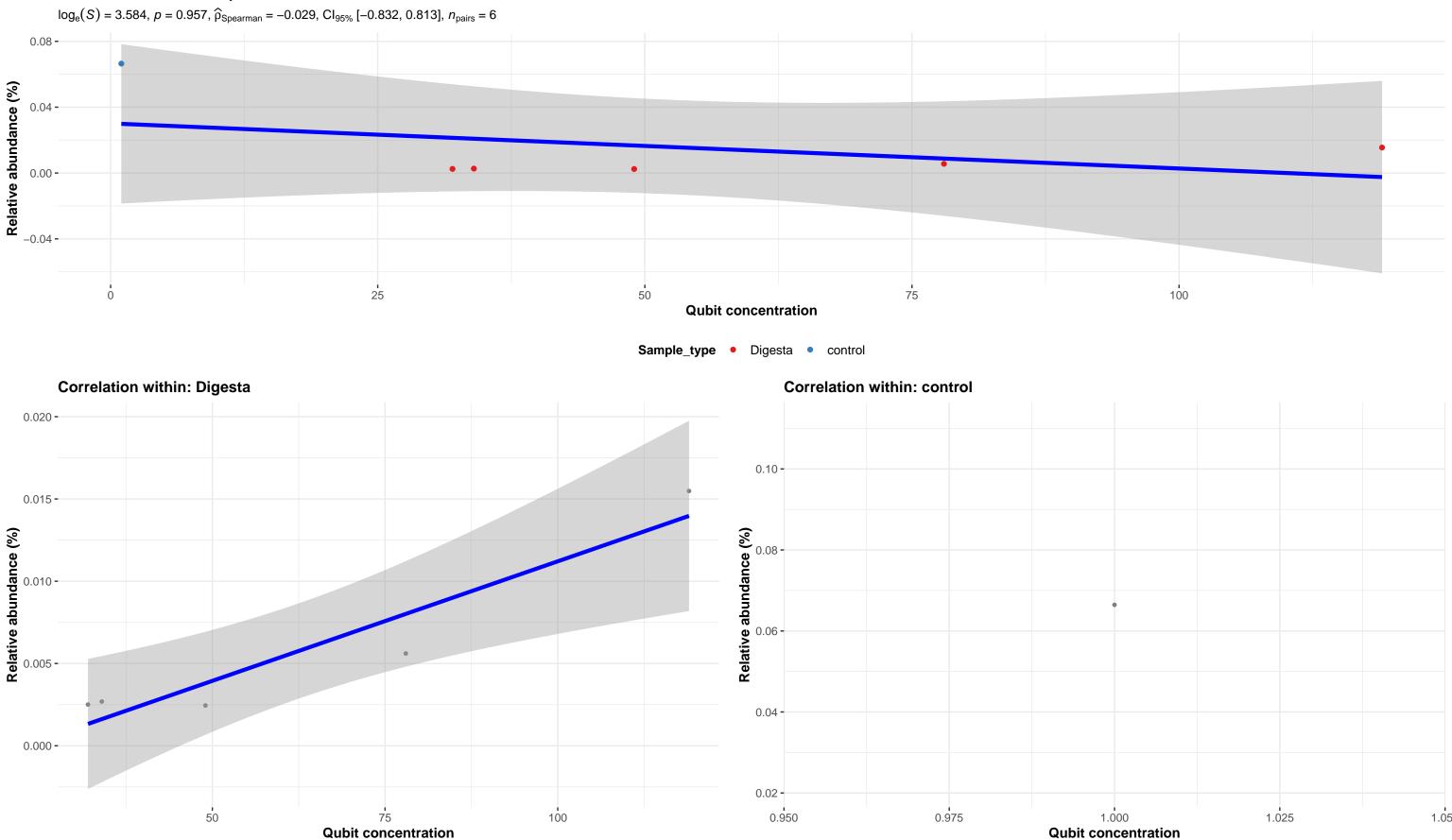
## Bacteria; Firmicutes; Bacilli; Paenibacillales; Paenibacillaceae; Paenibacillus; NA



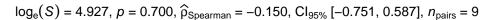


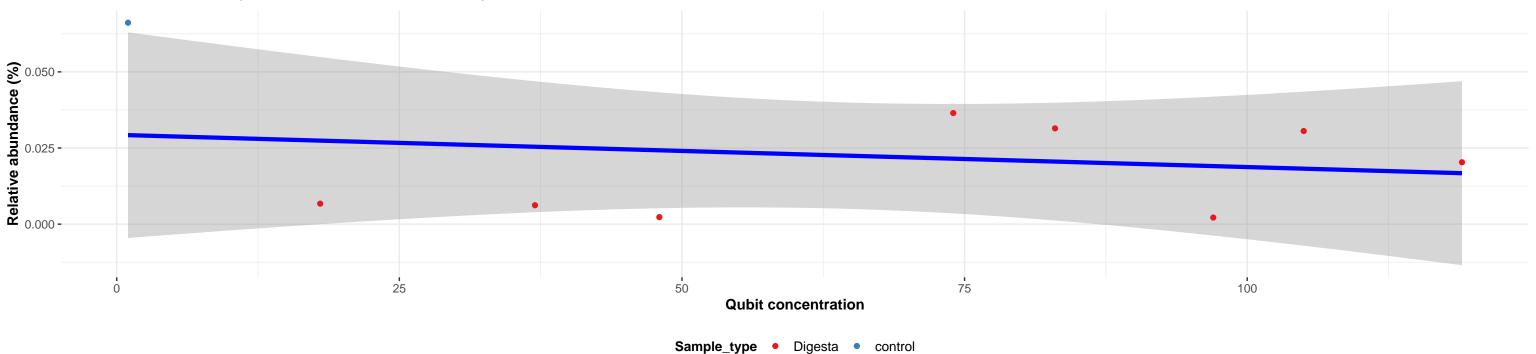
# Bacteria; Bacteroidota; Bacteroidia; Cytophagales; Spirosomaceae; Rudanella; NA



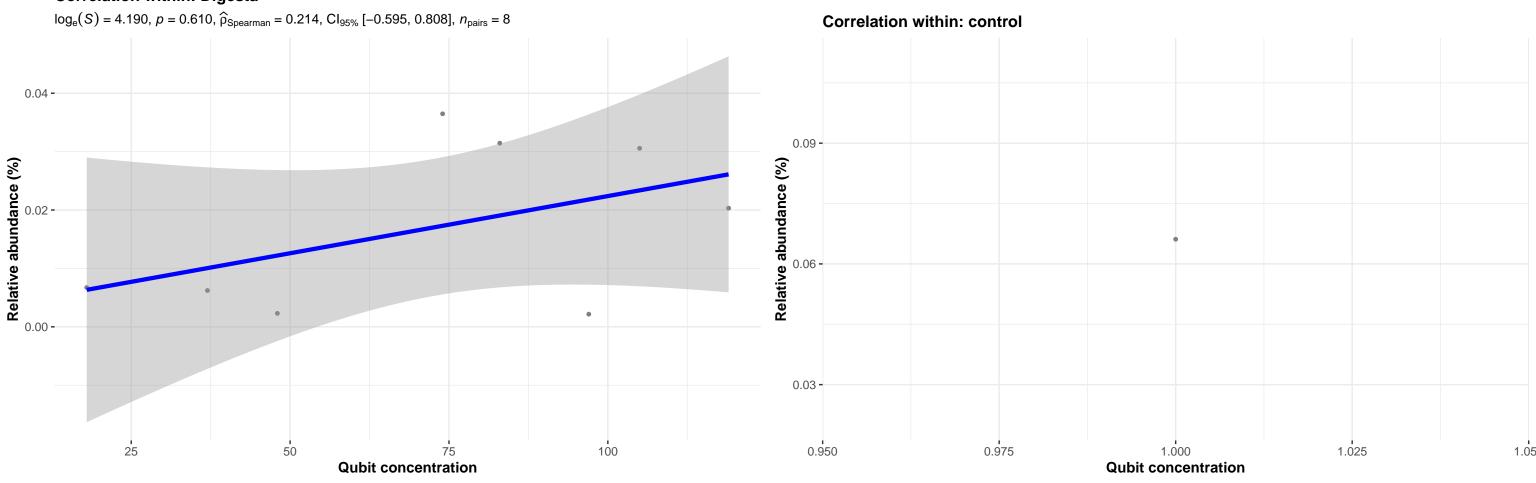


## **Correlation with all samples**





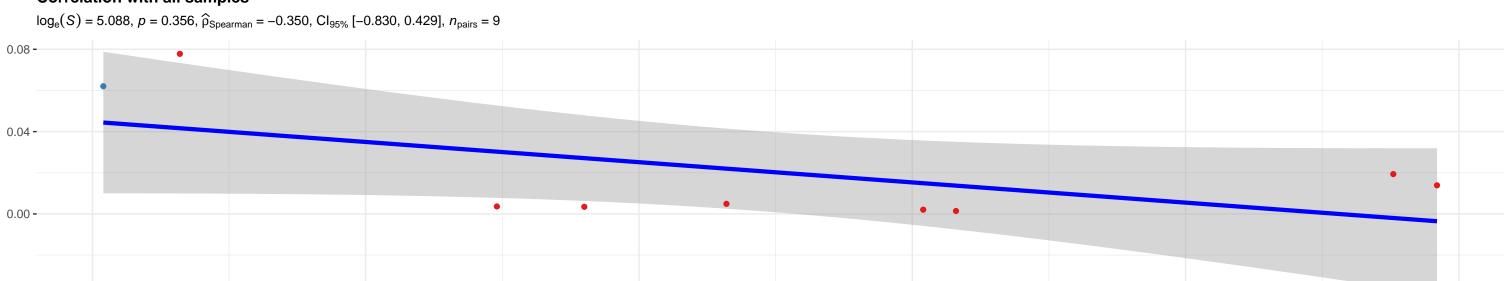
## **Correlation within: Digesta**





Relative abundance (%)

-0.04 **-**



**Qubit concentration** 

7<sub>5</sub>

50

125

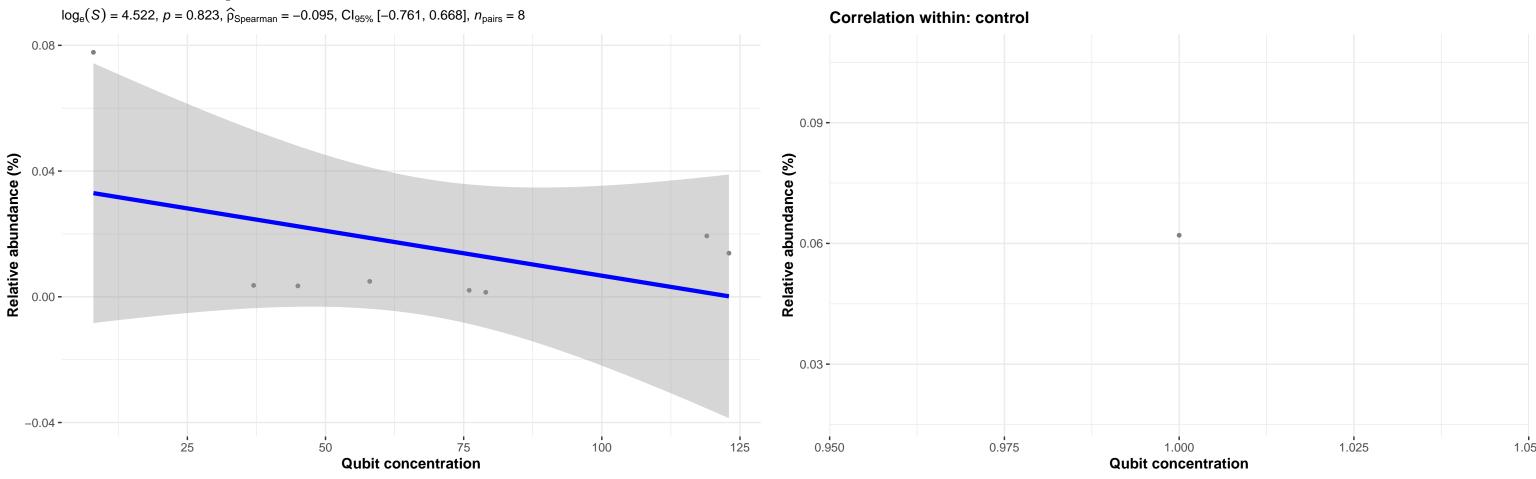
100



25

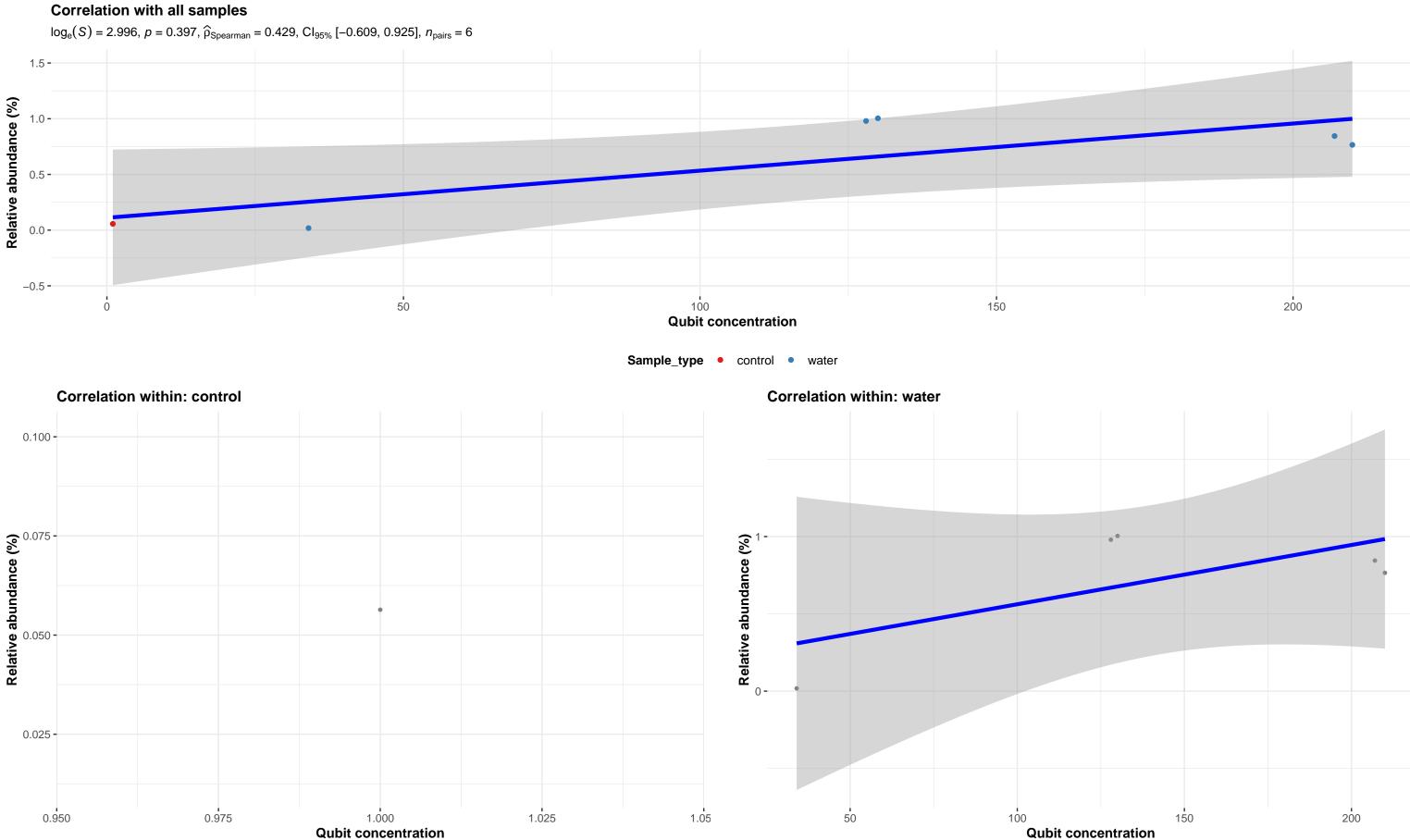


0

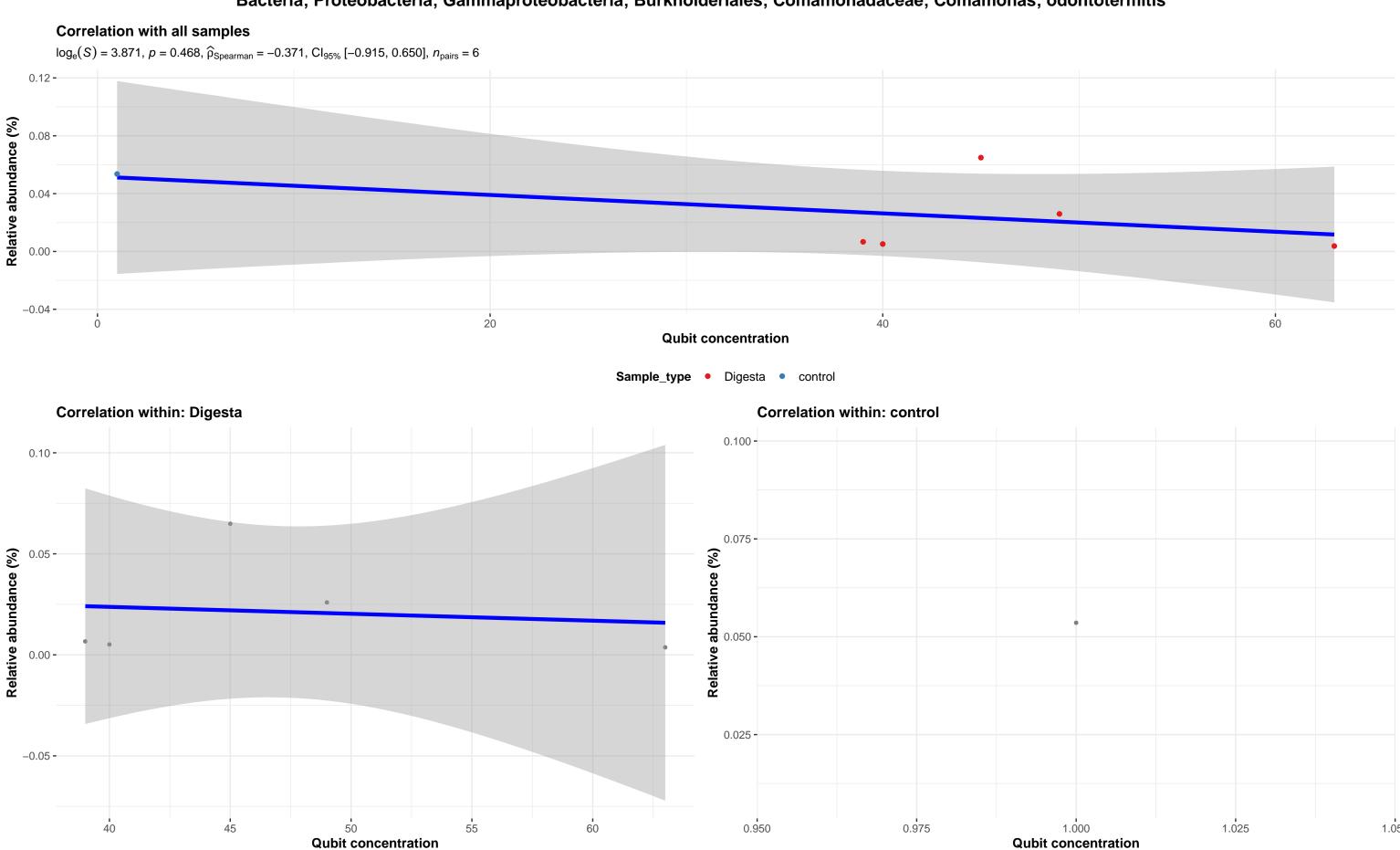


# Bacteria; Bacteroidota; Bacteroidia; Chitinophagales; Saprospiraceae; Lewinella; NA



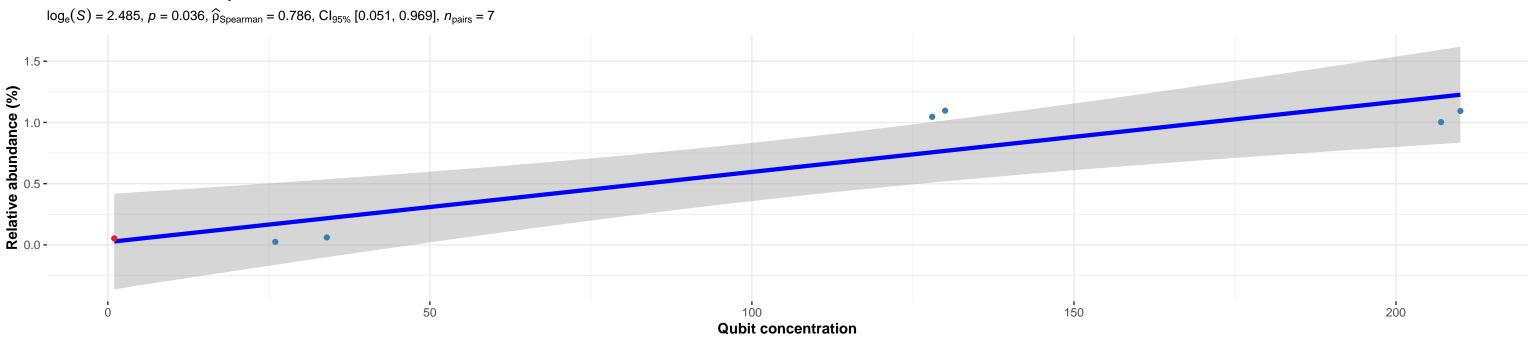


Bacteria; Proteobacteria; Gammaproteobacteria; Burkholderiales; Comamonadaceae; Comamonas; odontotermitis



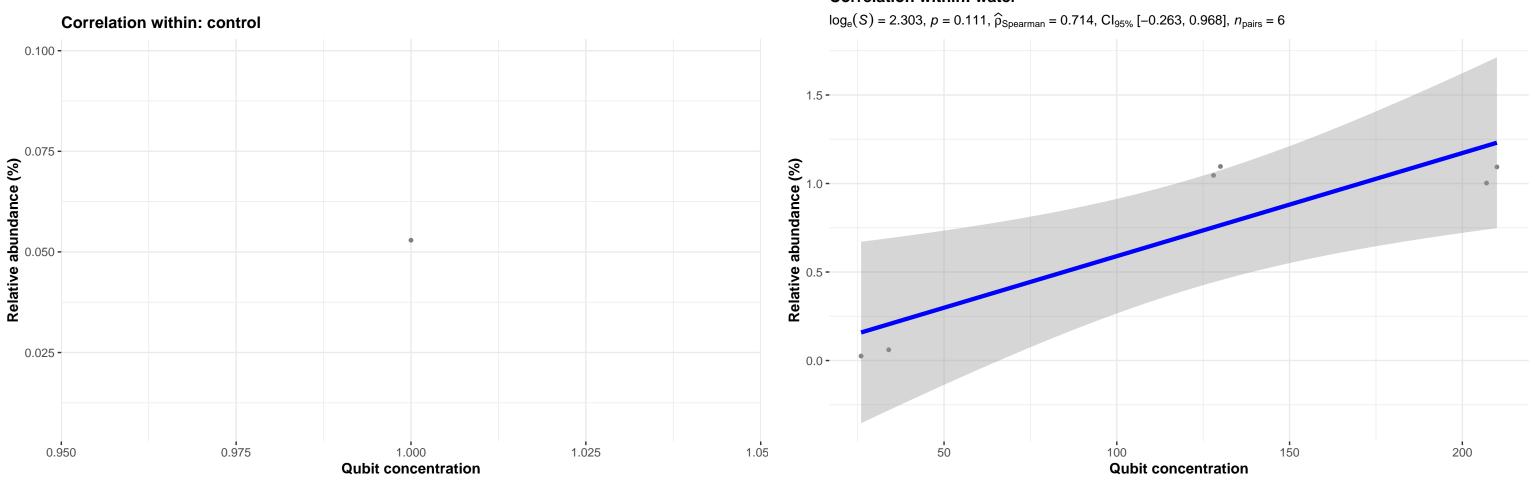
## Bacteria; Proteobacteria; Gammaproteobacteria; Enterobacterales; Colwelliaceae; Colwellia; NA



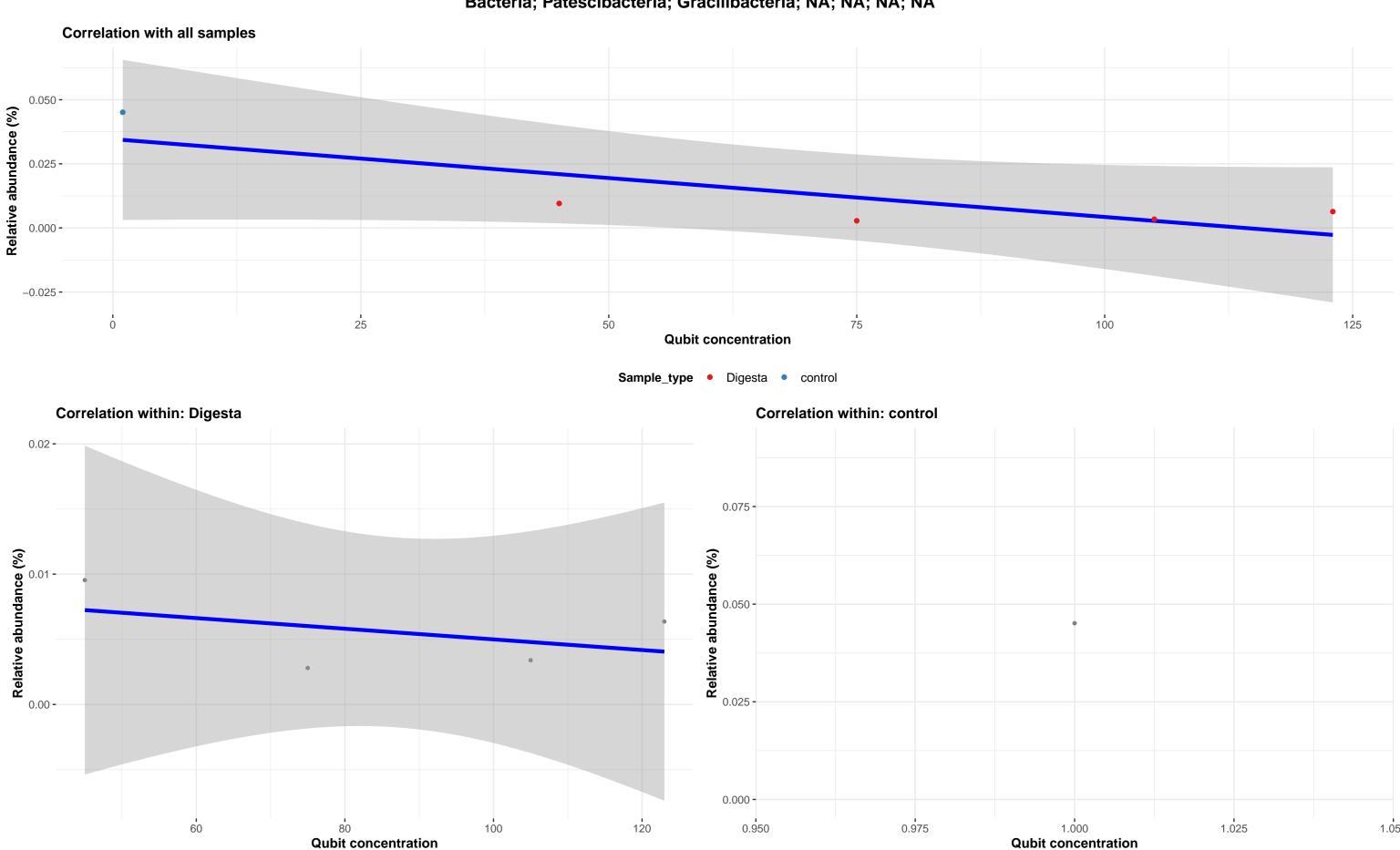


Sample\_type • control • water



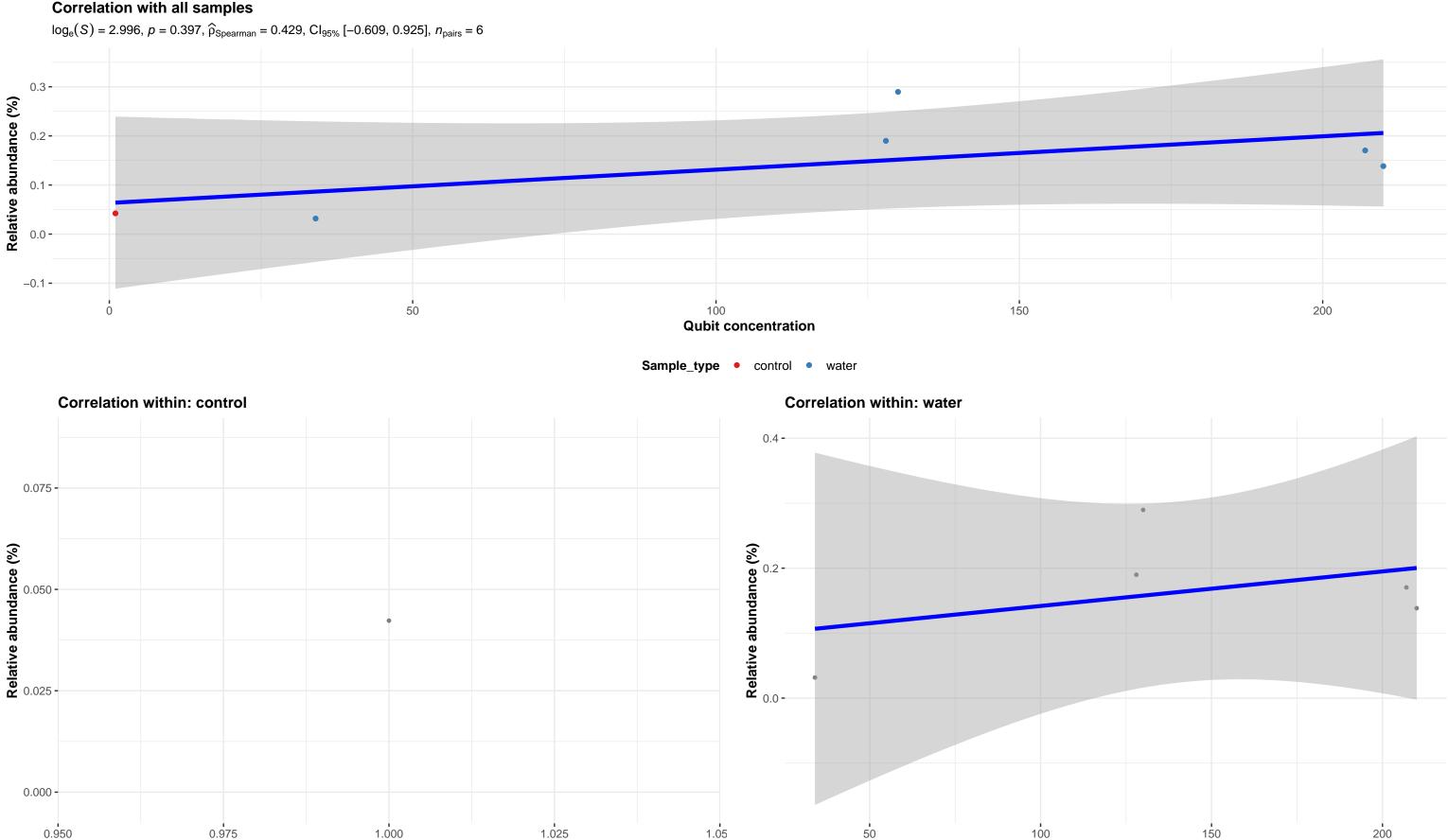


Bacteria; Patescibacteria; Gracilibacteria; NA; NA; NA; NA





0.950

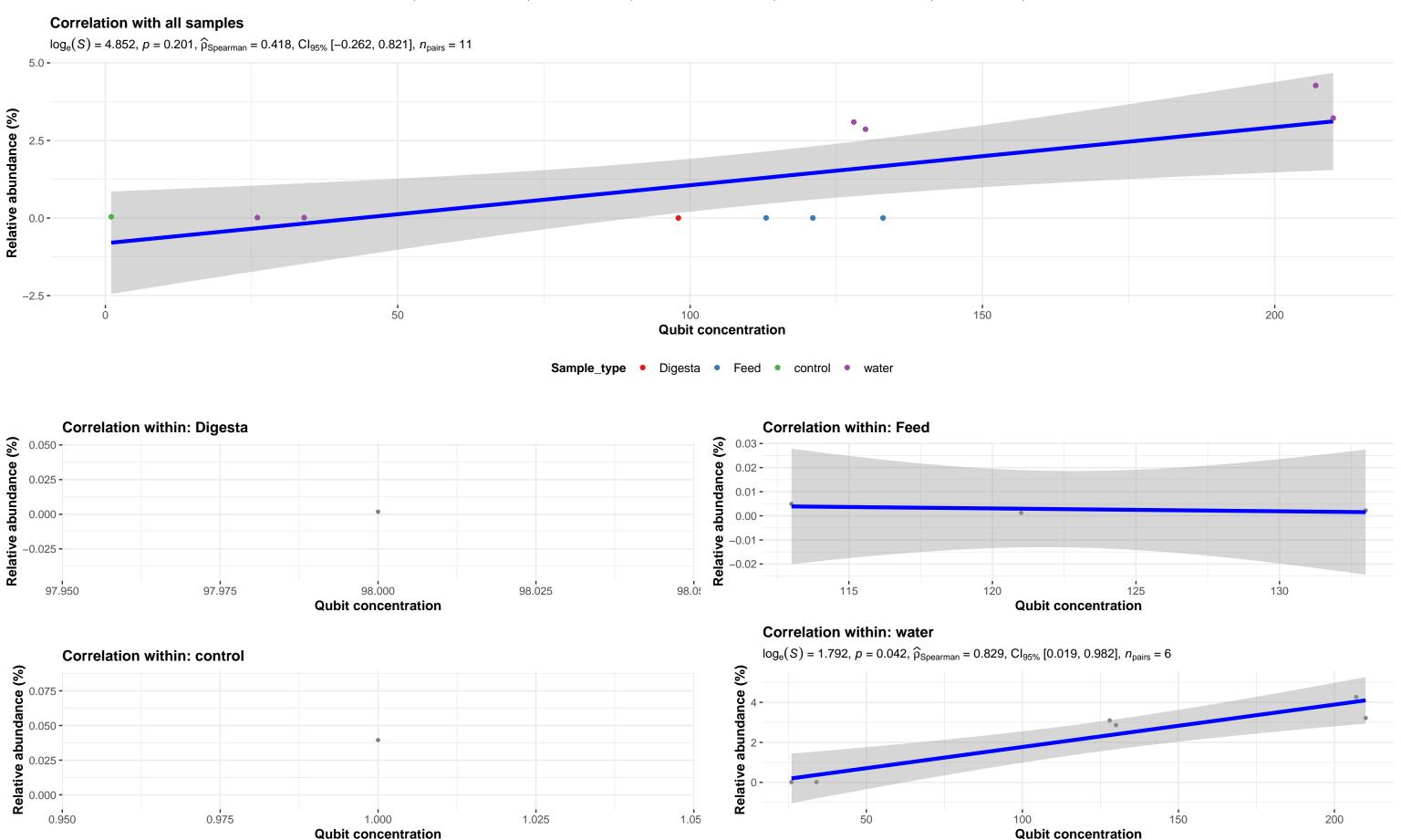


150

**Qubit concentration** 

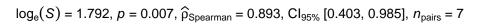
1.025

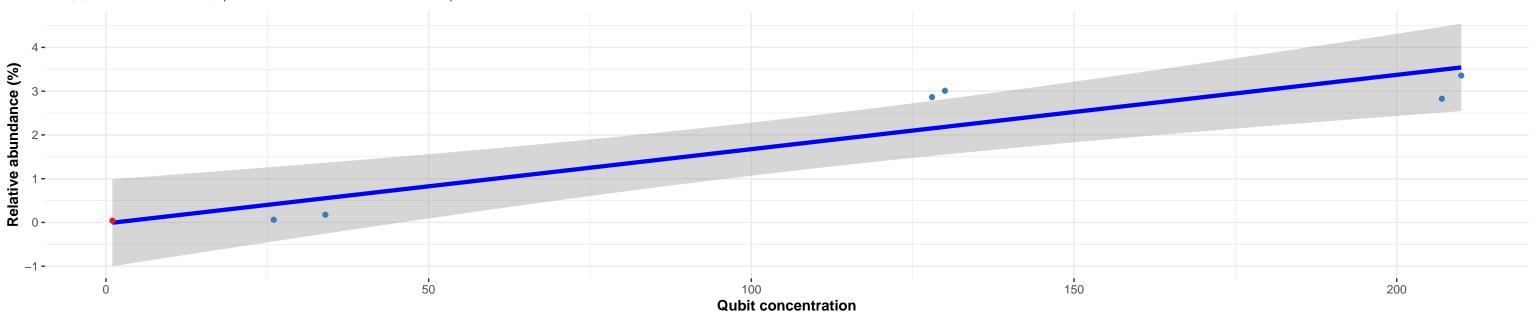
**Qubit concentration** 



# Bacteria; Proteobacteria; Gammaproteobacteria; Enterobacterales; Colwelliaceae; Colwellia; polaris

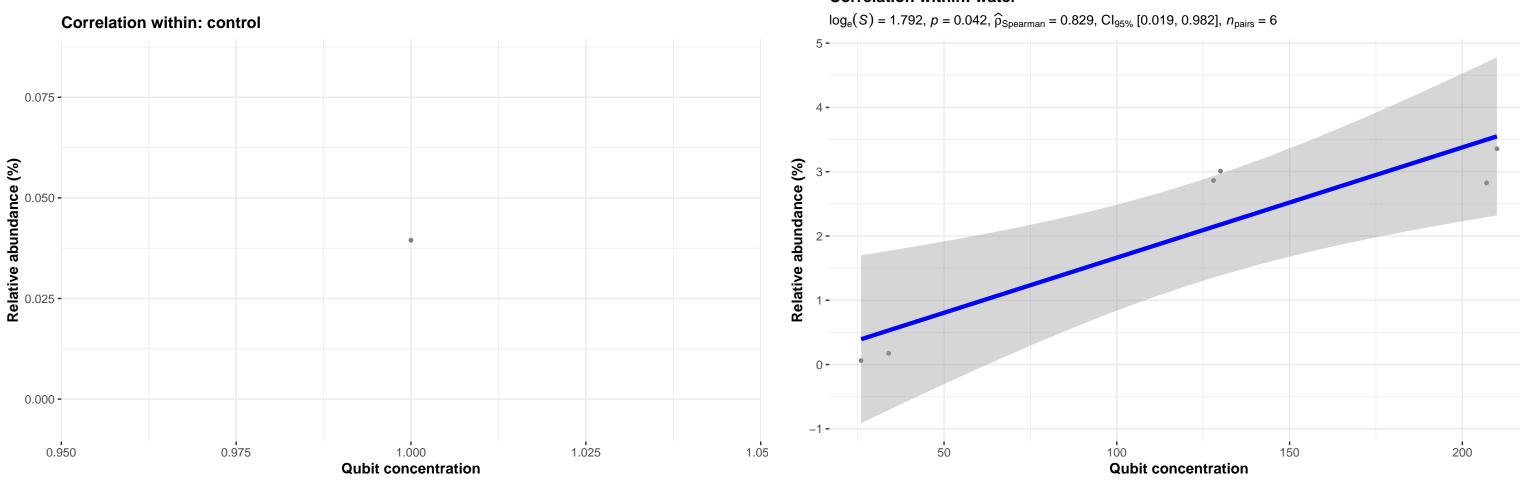




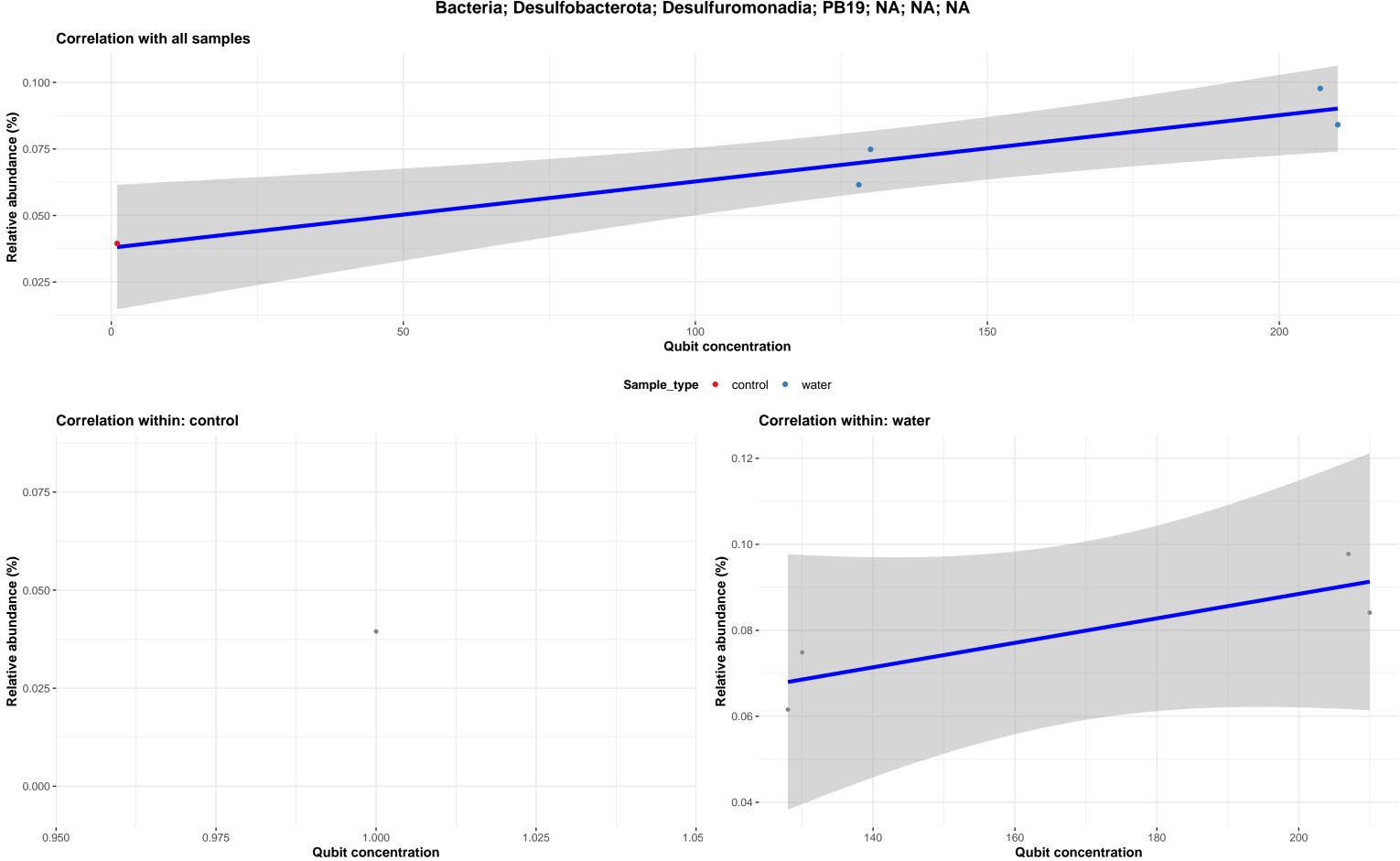


Sample\_type • control • water



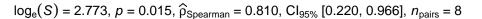


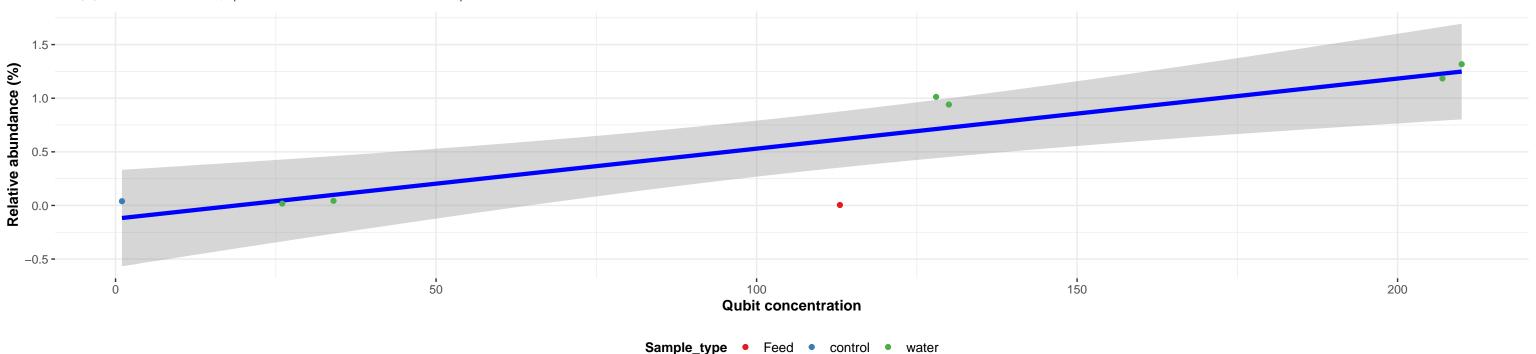
## Bacteria; Desulfobacterota; Desulfuromonadia; PB19; NA; NA; NA

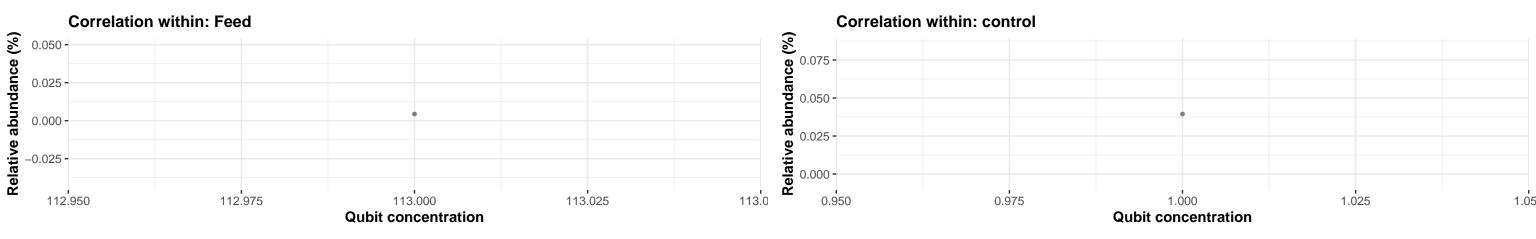


### Bacteria; Proteobacteria; Alphaproteobacteria; Rhodobacterales; Rhodobacteraceae; Yoonia-Loktanella; NA



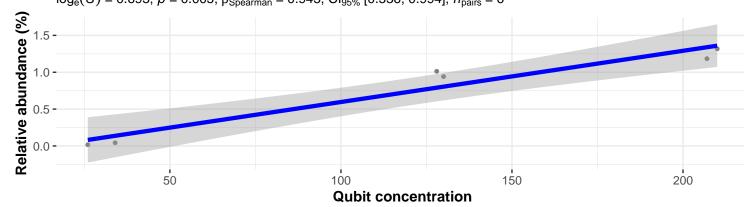


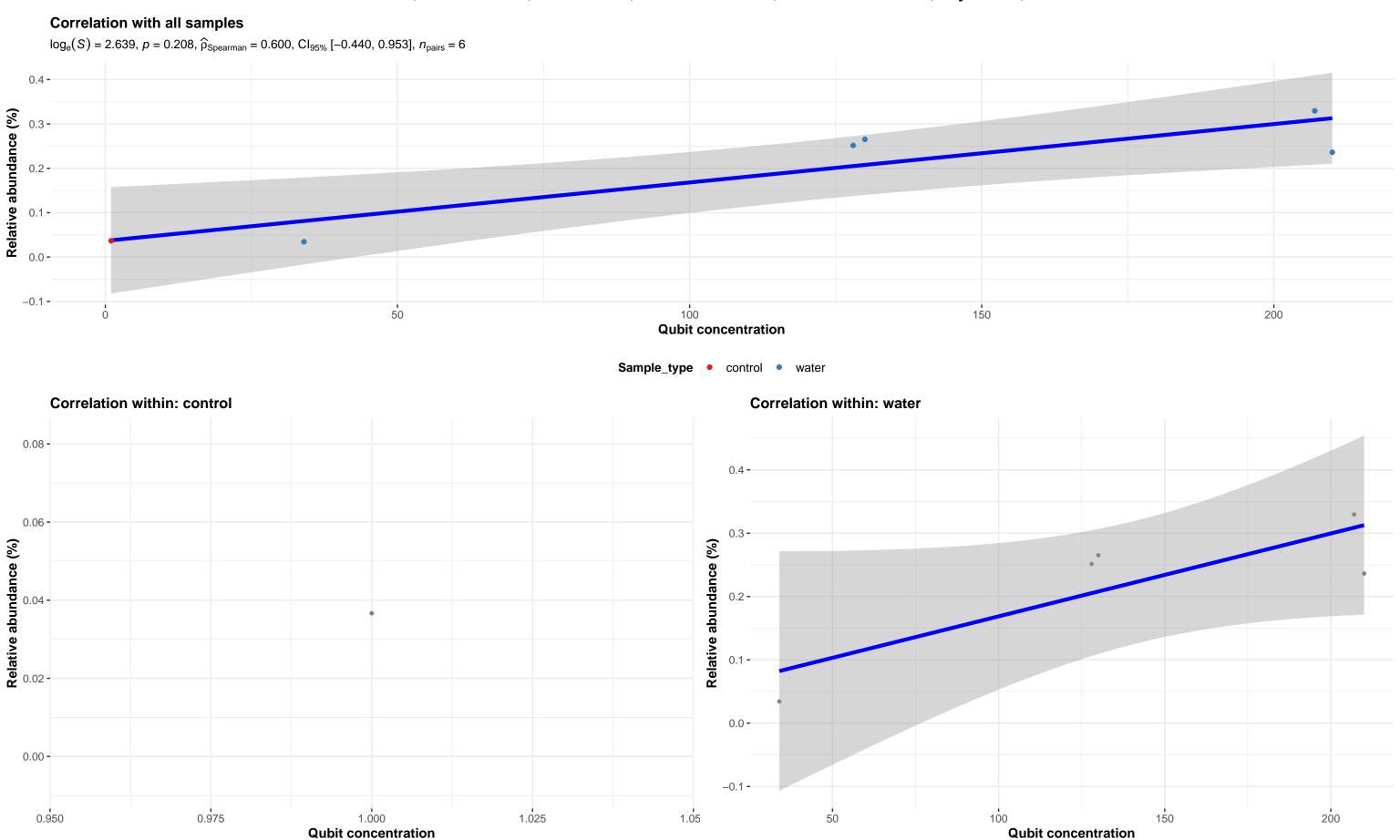




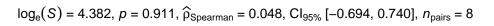
### **Correlation within: water**

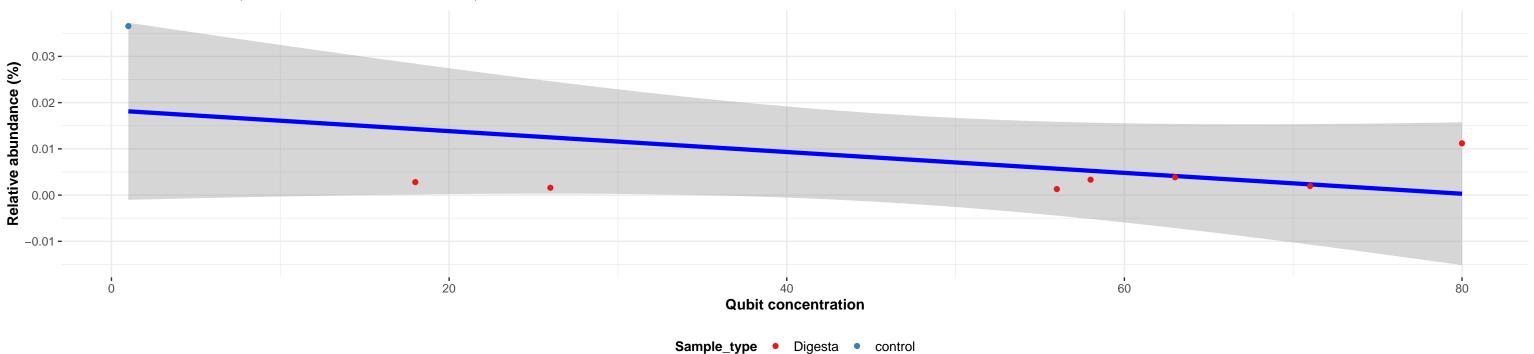
$$log_e(S) = 0.693, p = 0.005, \hat{\rho}_{Spearman} = 0.943, Cl_{95\%} [0.536, 0.994], n_{pairs} = 6$$



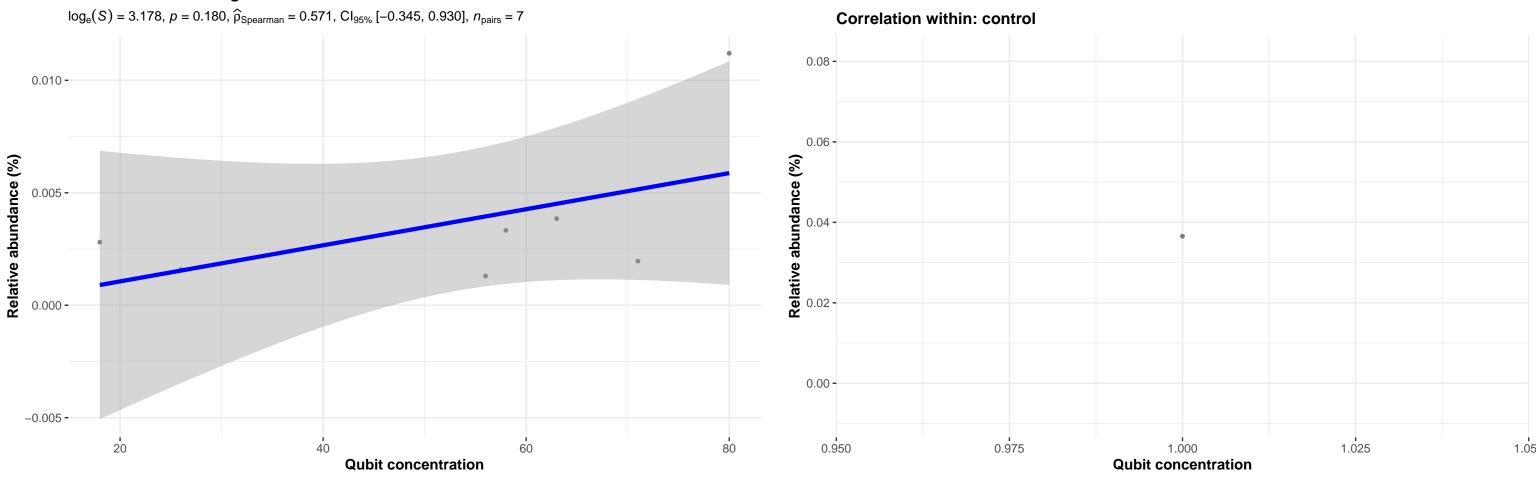


## Bacteria; Patescibacteria; Parcubacteria; Candidatus Kaiserbacteria; NA; NA; NA

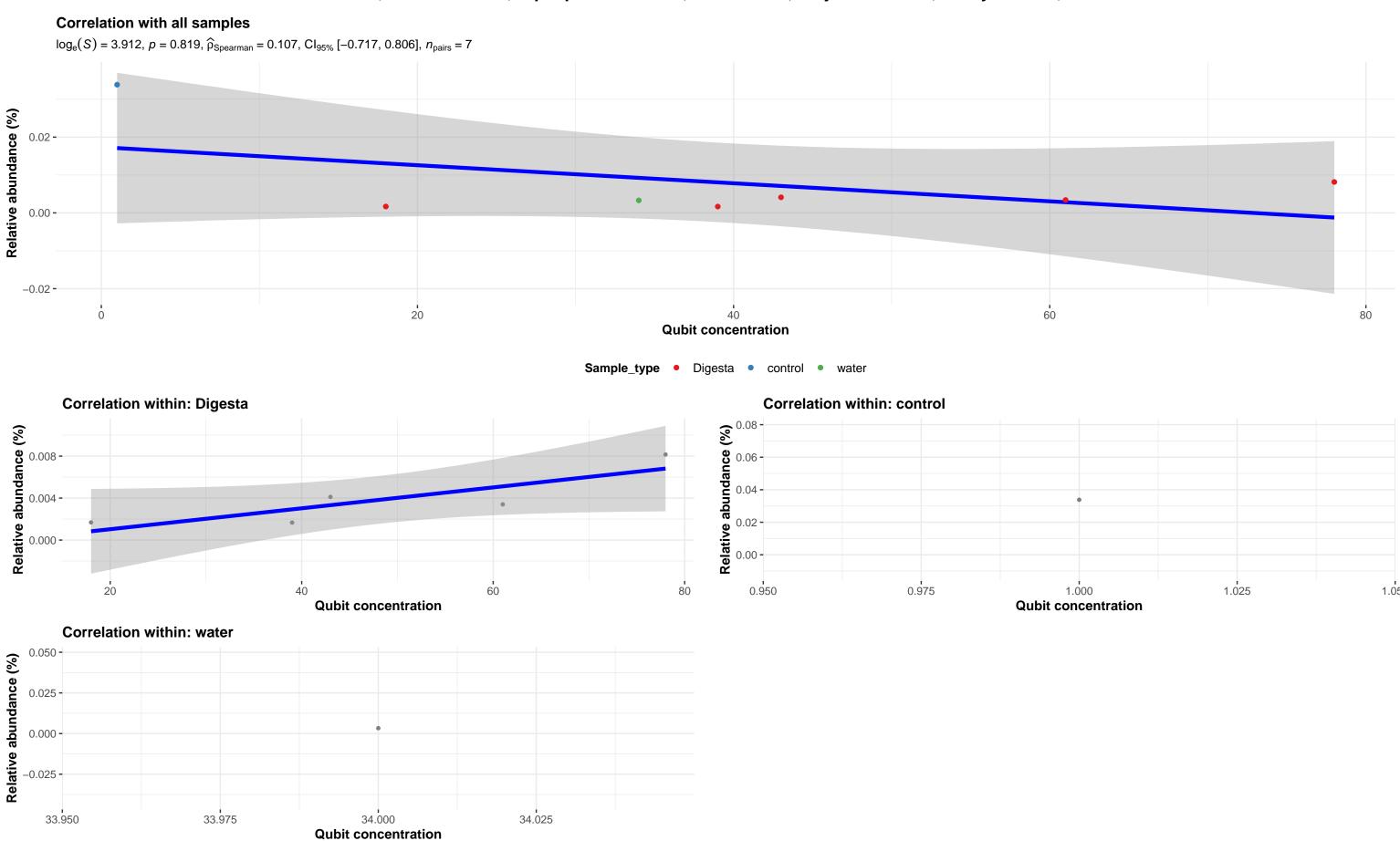






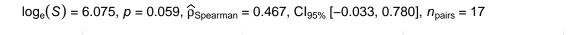


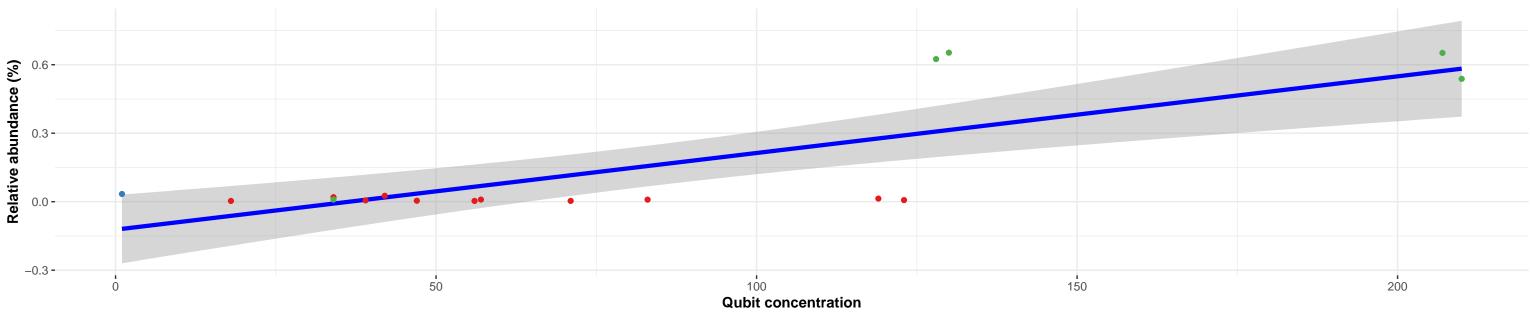
# Bacteria; Proteobacteria; Alphaproteobacteria; Rhizobiales; Beijerinckiaceae; Methylorosula; NA



## Bacteria; Proteobacteria; Alphaproteobacteria; Rhodobacterales; Rhodobacteraceae; NA; NA

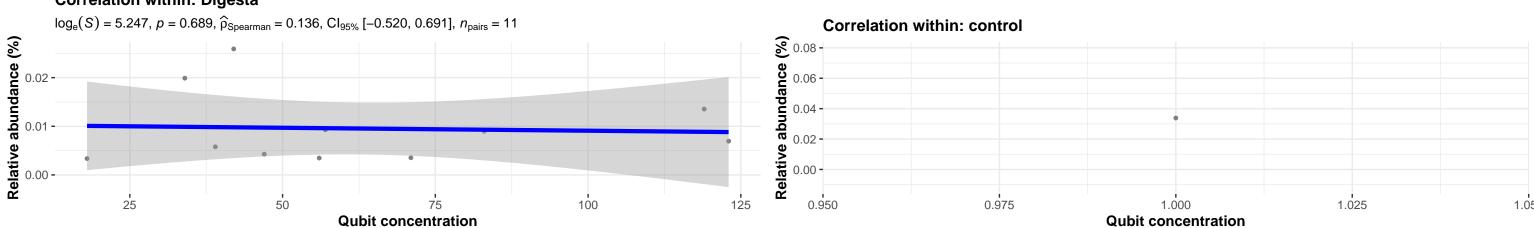


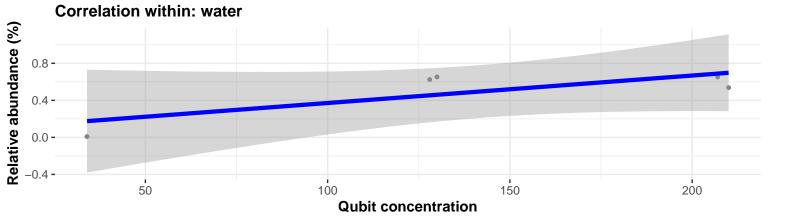






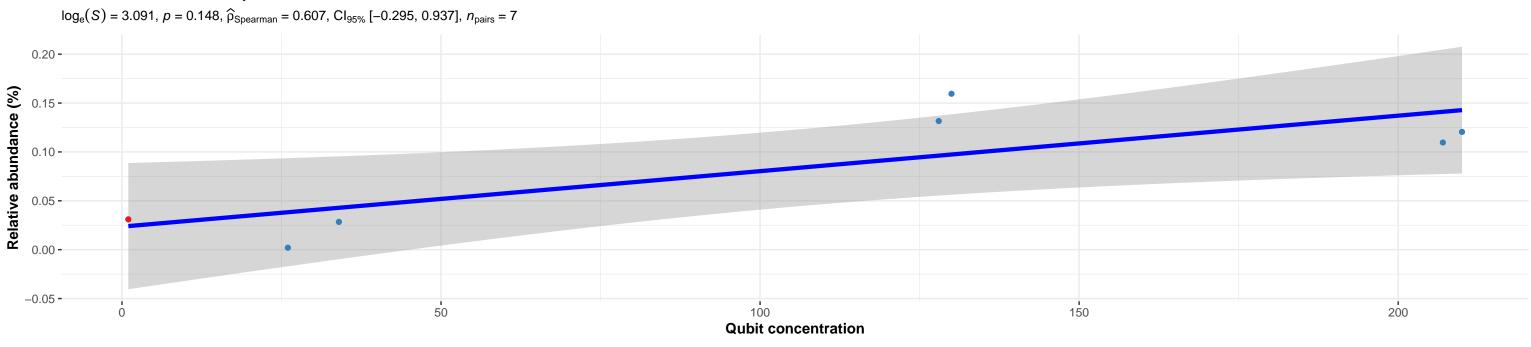
### **Correlation within: Digesta**

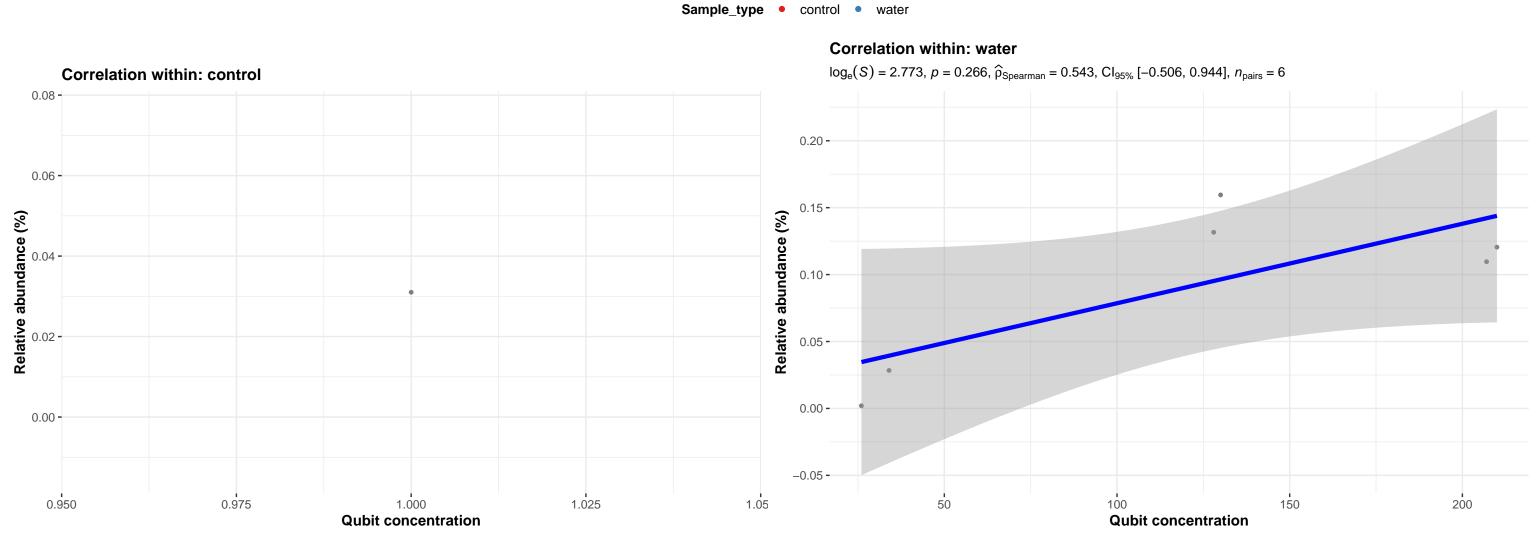




## Bacteria; Proteobacteria; Gammaproteobacteria; Enterobacterales; Colwelliaceae; Colwellia; NA

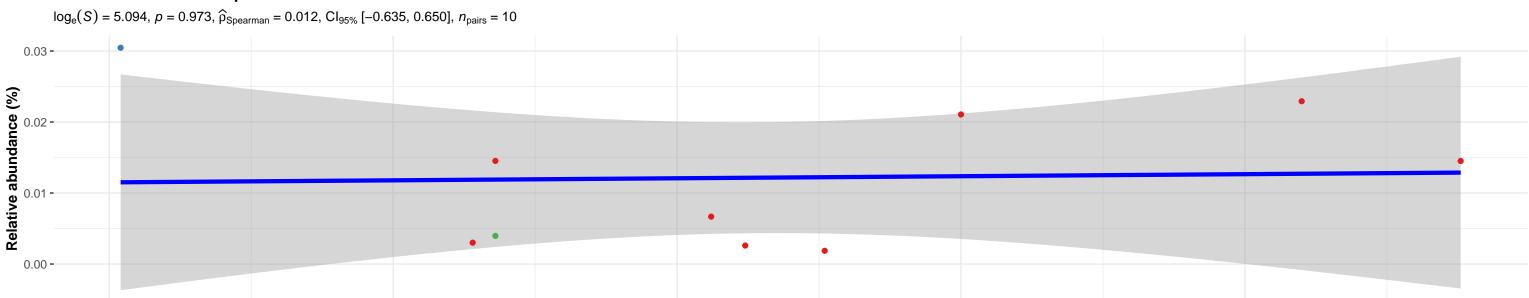






### Bacteria; Firmicutes; Clostridia; Peptostreptococcales-Tissierellales; Peptostreptococcaceae; Romboutsia; NA





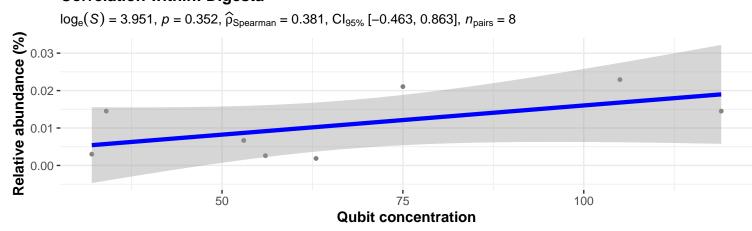


**Qubit concentration** 

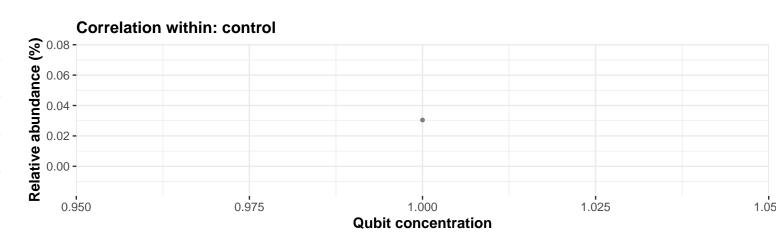
50

75

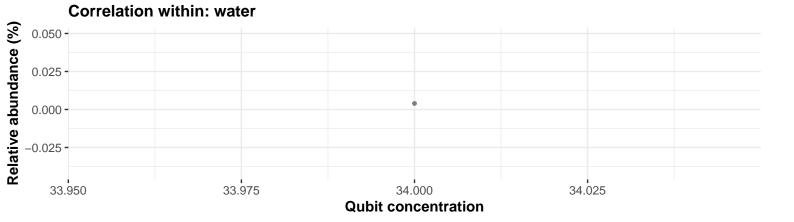
### **Correlation within: Digesta**



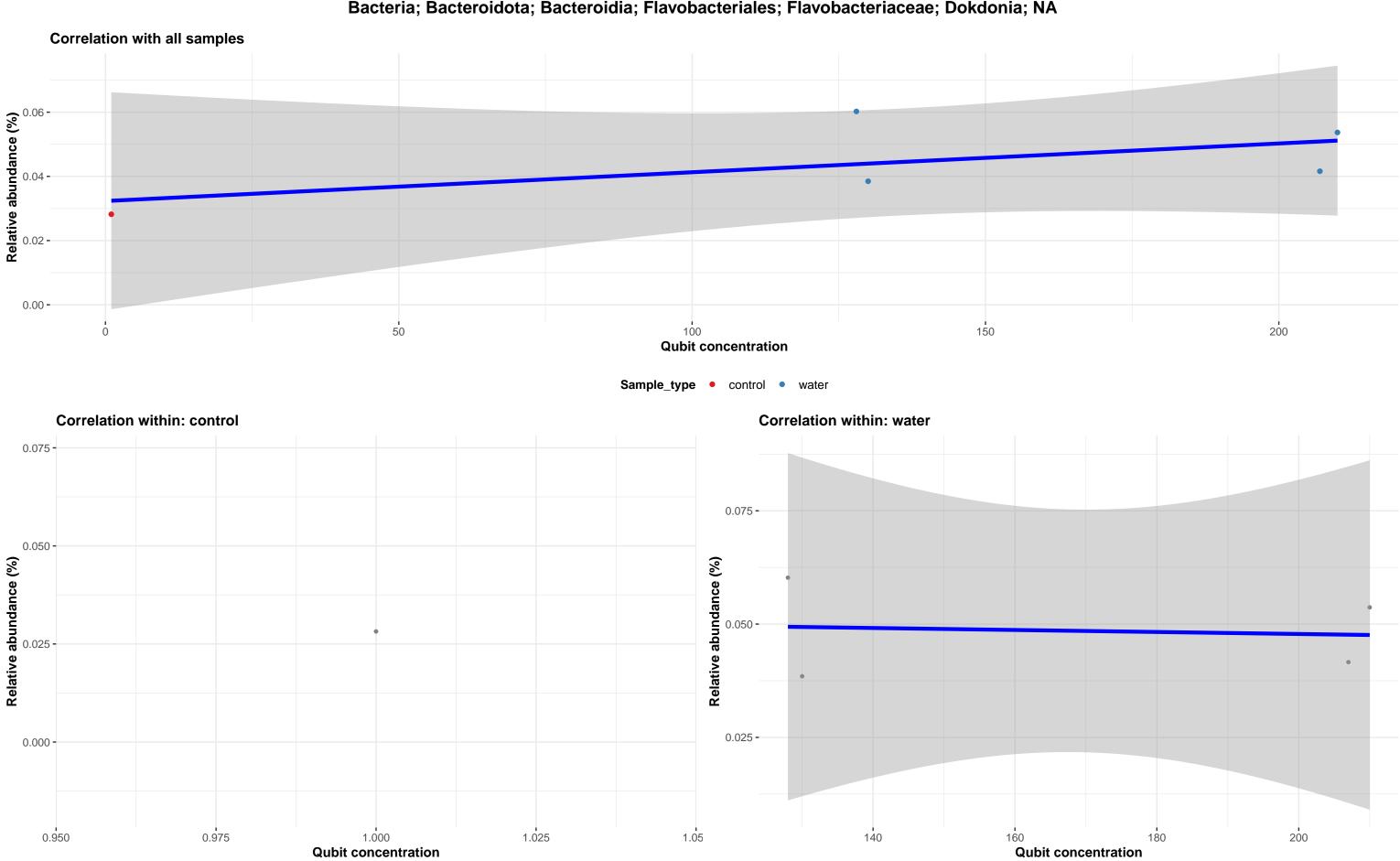
25



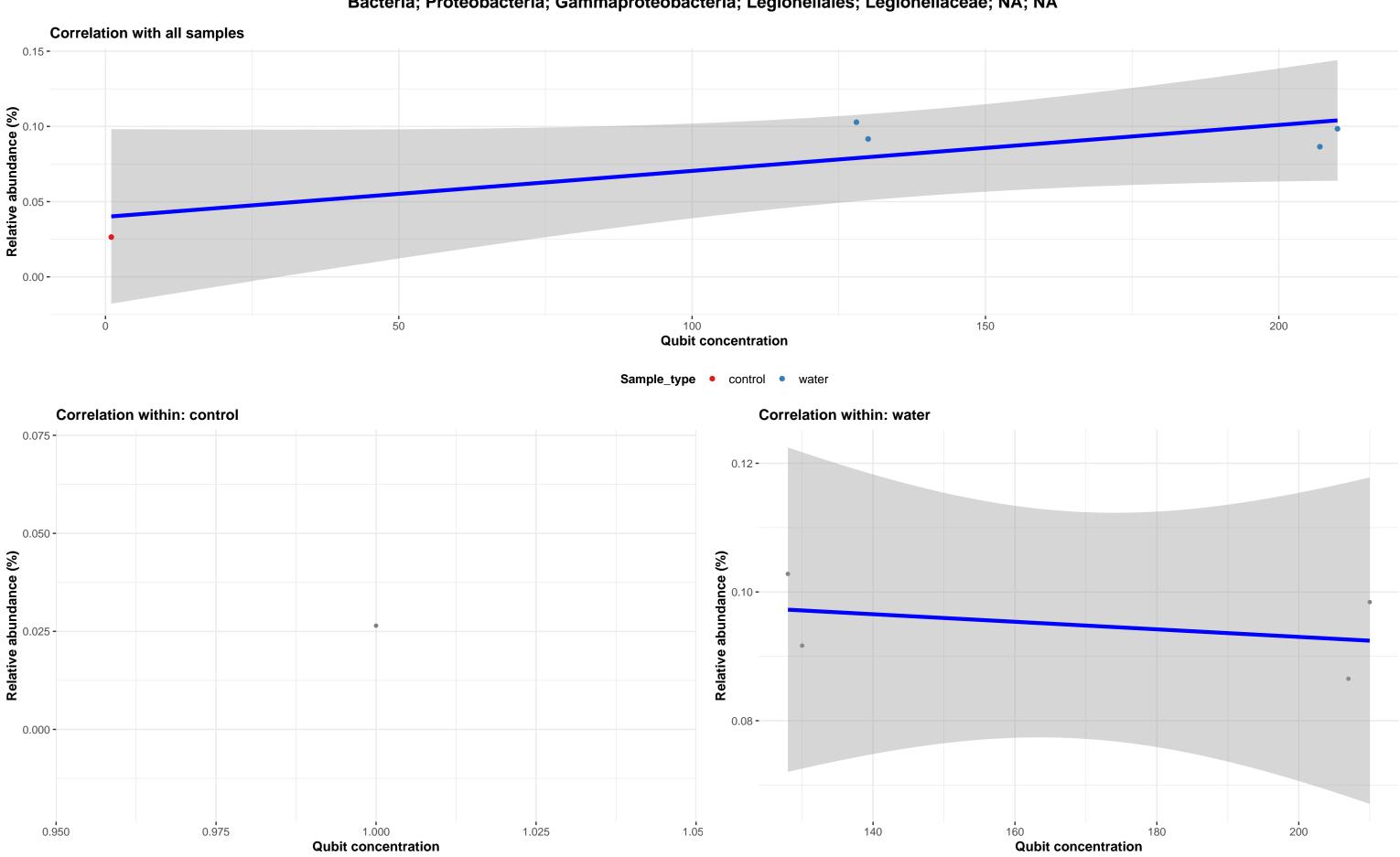
100

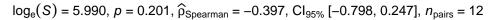


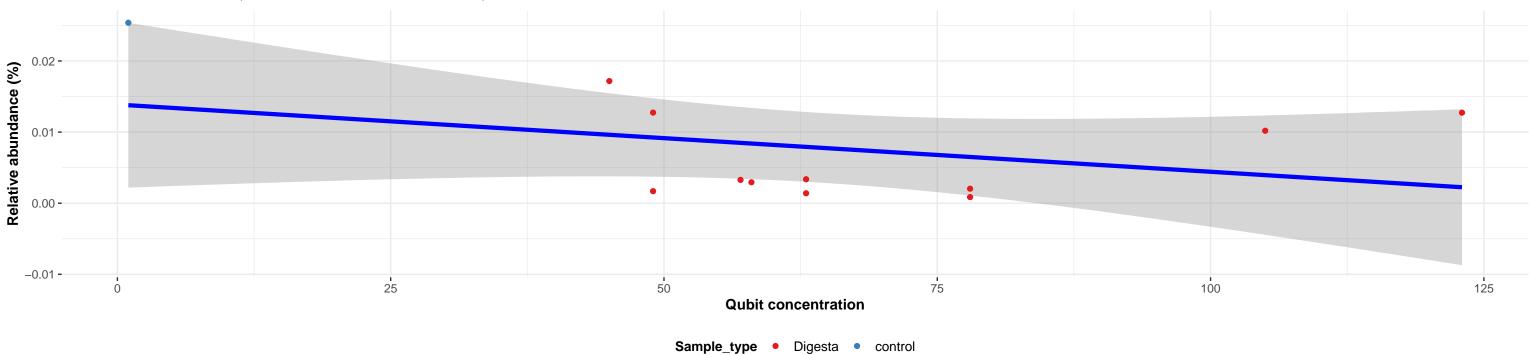
## Bacteria; Bacteroidota; Bacteroidia; Flavobacteriales; Flavobacteriaceae; Dokdonia; NA



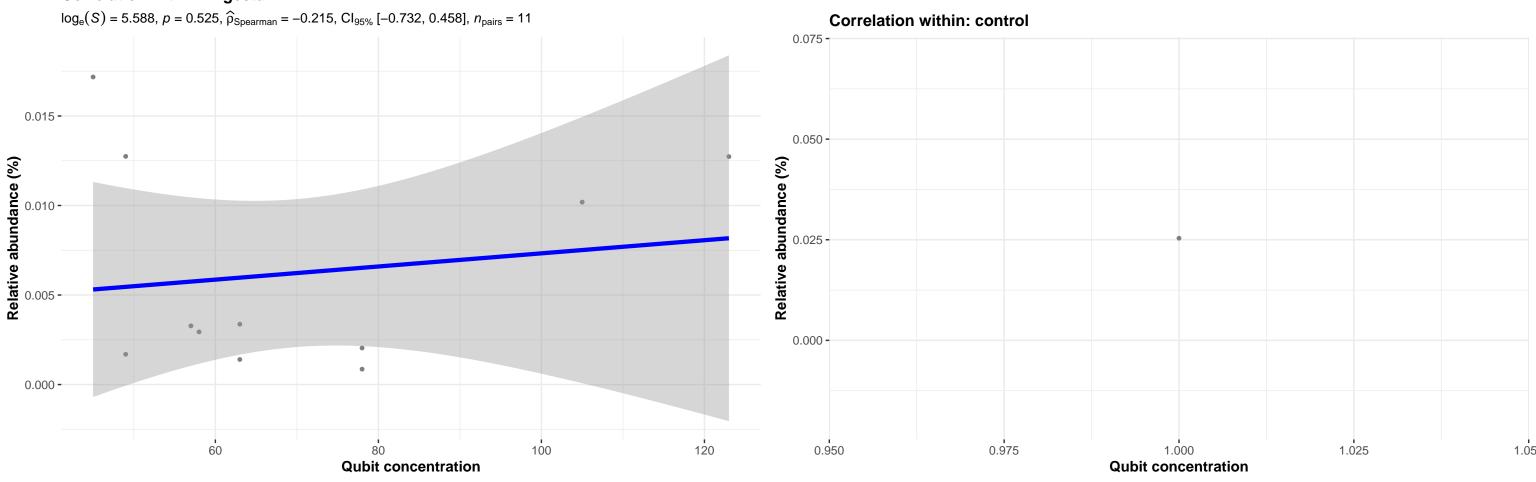
# Bacteria; Proteobacteria; Gammaproteobacteria; Legionellales; Legionellaceae; NA; NA



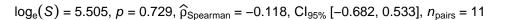


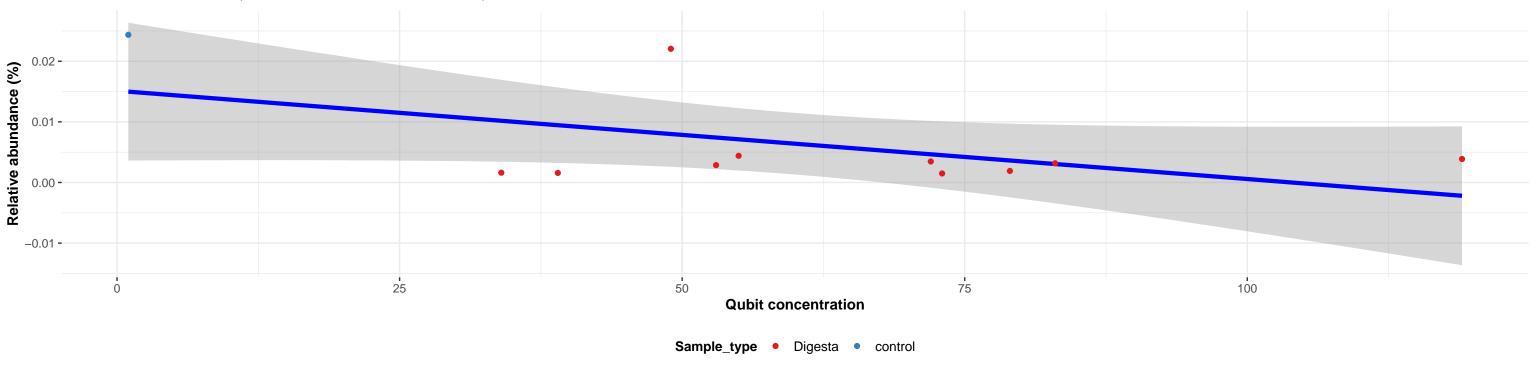




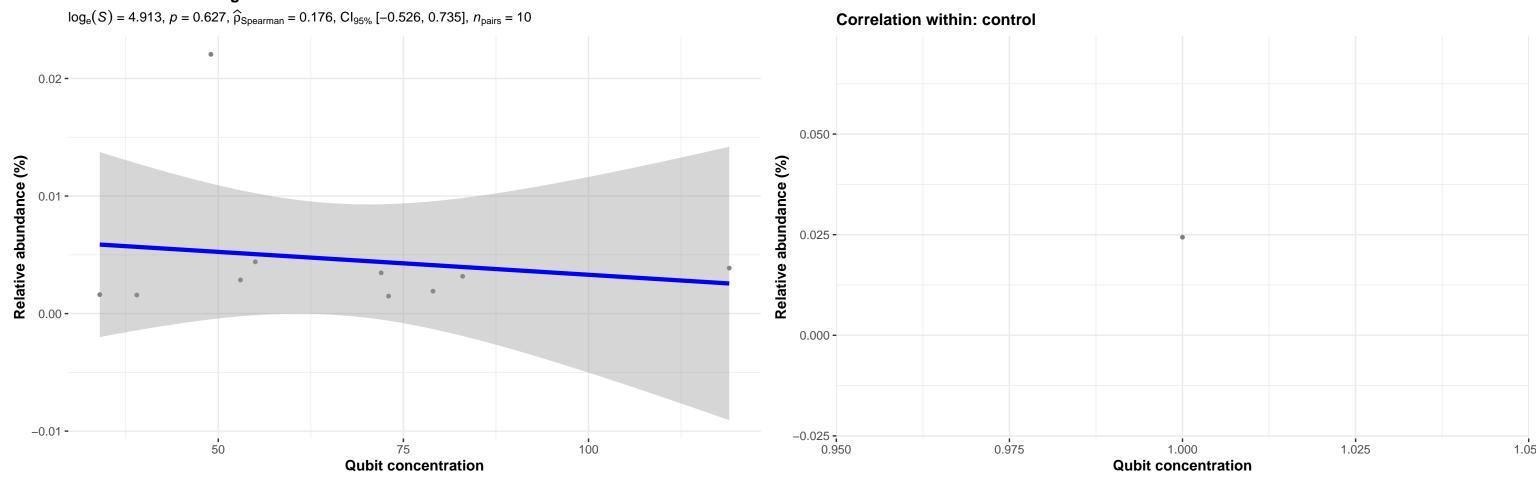


## Bacteria; Proteobacteria; Gammaproteobacteria; Burkholderiales; Neisseriaceae; NA; NA

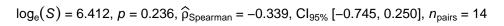


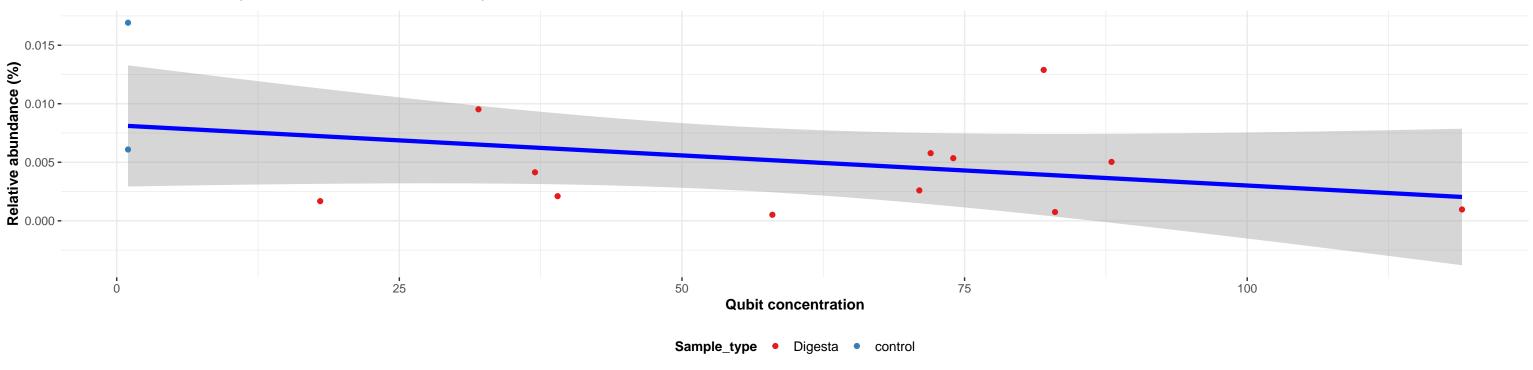


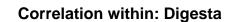


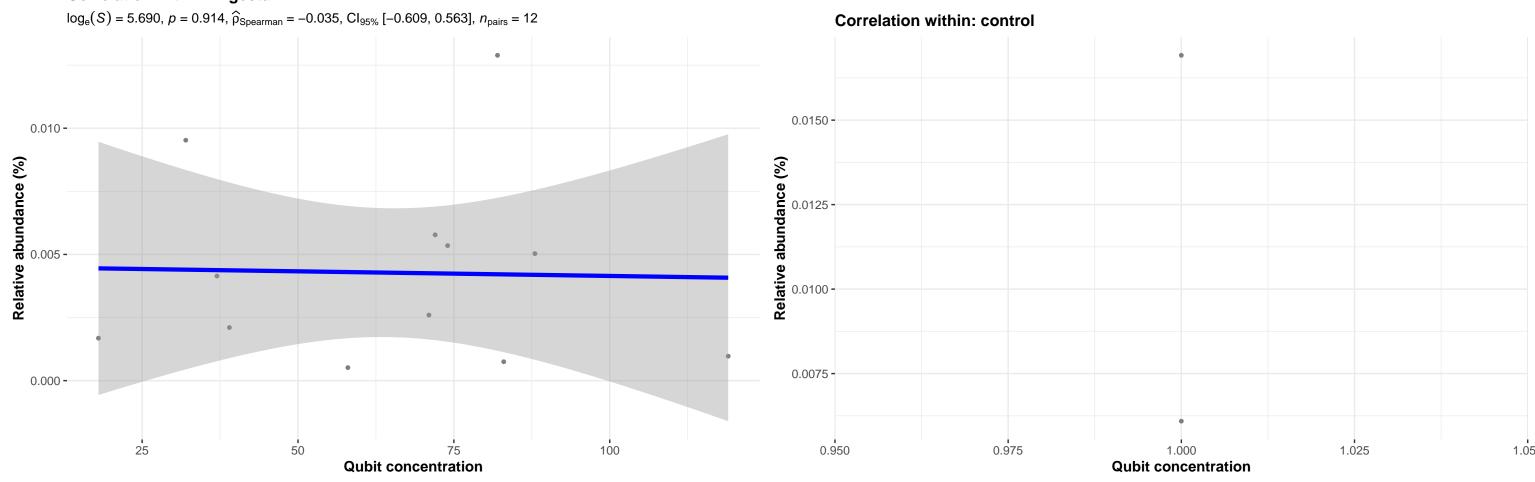


## Bacteria; Firmicutes; Bacilli; Lactobacillales; Enterococcaceae; Enterococcus; NA



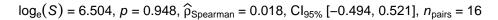


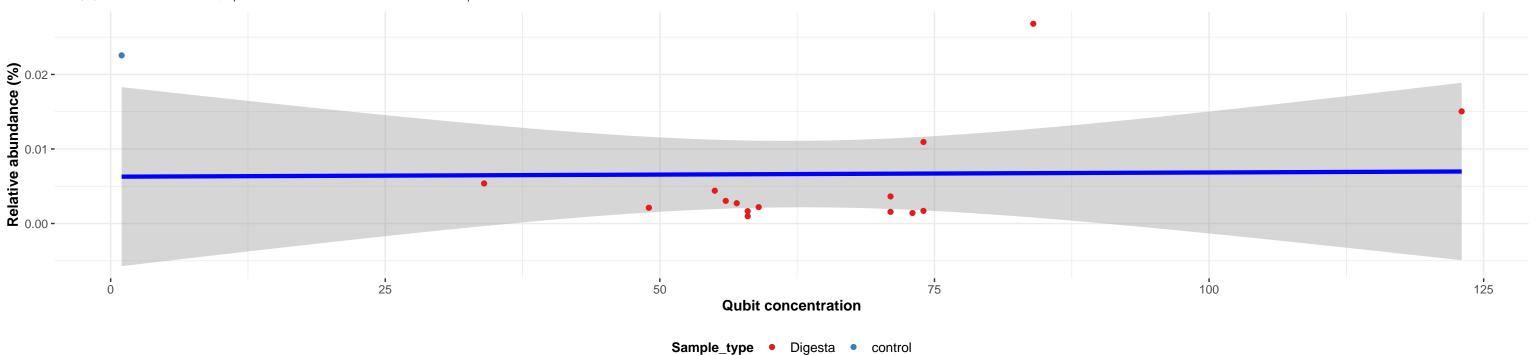




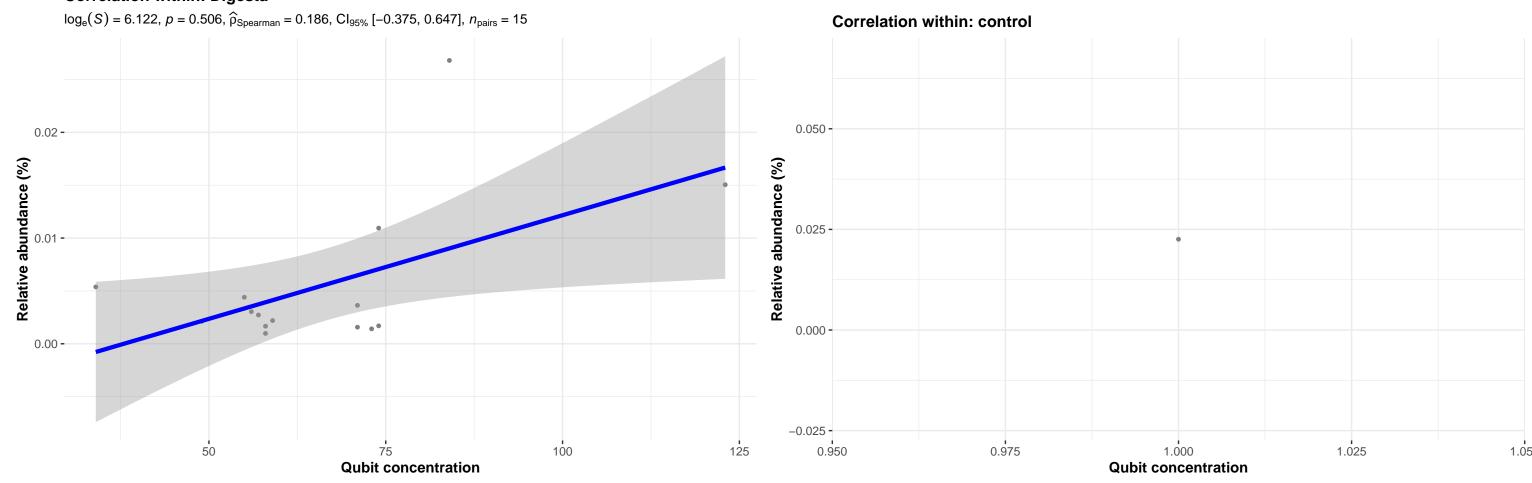
## Bacteria; Patescibacteria; Parcubacteria; Candidatus Nomurabacteria; NA; NA; NA

### Correlation with all samples



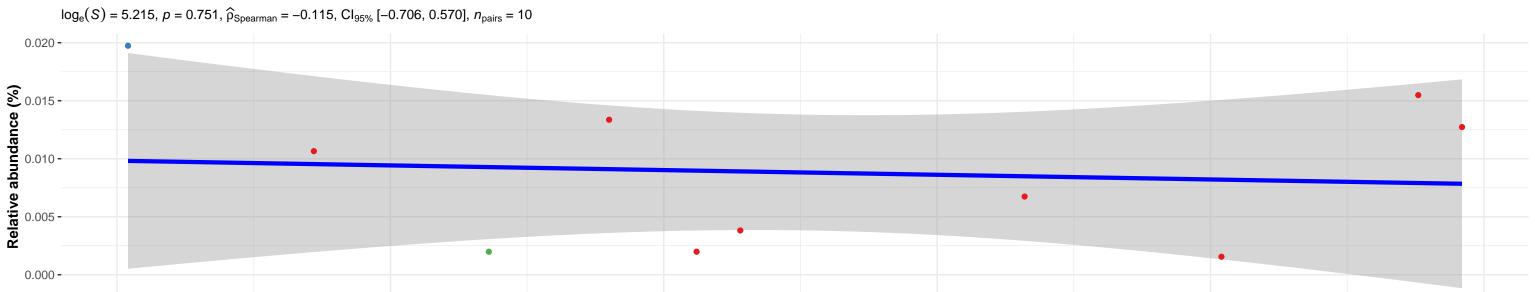


### Correlation within: Digesta



# Bacteria; Verrucomicrobiota; Chlamydiae; Chlamydiales; Parachlamydiaceae; Neochlamydia; NA

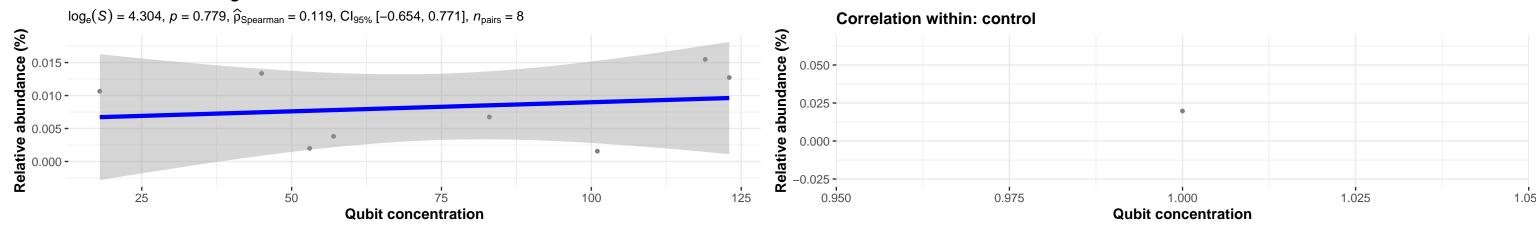


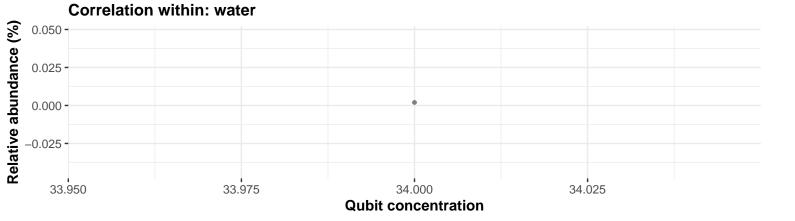




**Qubit concentration** 

### **Correlation within: Digesta**





## Bacteria; Proteobacteria; Alphaproteobacteria; Sphingomonadales; Sphingomonadaceae; Sphingomonas; NA



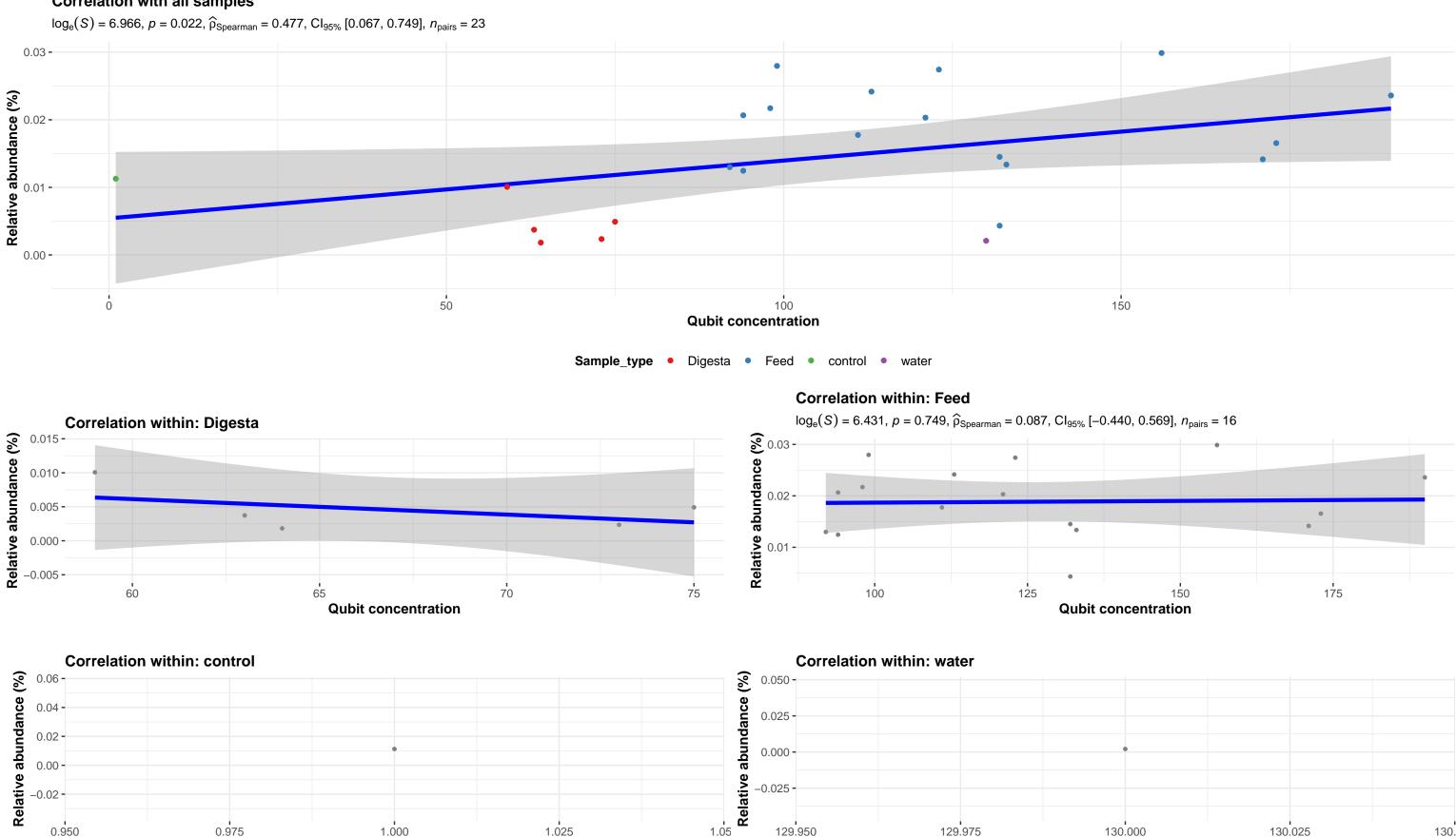
1.025

1.000

**Qubit concentration** 

0.950

0.975



129.950

1.05

130.0

130.025

130.000

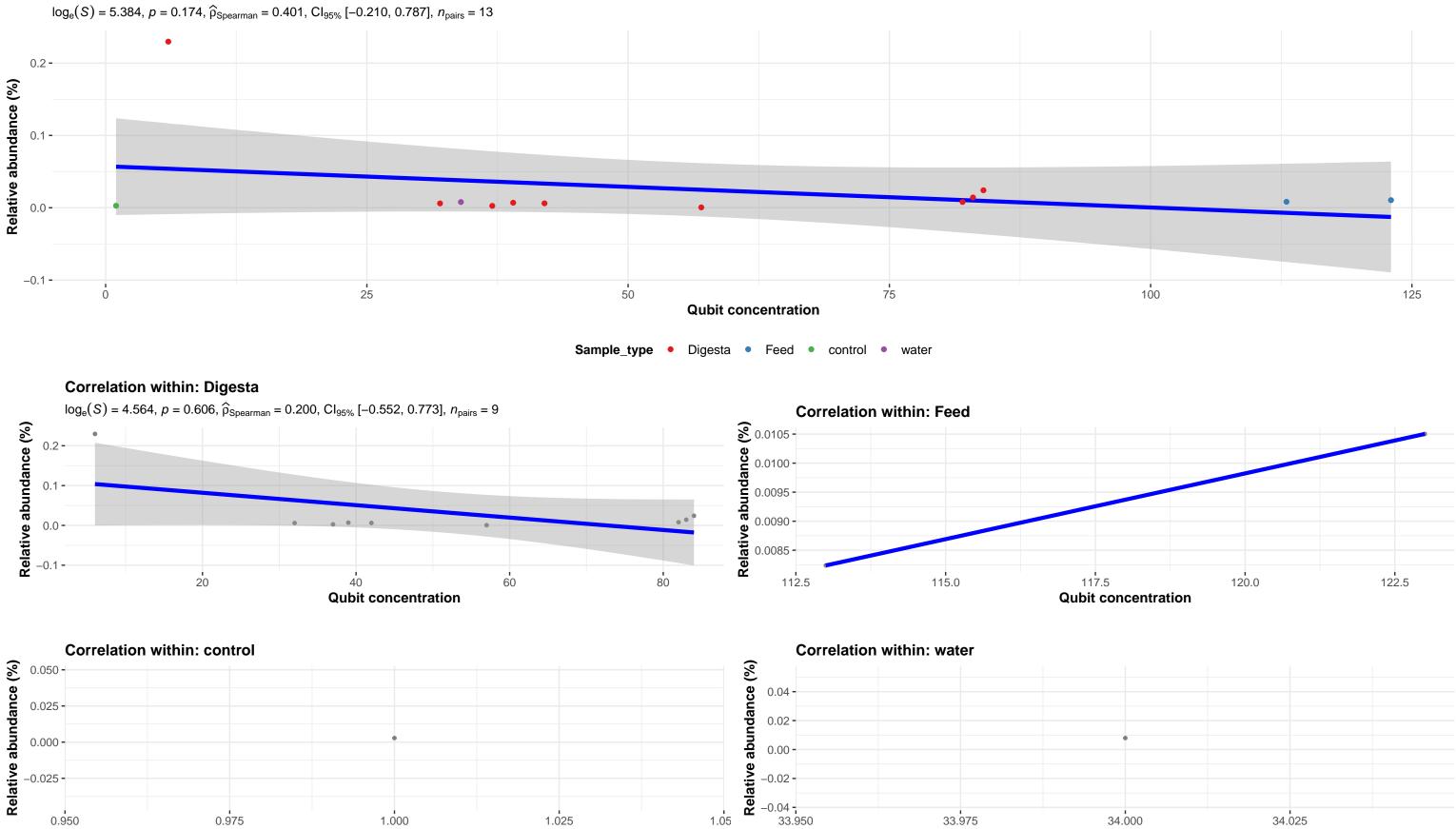
**Qubit concentration** 

129.975

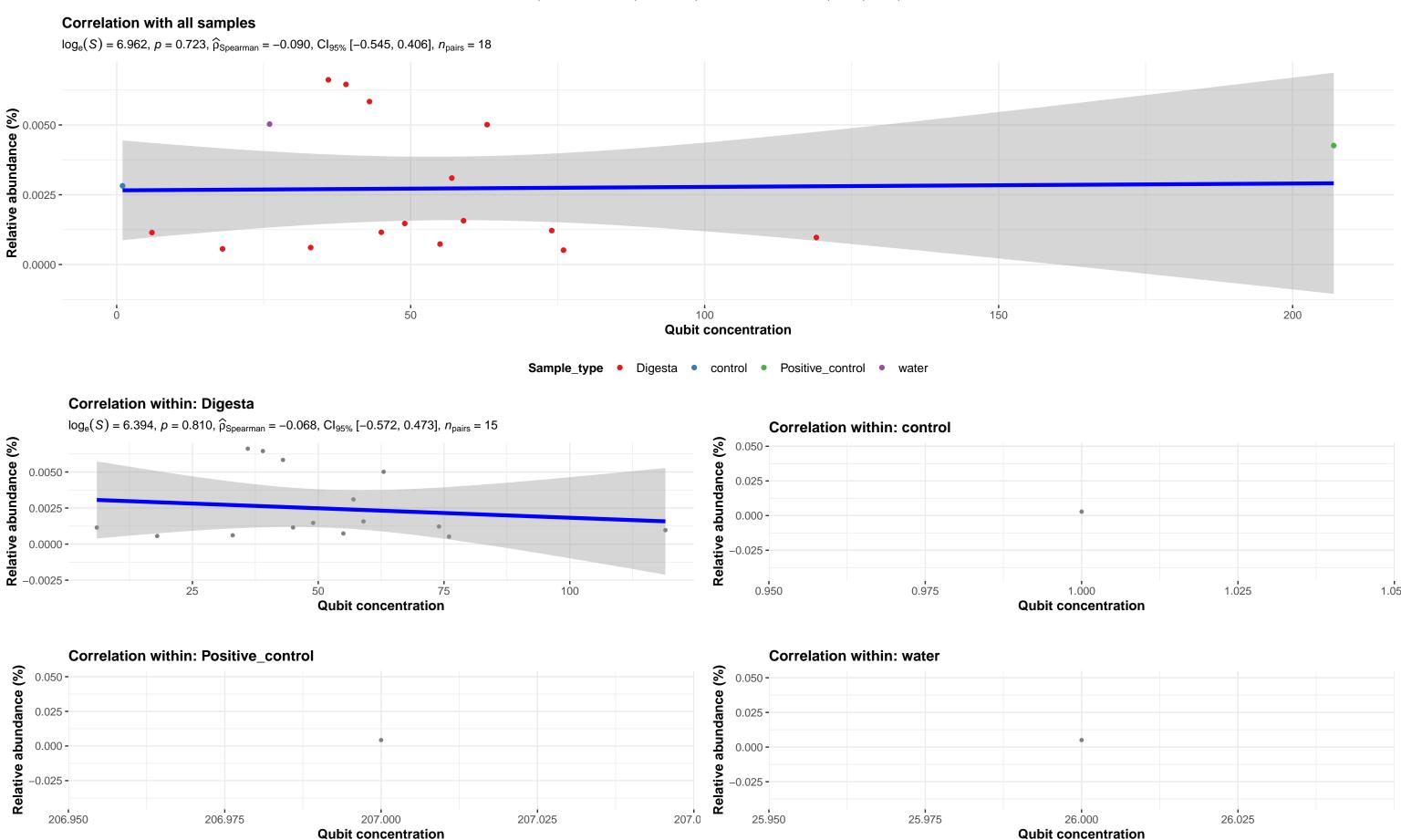
## Bacteria; Firmicutes; Bacilli; Staphylococcales; Staphylococcaceae; Staphylococcus; NA



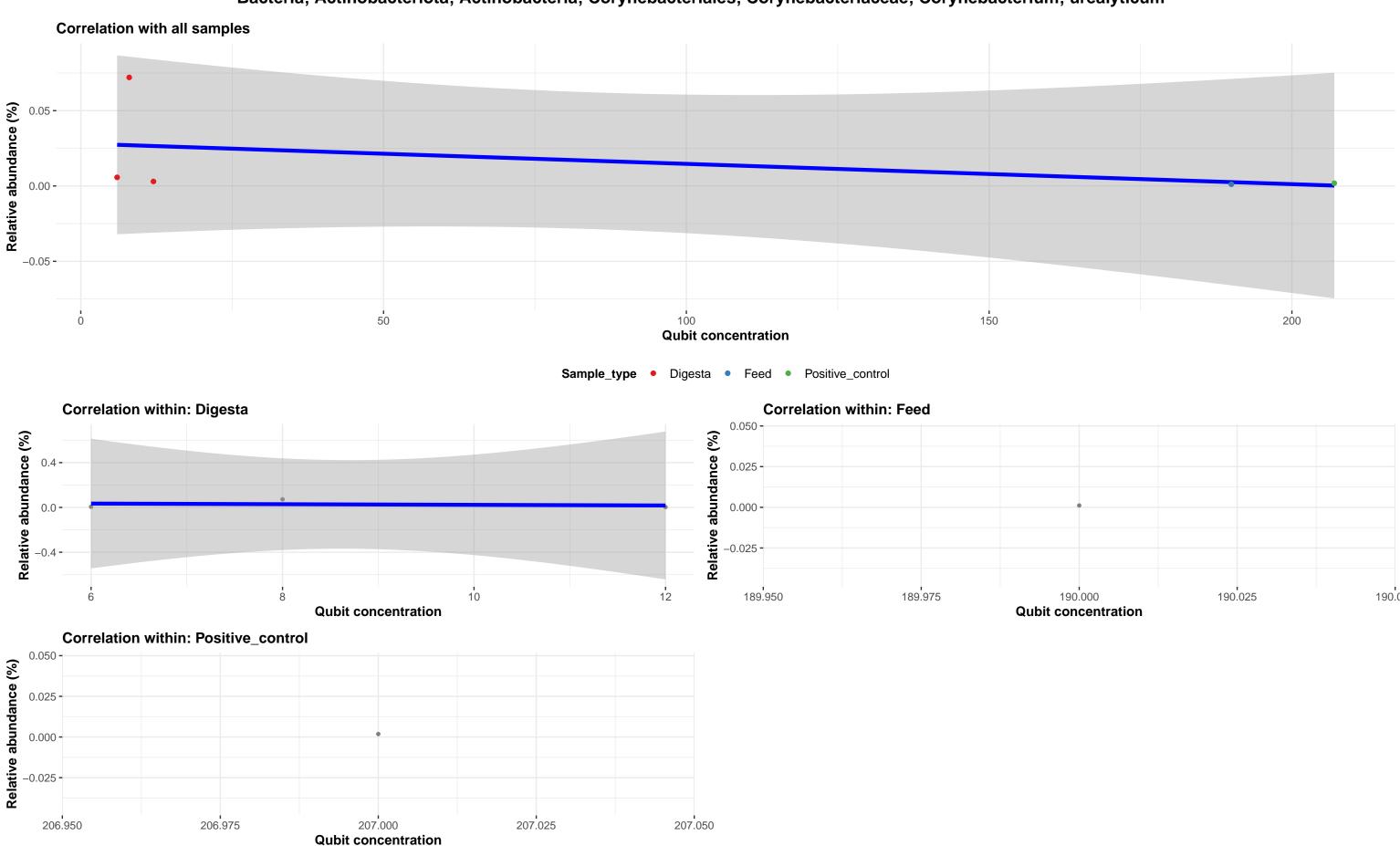
**Qubit concentration** 



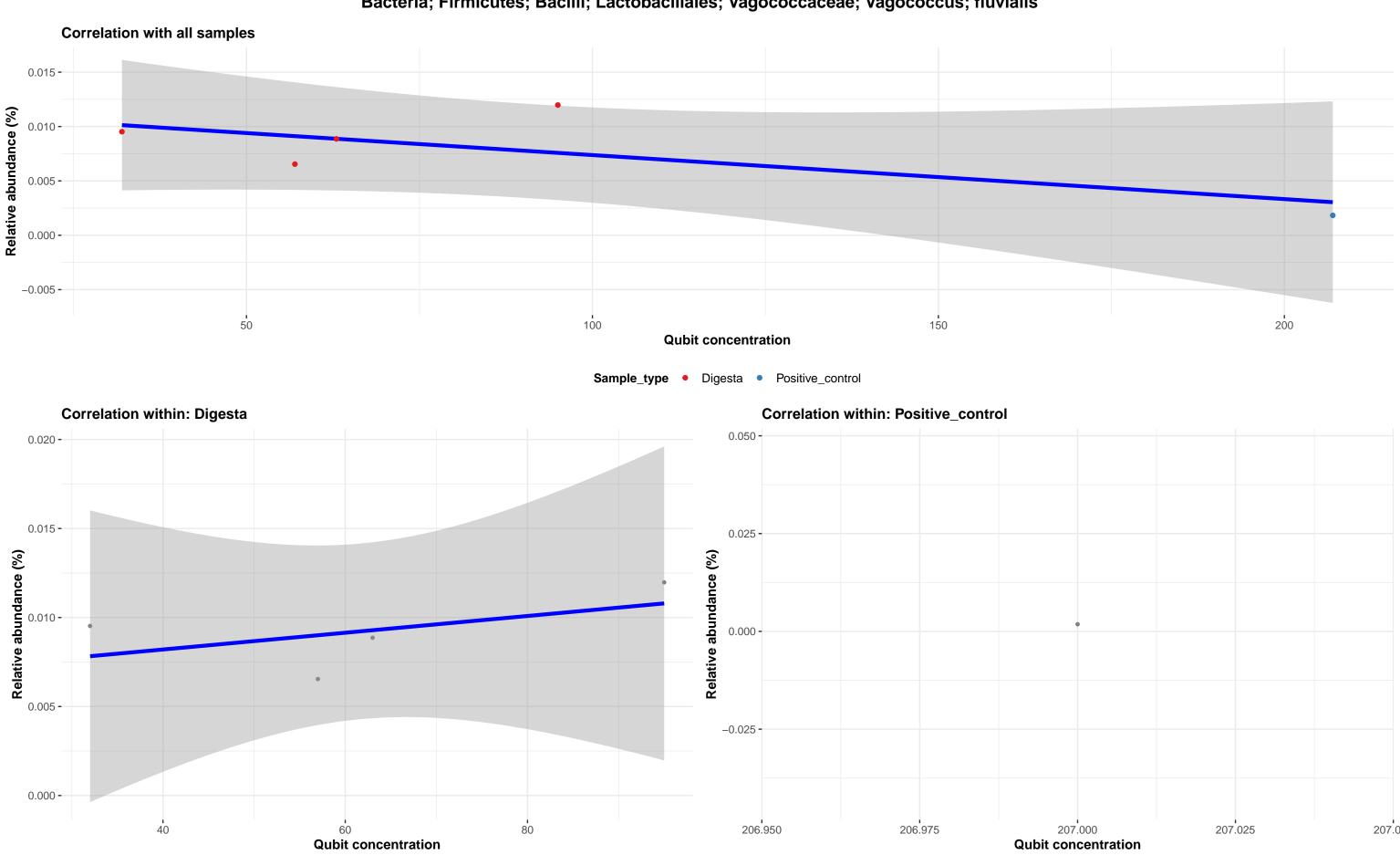
**Qubit concentration** 



# Bacteria; Actinobacteriota; Actinobacteria; Corynebacteriales; Corynebacteriaceae; Corynebacterium; urealyticum

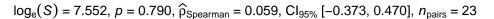


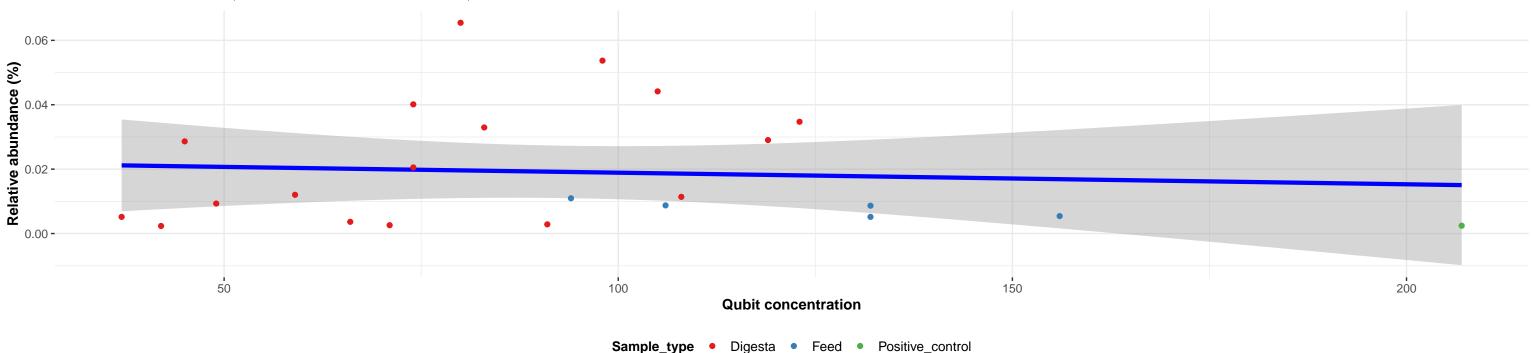
# Bacteria; Firmicutes; Bacilli; Lactobacillales; Vagococcaceae; Vagococcus; fluvialis



## Bacteria; Firmicutes; Clostridia; Peptostreptococcales-Tissierellales; Anaerovoracaceae; NA; NA







#### **Correlation within: Digesta**

