中国女性群体皮肤本态洞察

蓝皮书

（2025）

上海肤焕科技有限公司

上海微谱检测科技集团股份有限公司

上海日用

“ ”

5000 18-65

6 “ +

”

“ ”

*

*

*

.....1
1.1 1
1.2 “ ” 1
1.3 3
1.4 3
“ × ” 7
2.1 7
2.2 10
2.2.1 10
2.2.2 12
2.3 15
2.4 19
2.5 23
2.5.1 23
2.5.2 alpha 24
2.6 25
2.6.1 25
2.6.2 30
2.7 31
2.8 34
2.9 36
2.9.1 36
2.9.2 alpha 38
“ ” 42
3.1 42

3.1.1 —— 42
3.1.2 43
3.1.3 —— 44
3.1.4 —— 45
3.1.5 —— 46
3.2 48
3.2.1 48
3.2.2 49
3.2.3 —— 50

1.1

“ ”

“ ”

1.2 “ ”

- 5000 “ 18-25 /26-35 /36-45 /46-55

-

1

2

DermaLab Hydration Pin
Tewameter TM nano
Meibometer MB560
illumina PE 250
•
•
•

1.3

1.

1 -
ANOVA
K-W
2 -
Tukey HSD Test
Dunn
3 / χ^2 /

2. :

1 :
Pearson
Spearman
pH
2 / :
“ ” L*

3.

α Shannon Simpson
/ Propionibacterium Staphylococcus

1.4

2019

Simpcare

“ ”

1

“ × ”

“ × ”

200

“ ”

2.1

L b

1 ITA

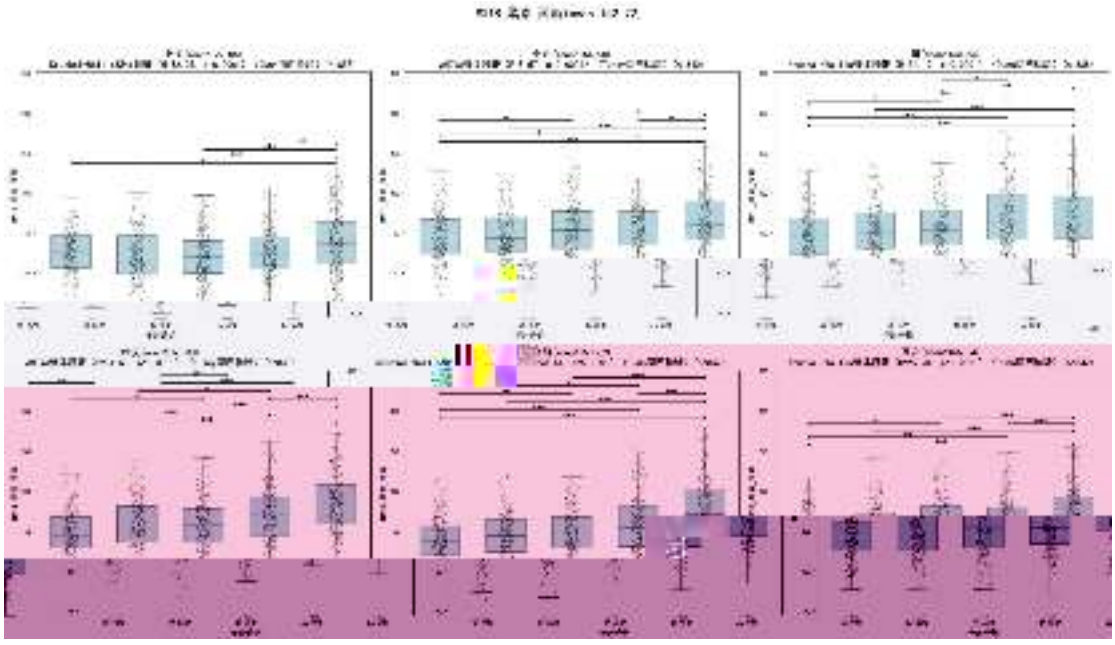
“ × ”

ITA

44% ITA

35 18 65

2



2.2 MX18_ _

2.2

10%

55 3

3

“ × ”

2.4 Vplus_ %

2.4 %

20%

5

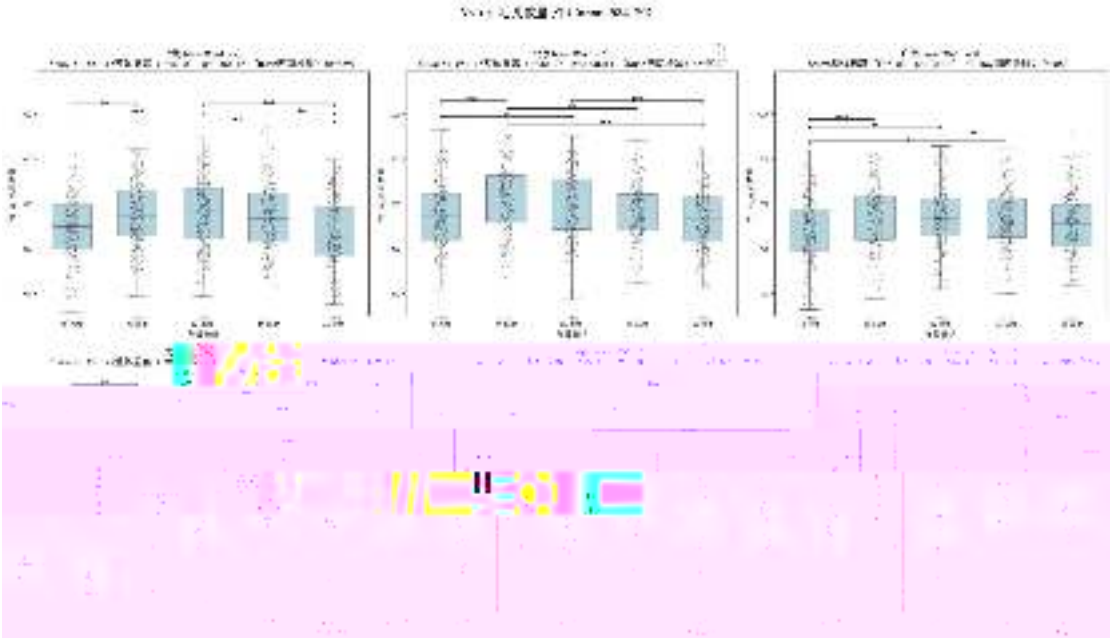
“

”

2.2

“ × ”

2

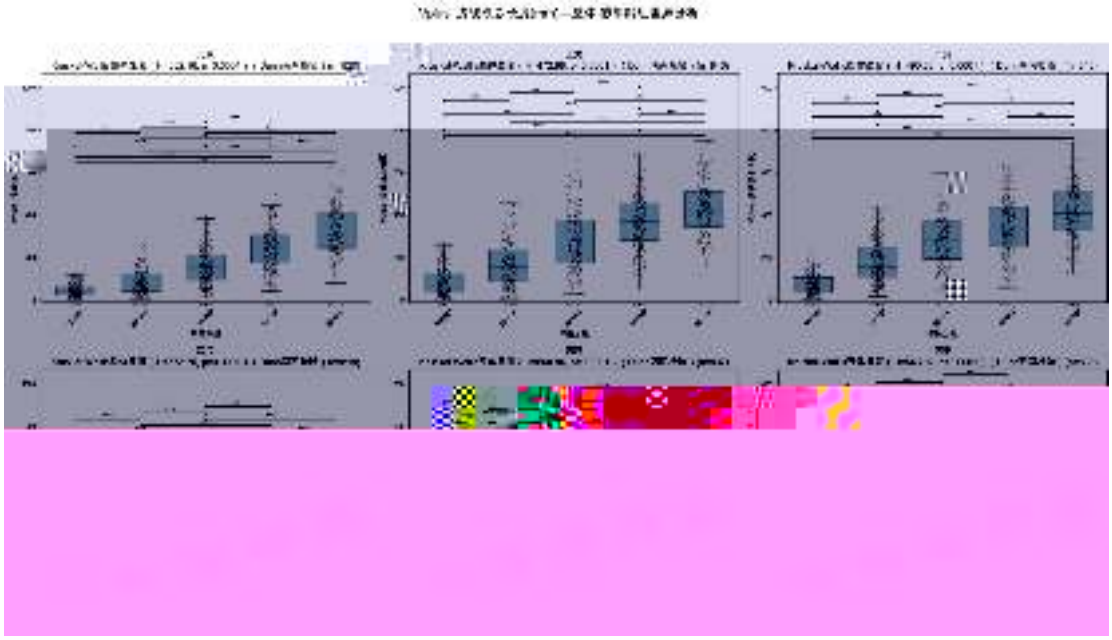


2.6 Vplus_

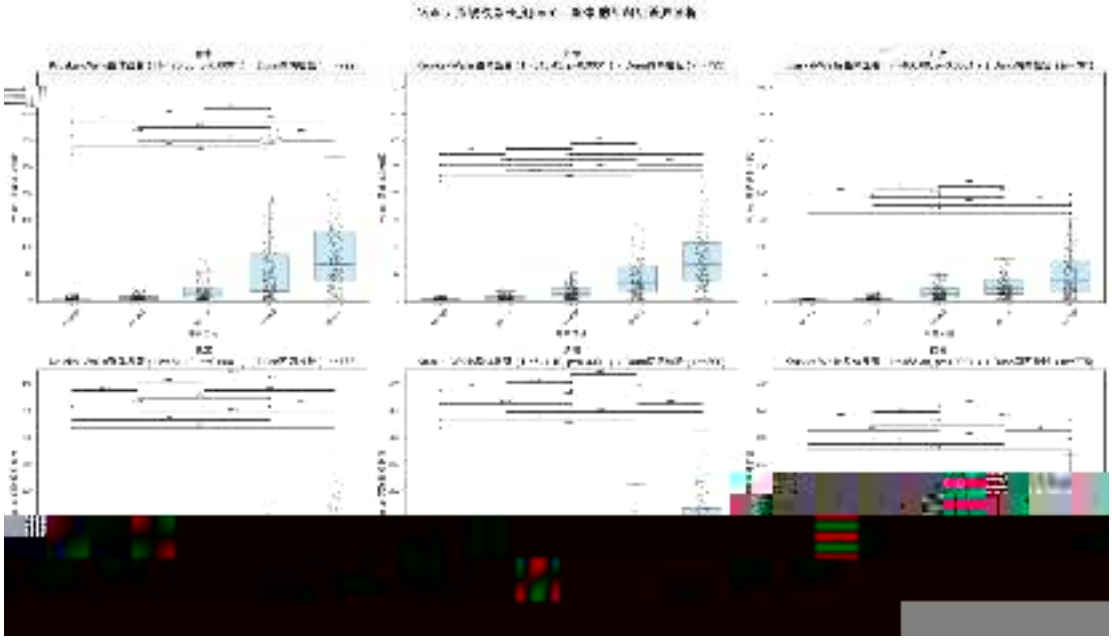
“ ” “ ”

“ × ”

“ × ”



2.8 Vplus_ mm



2.9 Vplus_ mm

2.8 2.9

“ × ”

2.10 Vplus_ μm -

2.10 35

4

25 35

2.3

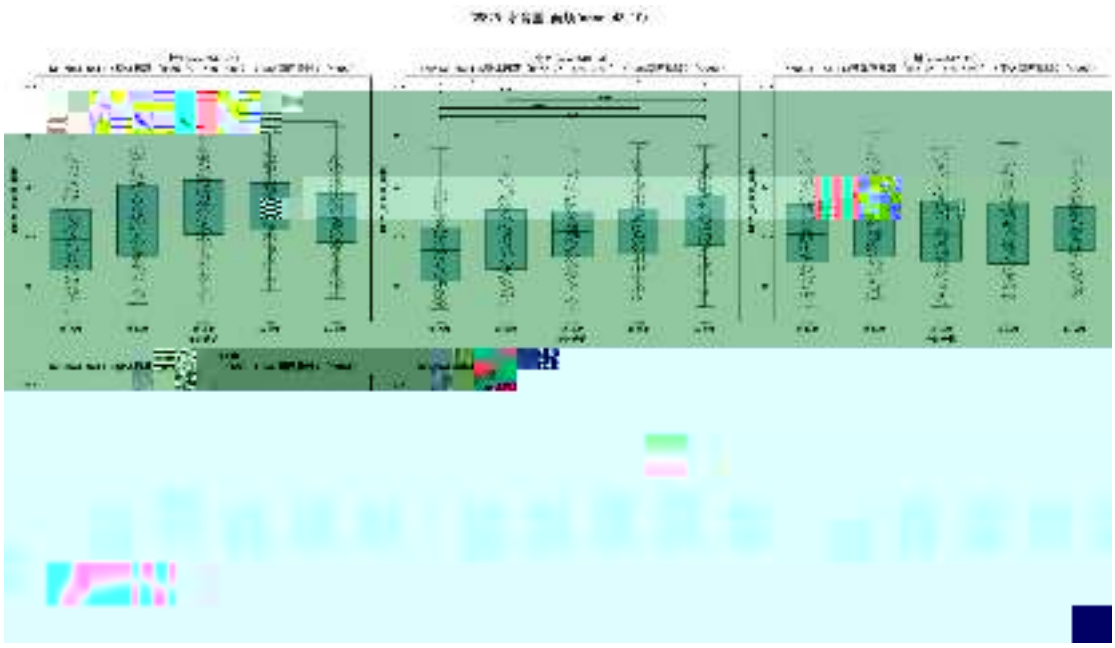
“ ” “ ”

TEWL

pH

1

“ × ”



2.11 CM825_ _

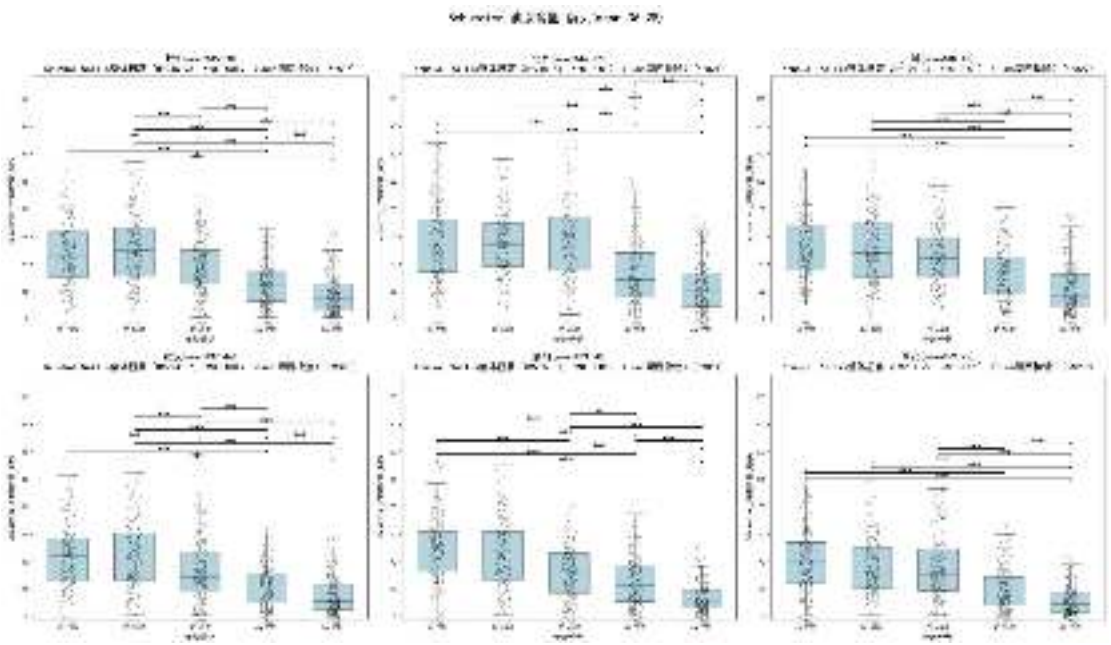
2.11

40

20 60

2 TEWL

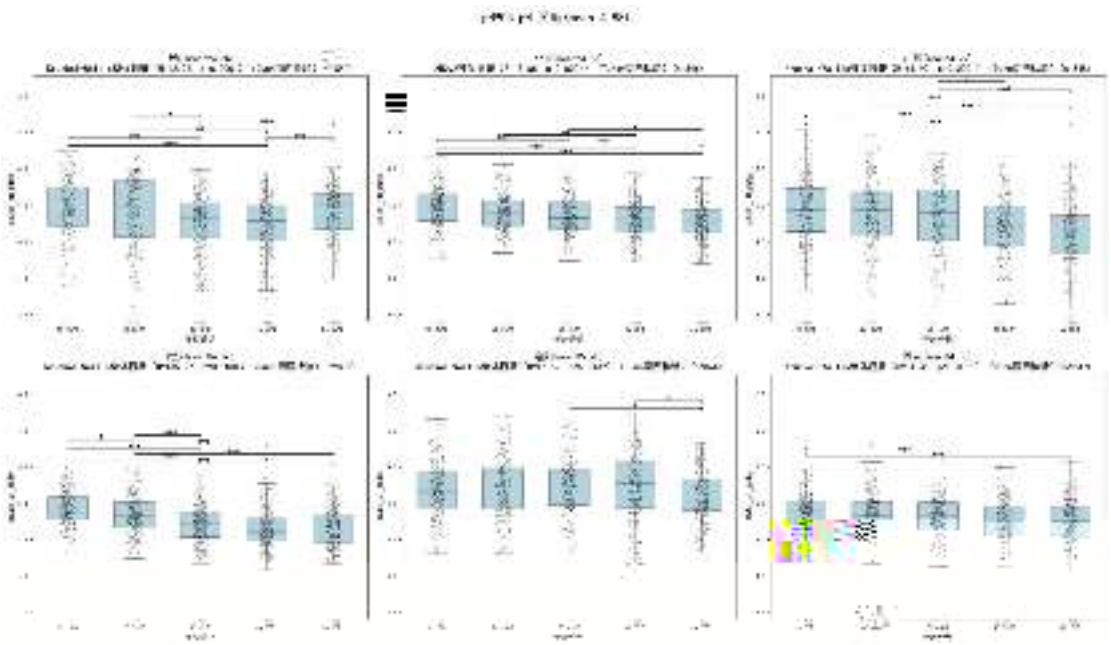
“ × ”



2.13 Sebumeter_ _

2.13

“ × ”



2.14 pH905_pH_

pH 4.0-5.5

2.14 pH

3

“ pH ”

5000 pH pH

45 pH 4.5

3 pH U 25 45

pH 45 pH

pH 5

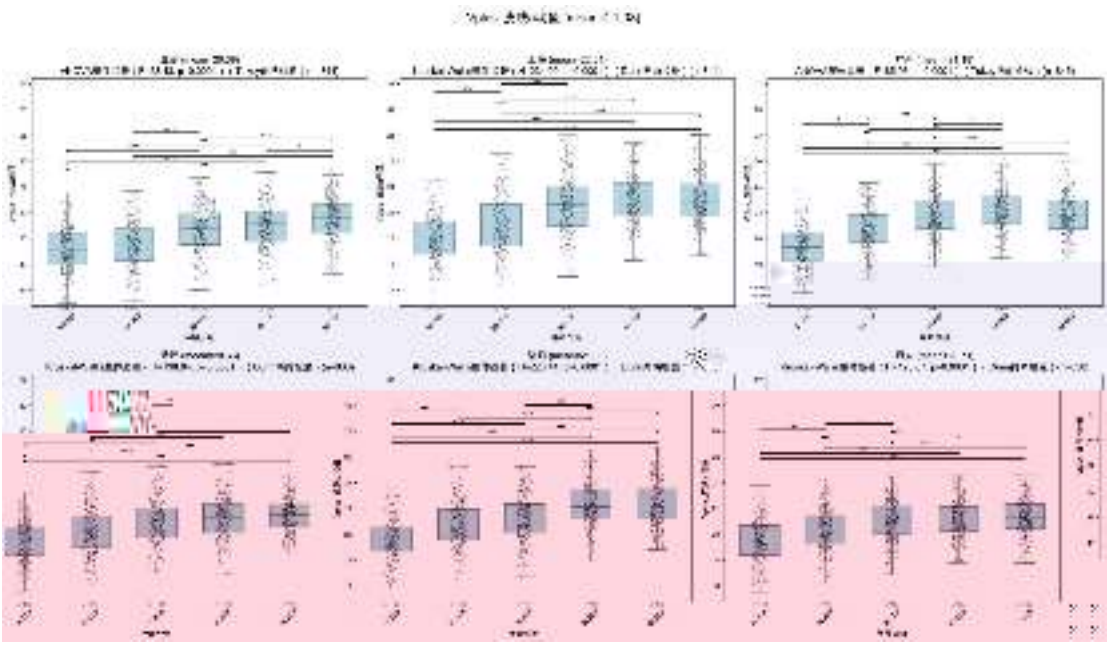
5

40 “ ”

2.4

“ × ”

“ × ”



2.16 Vplus_ a

a

2.16 18 45

45

Ó ך

“ × ”

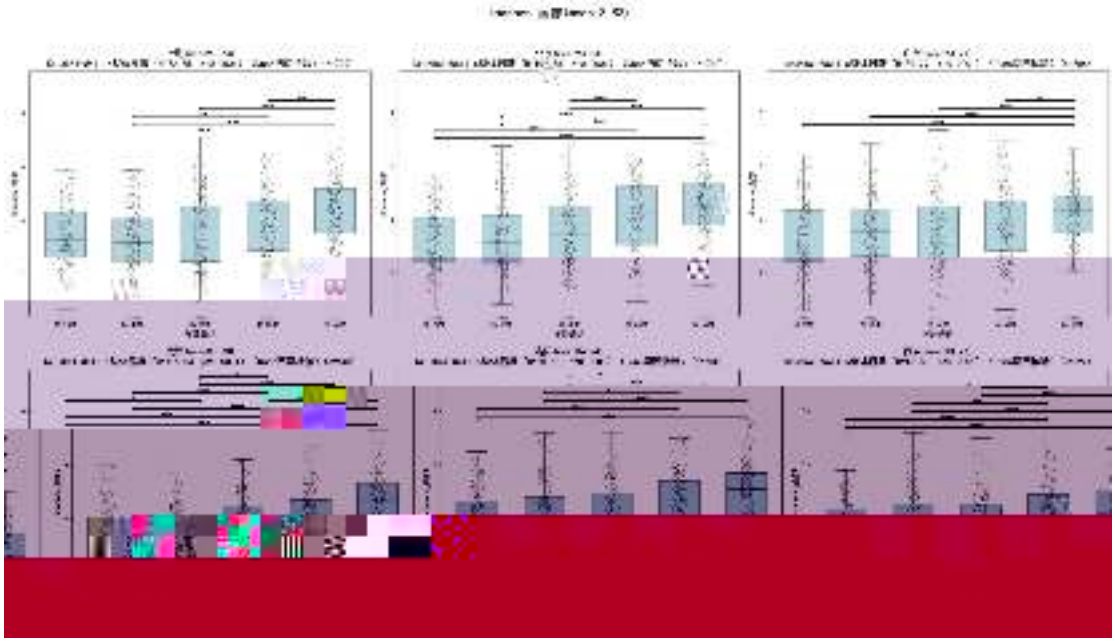
“ × ”

2.5

“ × ”

2.5.2 alpha

“ × ”

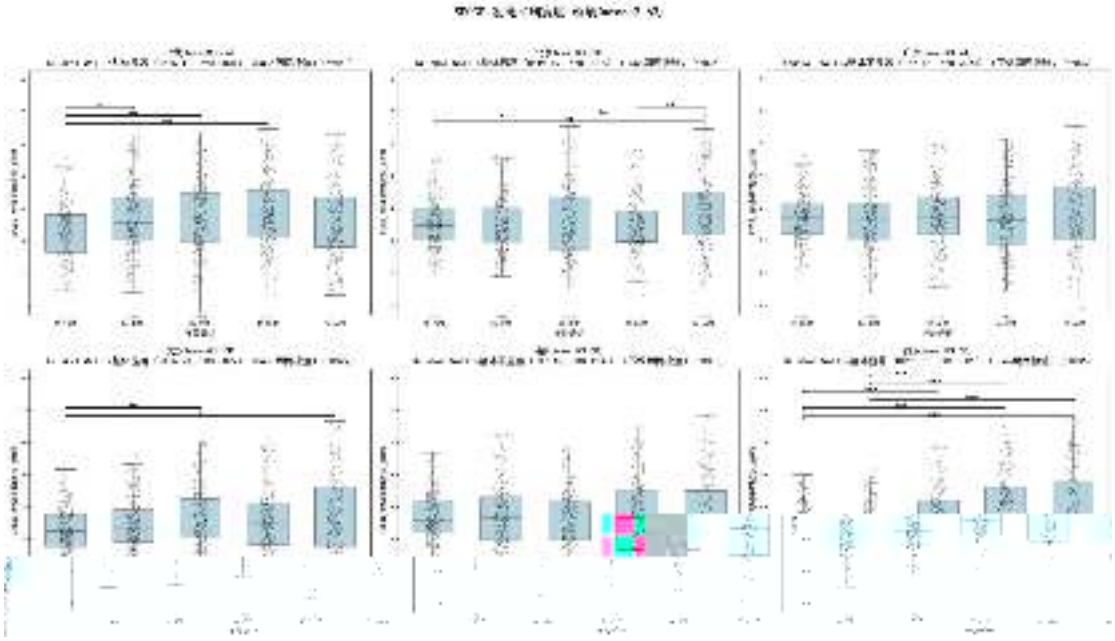


2.21 shannon

Shannon **α**

“ × ”

1



2.22 SPOCS_ _

2.22

18-25 46-55

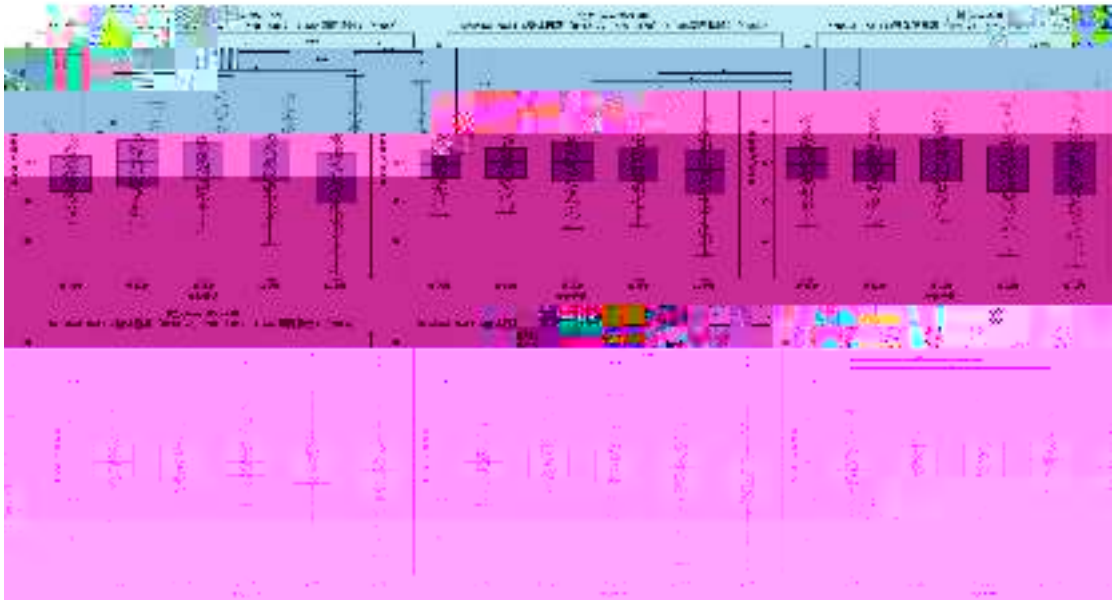
26-45

26

36 56

2

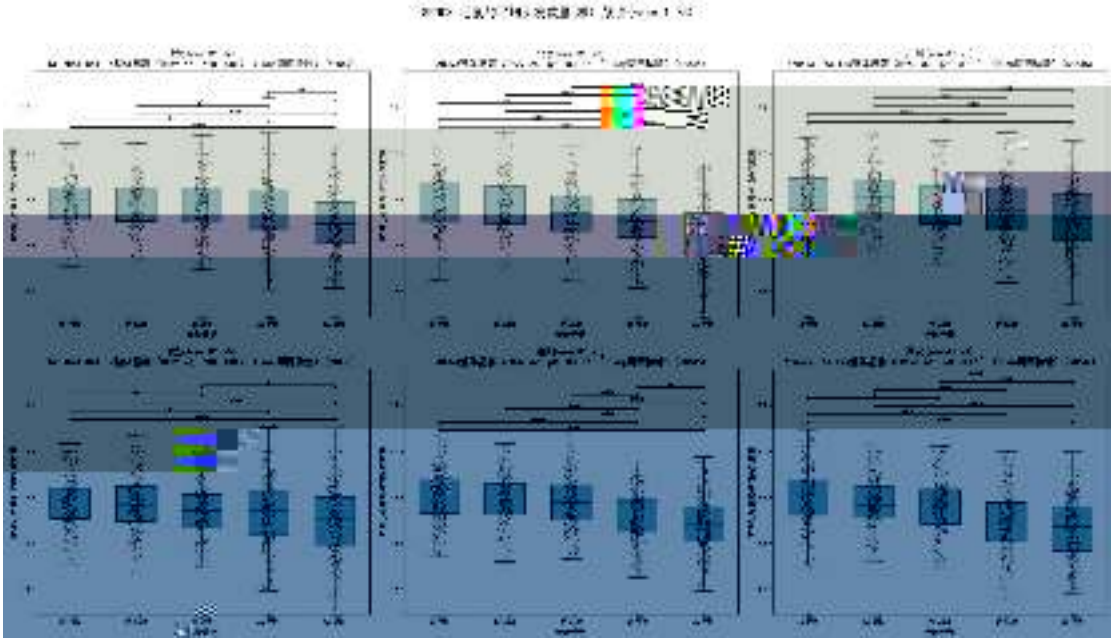
“ × ”



2.23 SPOCS_ _

2.23

“ × ”



2.24 SPOCS_ _

2.24

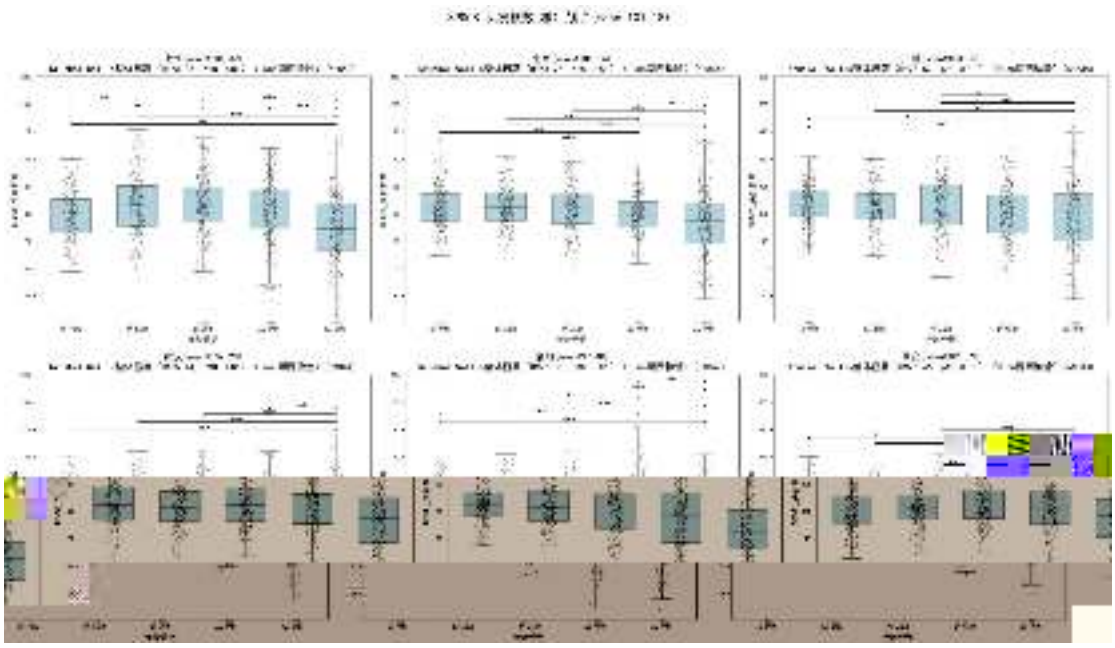
18-25

35-45

55-65

4

“ × ”



2.25 SPOCS_ _

2.25

18-35

46-65

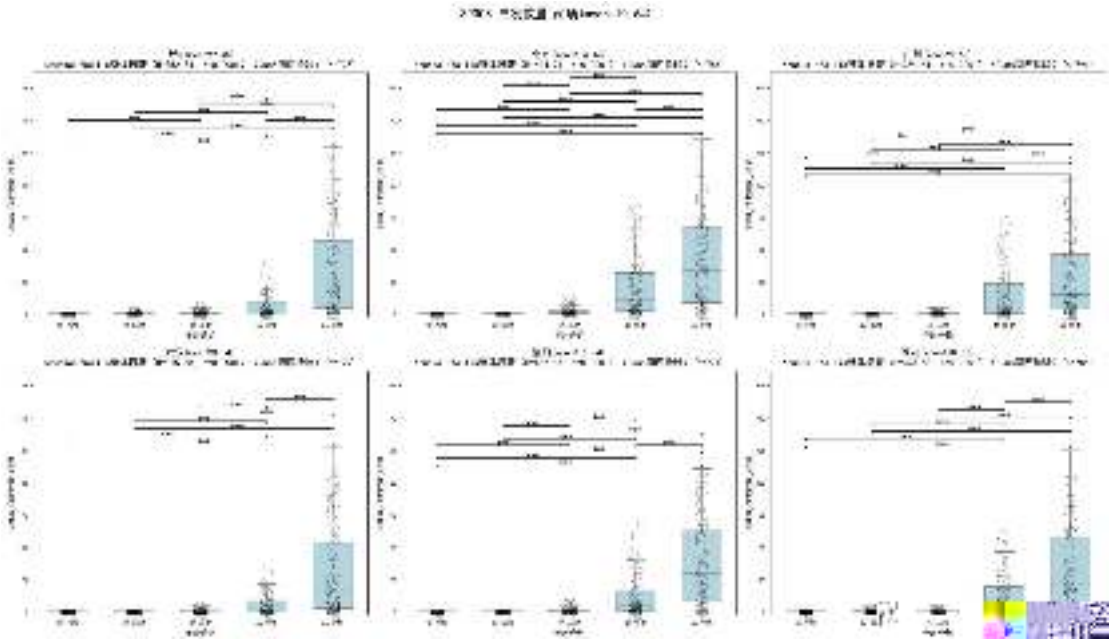
36-45

5

“ ” “ ”

2.6.2

1



2.26 SPOCS_ _

2.26

18-25 56-65

80 100 150% 36-55

30-40%

5%

2

“ × ”

46

2.7

TEWL

pH

“ × ”

2.27 deramlab_ _

2.27

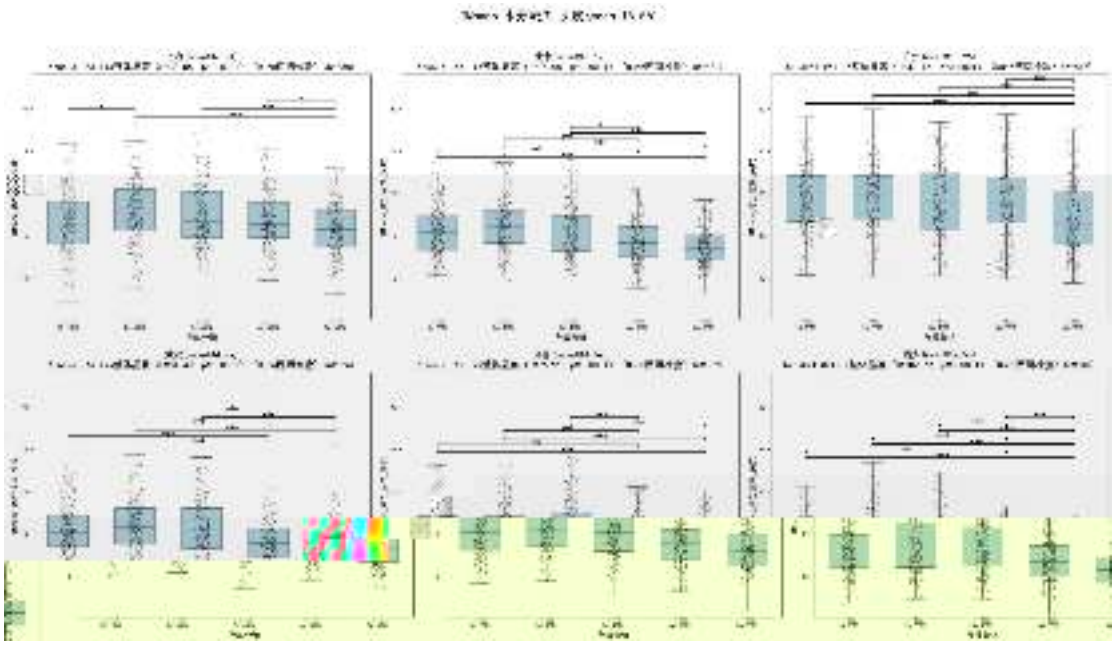
18-35

46-65

30% 36-45

“ ”

2 TEWL



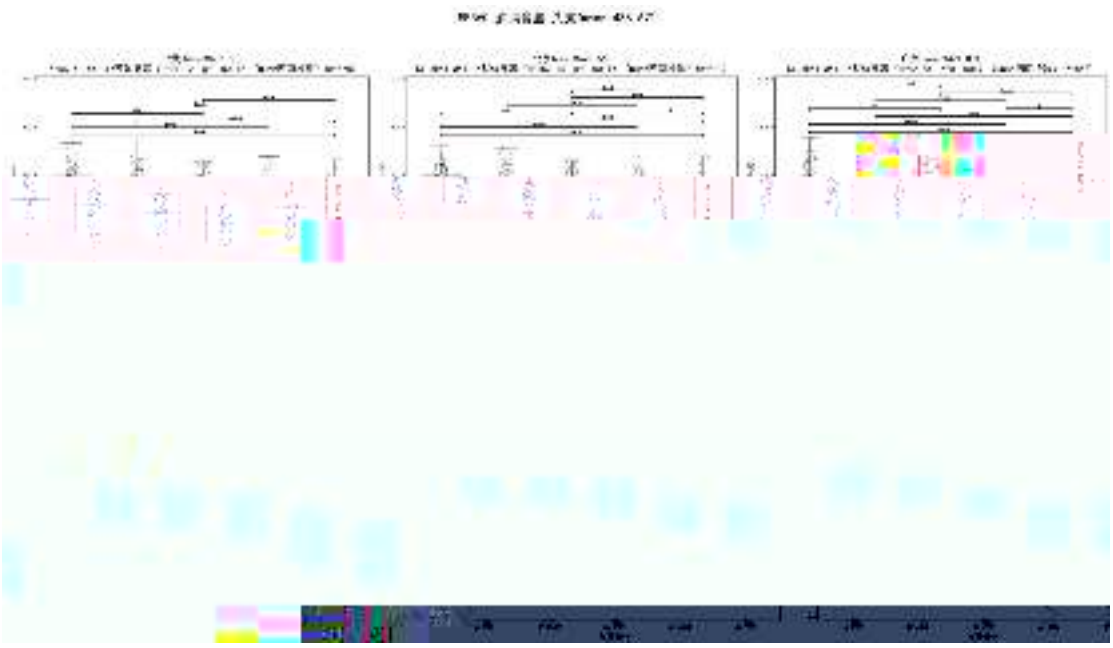
2.28 TM nano_ _

TEWL ——TEWL

2.28 TEWL

18-35

“ × ”



2.30 MB560_ _

2.30

5

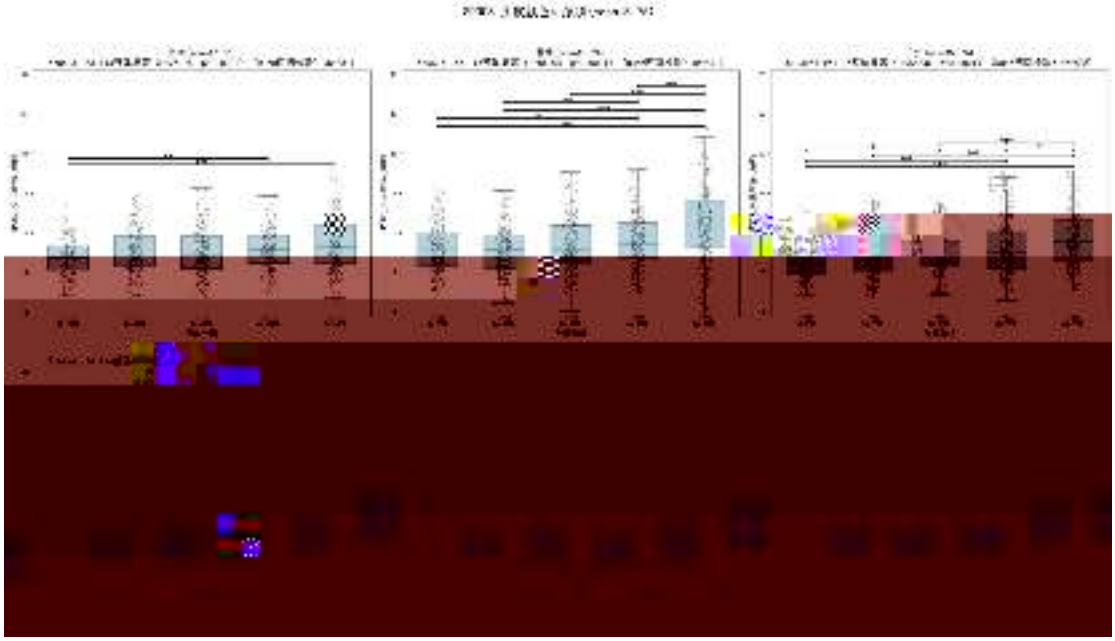
TEWL pH

“ ”

2.8

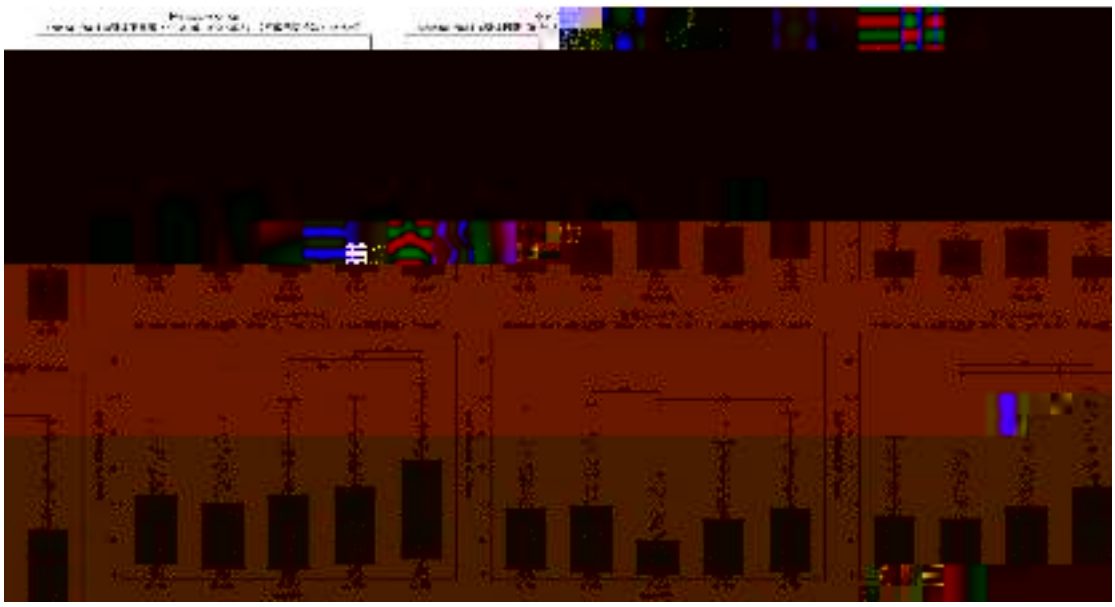
“ × ”

1



2.31 SPOCS_ a_

“ × ”



2.32 SPOCS_ _

“ - ”

2.32

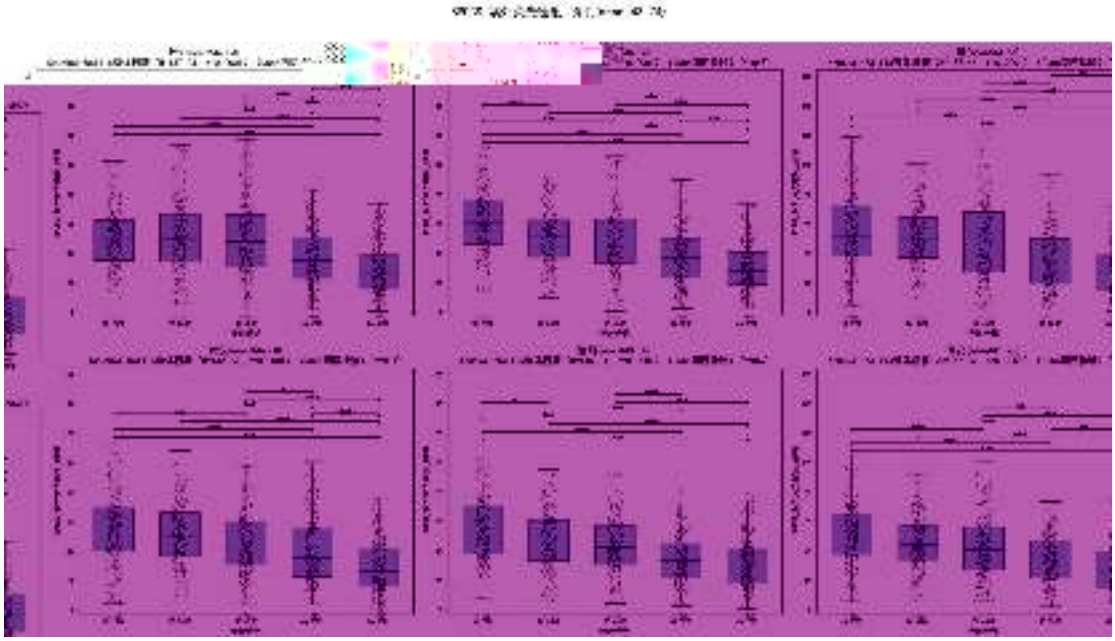
3

2.9

2.9.1

“ × ”

1



2.33 SPOCS_

2.33

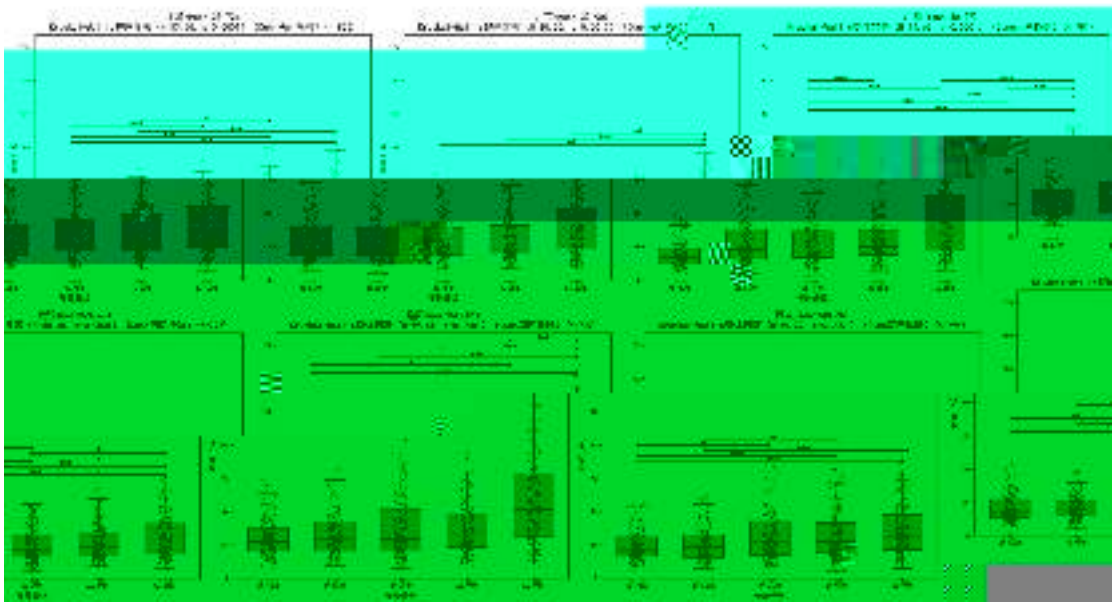
18-35

46-65 36-45

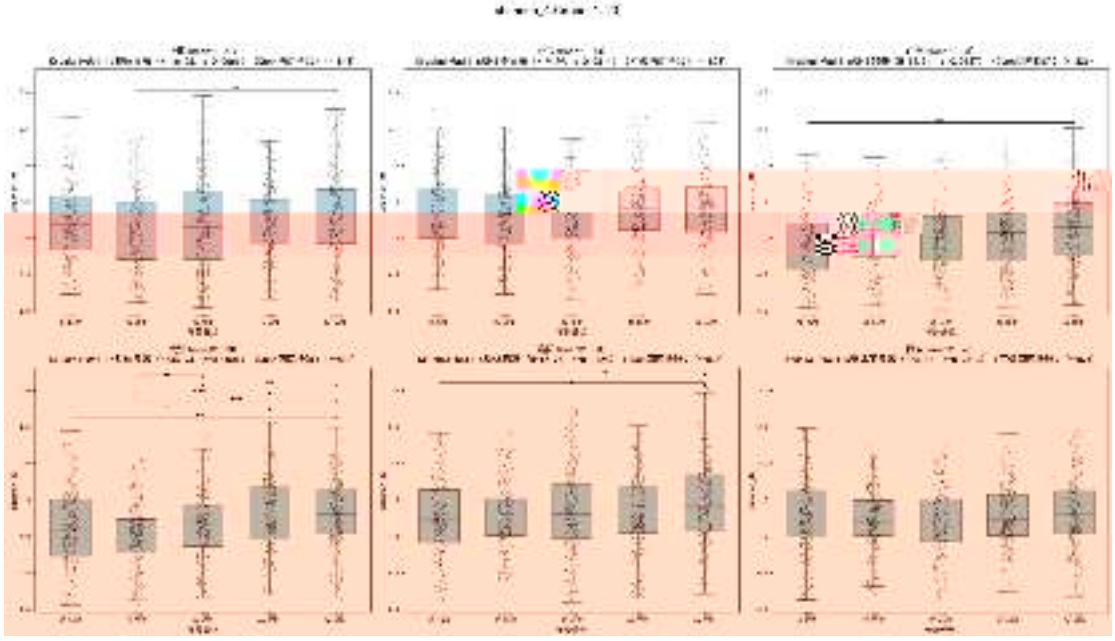
“ ” “ ”

“ × ”

“ × ”



2.35 chao1



2.36 shannon

2.35 2.36 Chao1

Shannon Chao1

“ × ”

2.37 2.38 Chao1

56 – 65 18 – 25 94%

Shannon Chao1

chao1

shannon

18 55

3

chao1 shannon

alpha

“ ”

“ ”

“ ”

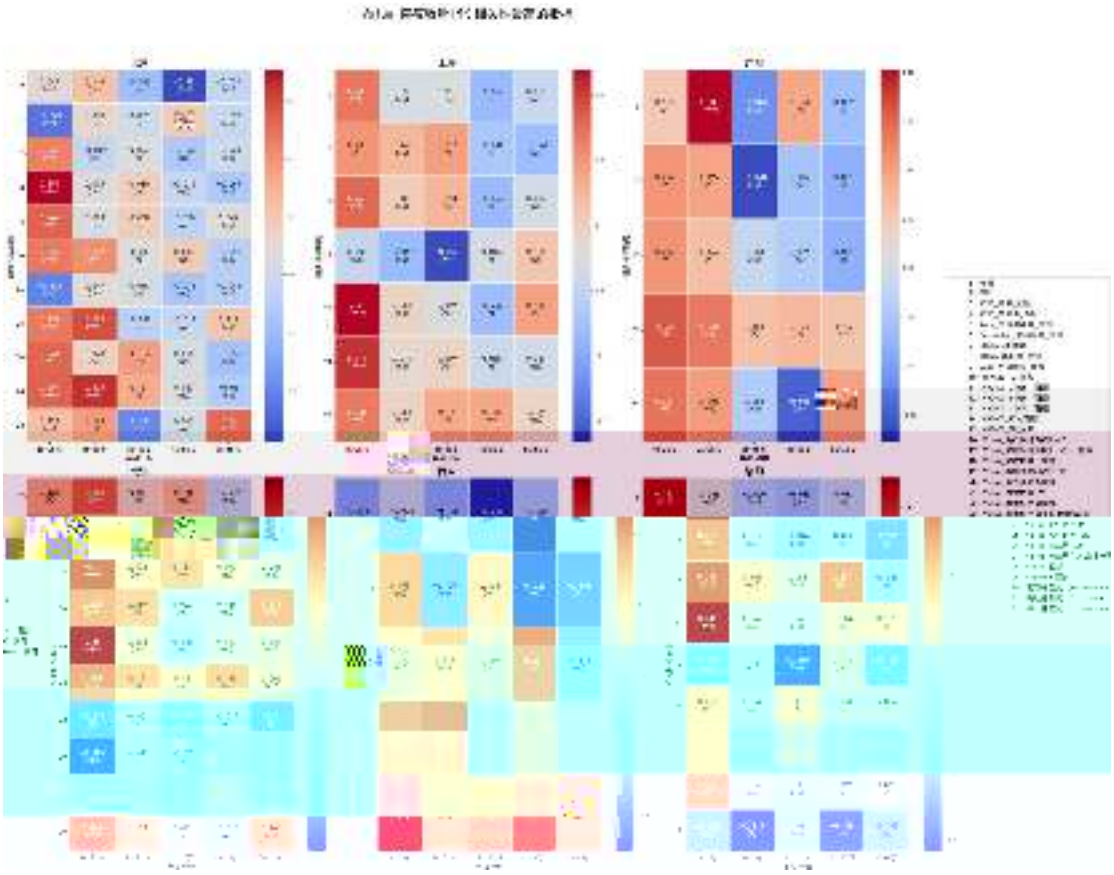
3.1

“ ”

“ ”

“ ”

0.34 ***



3.3 Vplus_

3.1.4 ——

3.4 MX18_ _

36-45 13-CM26DG_b (D65)_

0.601 *** 18-25

27-Vplus_ -0.551 ***

36-45

1 13 0.6

56-65 27

- 0.409 ***

C

“ ”

24-Vplus_ 0.4 18
– 25 0.576 ***

26 – 35
1 12 0.692

18 – 25 0.576 ***

C

3.5 MX18_ _

3.2

“ ”

3.2.1

3.6 1-deramlab_ _

pH 3-pH905_pH_ 18-25 -0.236 ***

36-45 46-55 -0.528 *** -0.544 ***

“ ”

pH 4.5-5.5

“ ”

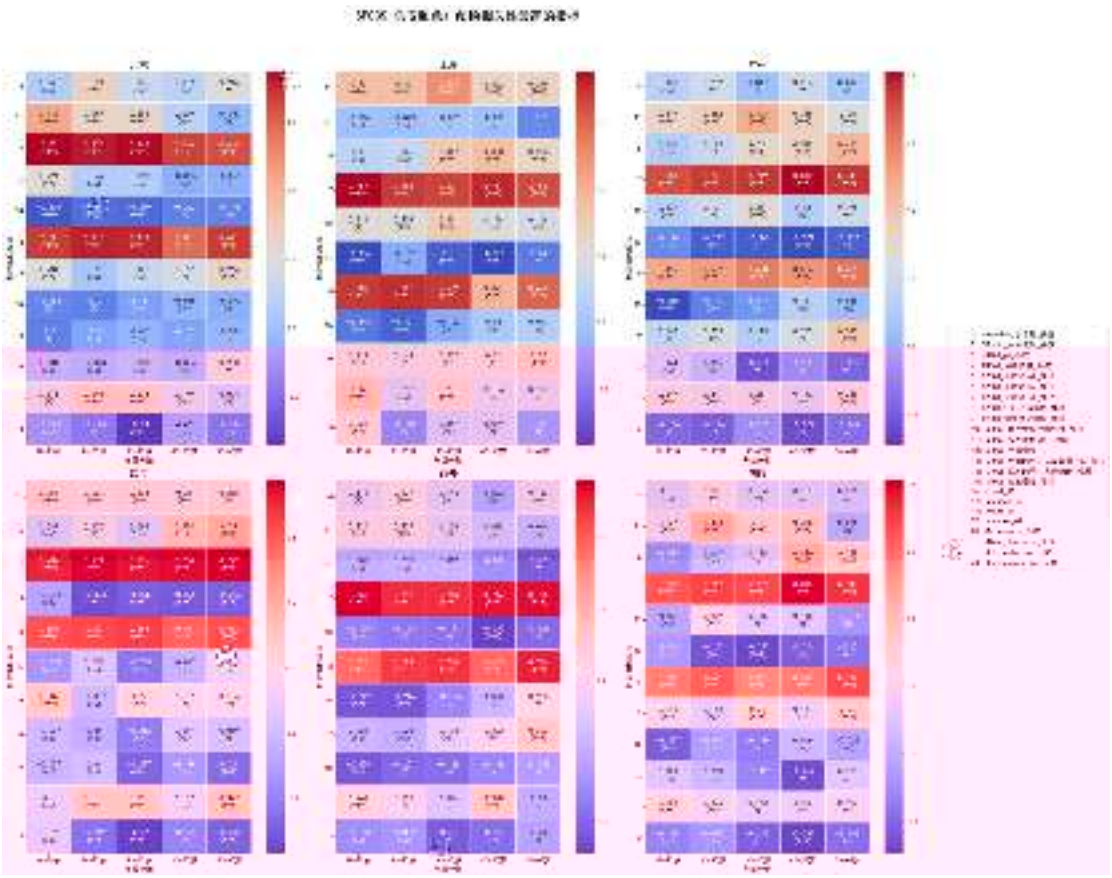
pH

46 – 55 pH 1 0.54

pH

“ ”

pH 3-pH905_pH_ a



3.7 SPOCS_ a _

3.2.3 ——

3.8 SPOCS_

_ 12-SPOCS_ 26-35

-0.4 *** 46-55 -0.448 ***

“ ”

“ ”

46-55

1 0.45

——

“

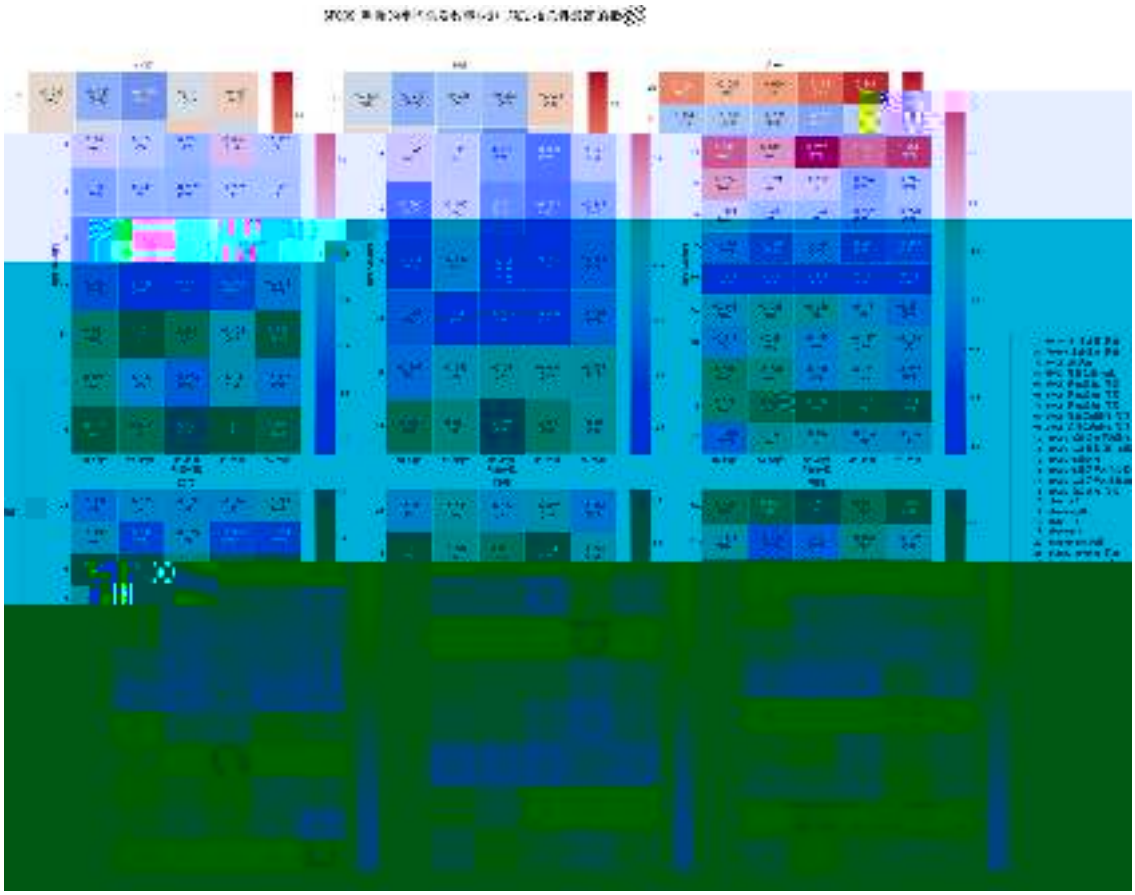
” 36-45

“ ”

-0.386***

“ ” —— 26-35

0.4



3.8 SPOCS_ _

3.2.4

3.9

1.

chao1_41 shannon_41

0.45 56-65 0.555 “

” “ ”

chao1_41 23-Corynebacterium_ *** 56-65

0.487 ***

2. /

chao1_41 21-Staphylococcus_ 56-65
-0.36 ***
20-Malassezia_ *** 56-65
-0.385 ***

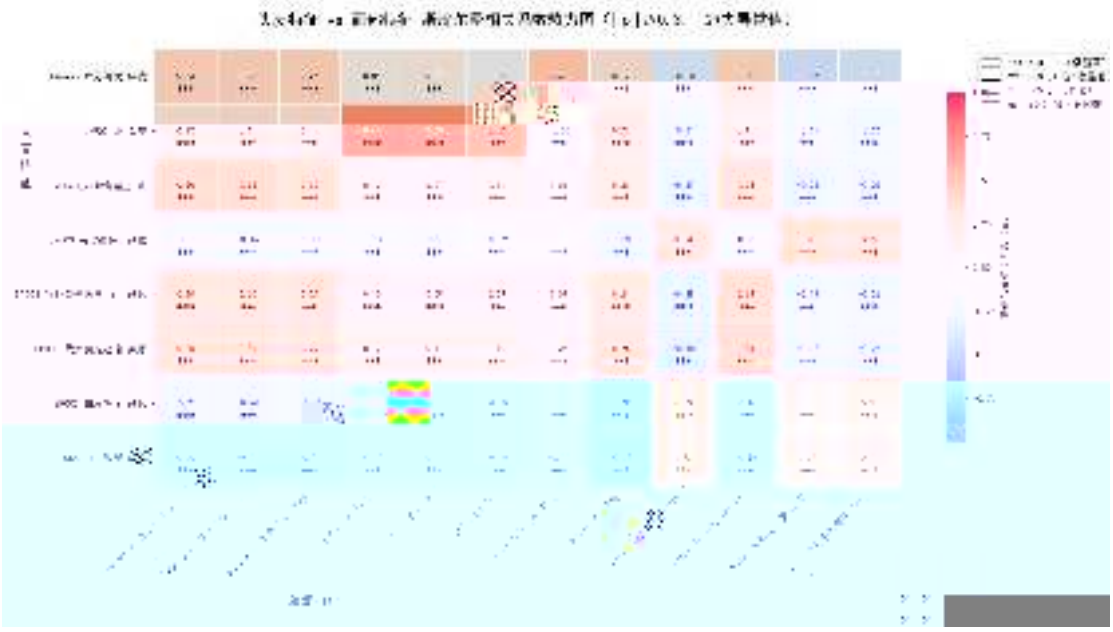
Chao1 Corynebacterium
Staphylococcus

“ ”

“ ”

3.3

3.10



3.10 vs Spearman

3.3.1 ——

a

" "

" "

3.3.2 ——

MB560_ _ Sebumeter_

“ ”

3.3.5

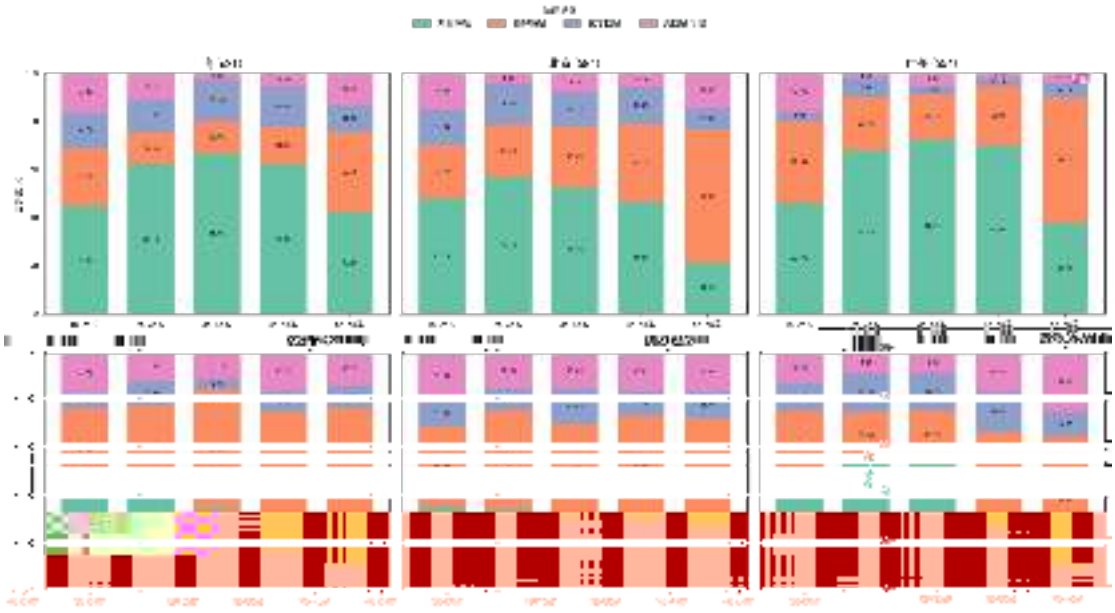
4.1

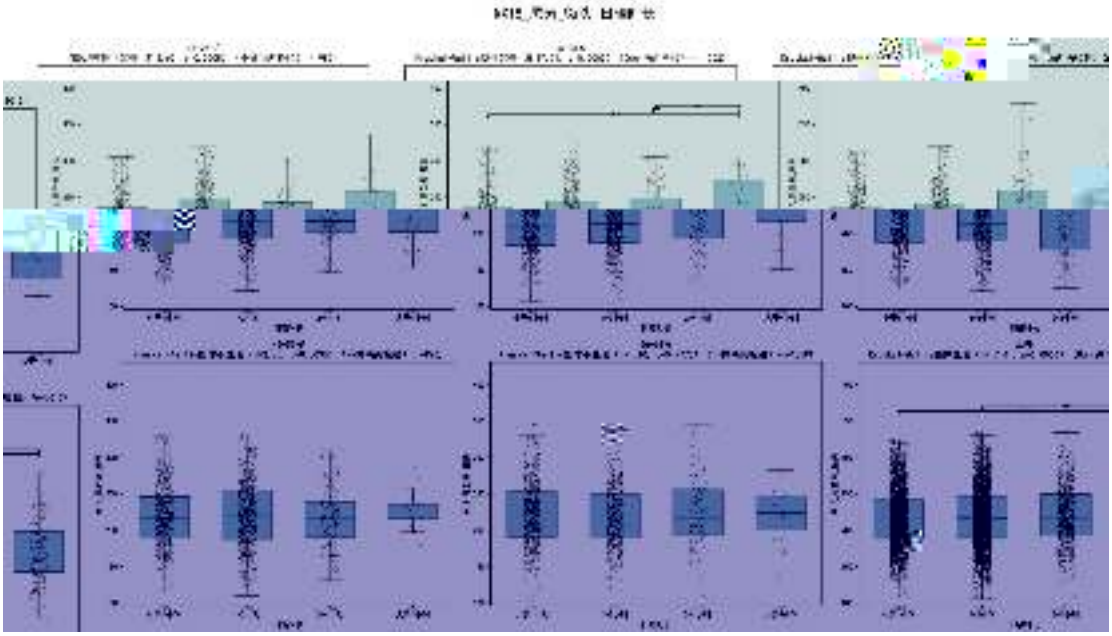
“ ”

“ ”

+

45

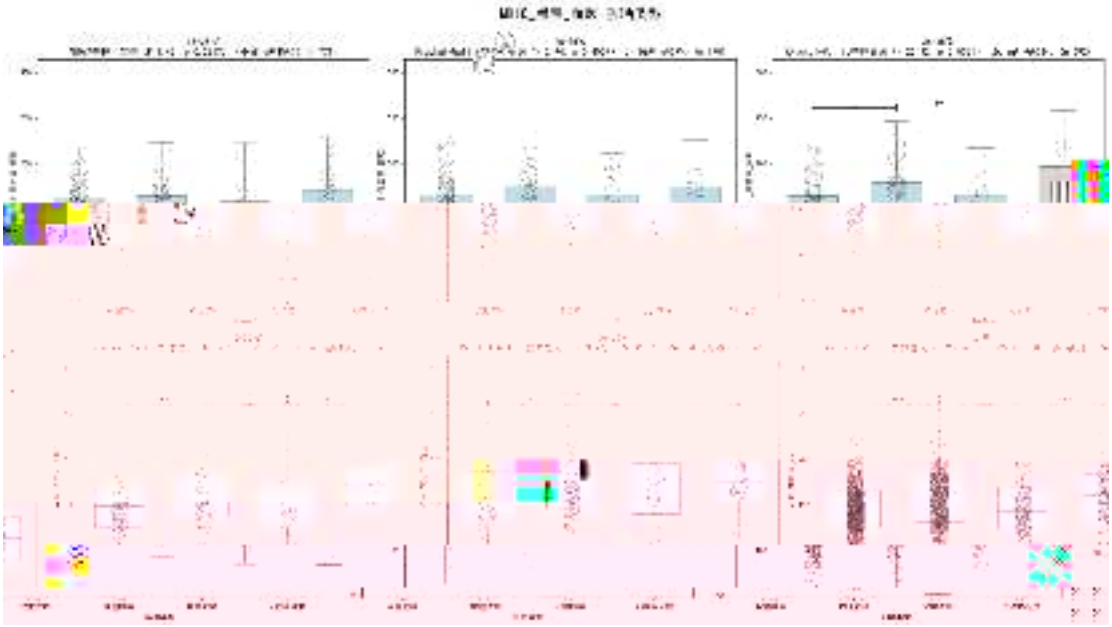




4.1.2 MX18_ _ X

UVA

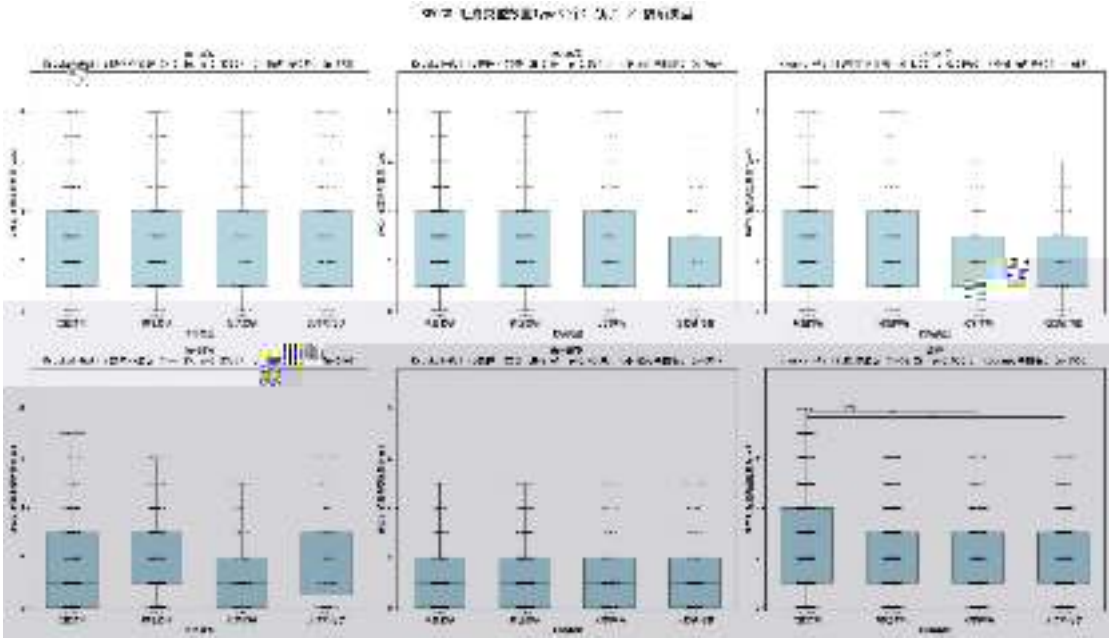
“ ”



4.1.3 MX18_ _ X

“ ”

2



4.1.4 SPOCS_ Type3 X

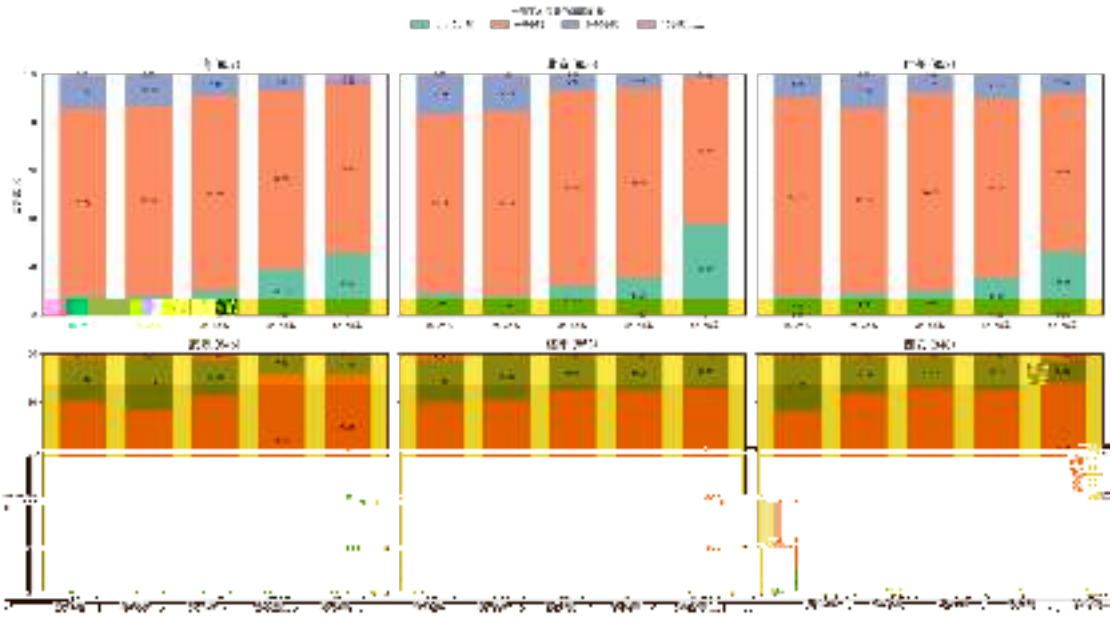
“ ”

3

4.2

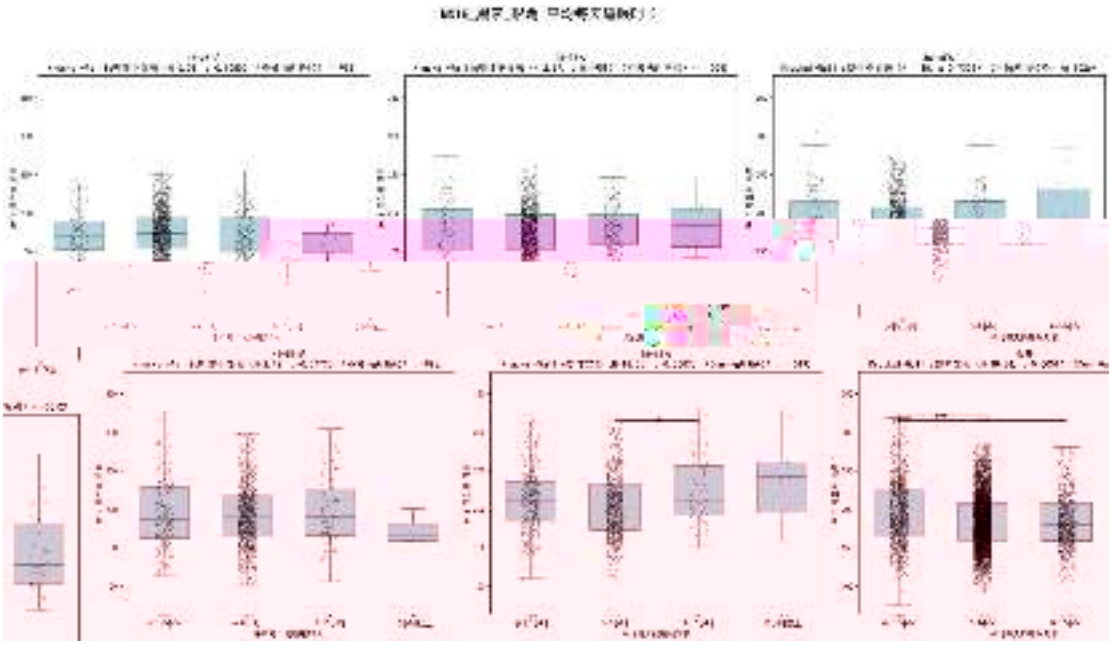
16%

6 23% ——

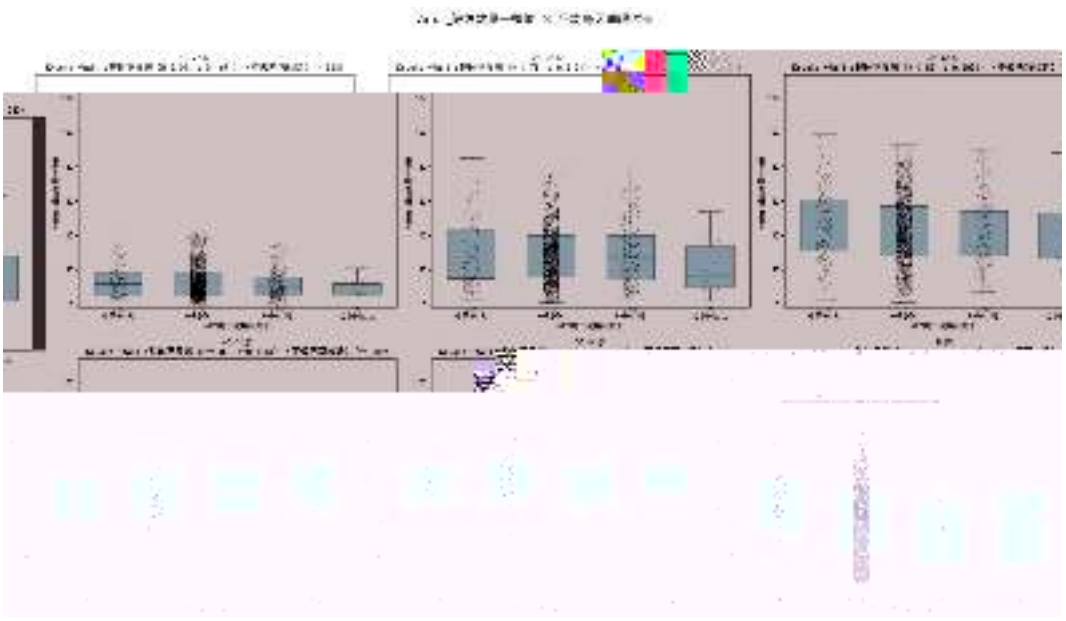


4.2.1

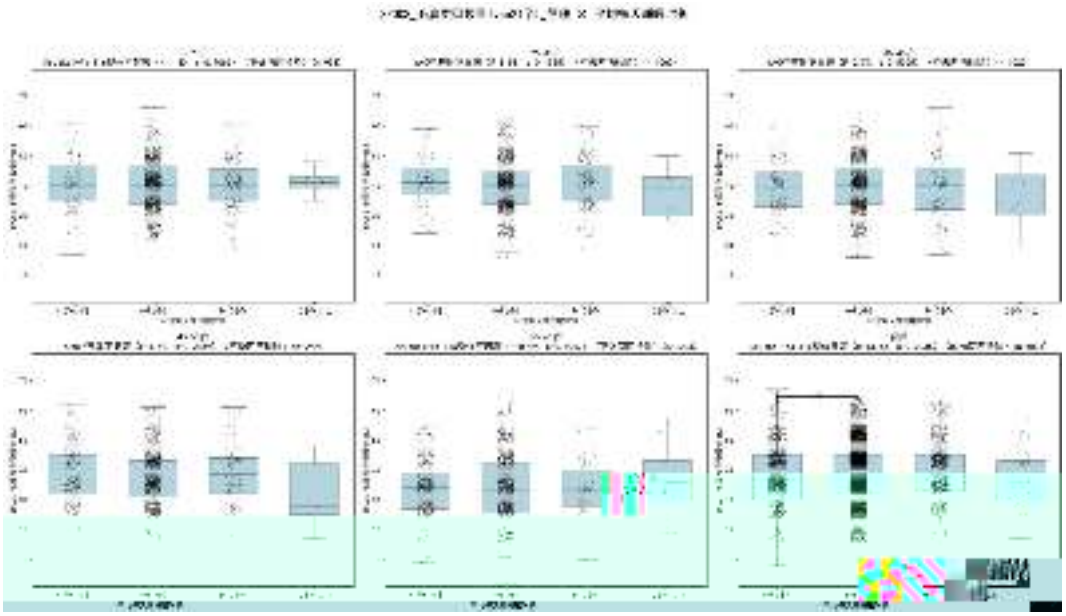
1



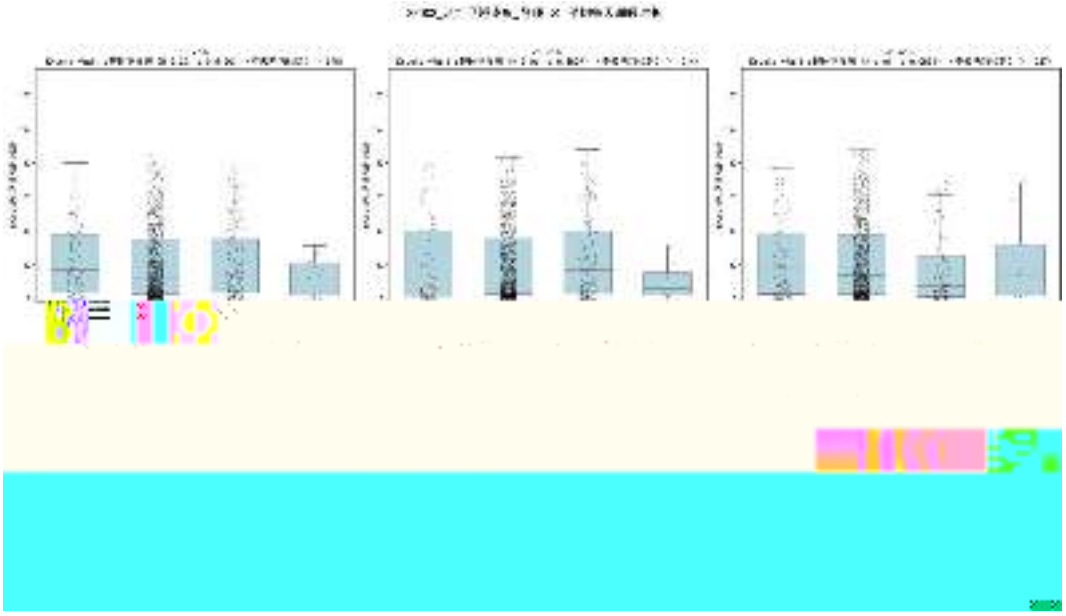
4.2.2 MX18_ _ X



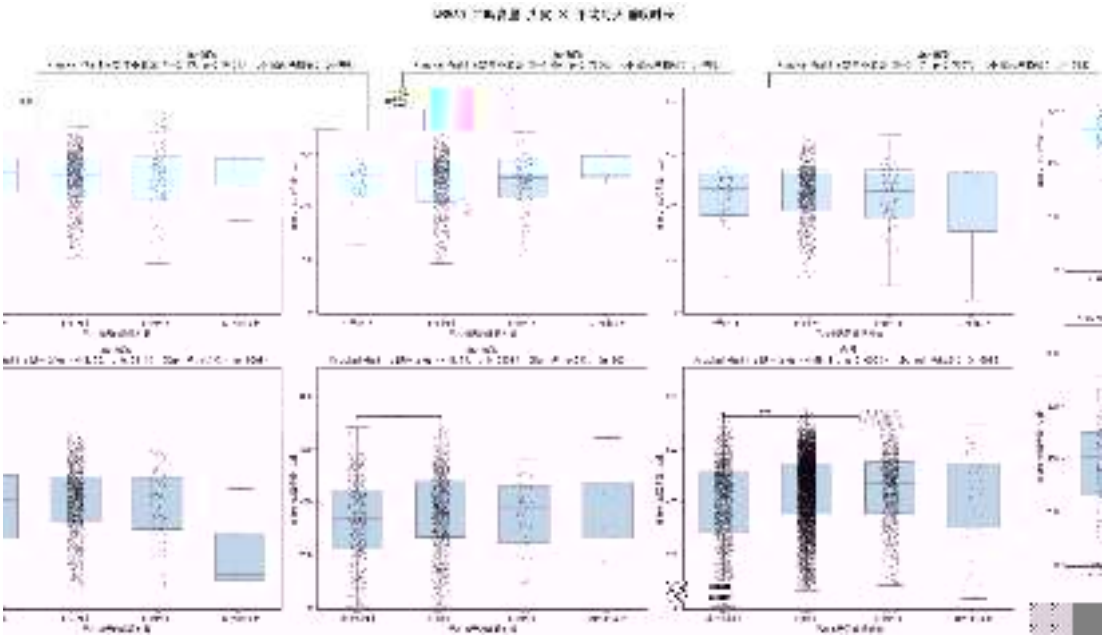
4.2.3 Vplus_ -- X



4.2.4 SPOCS_ Type2X



4.2.5 SPOCS_ X



4.2.6 MB56O_ _ X

6 6 8

8 10

10

18 25

6

26 35 10

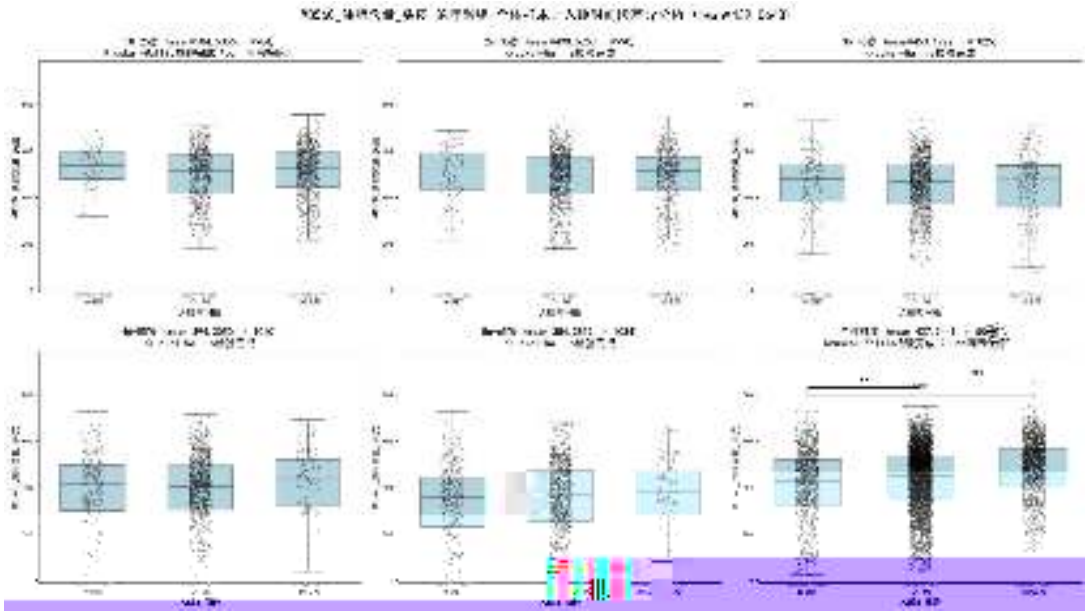
36 45

10 46 55

6 8 8 10

56 65 6 10

8 10



4.2.7 MB560_ _ X

*** 12

10

10 →10-12 →

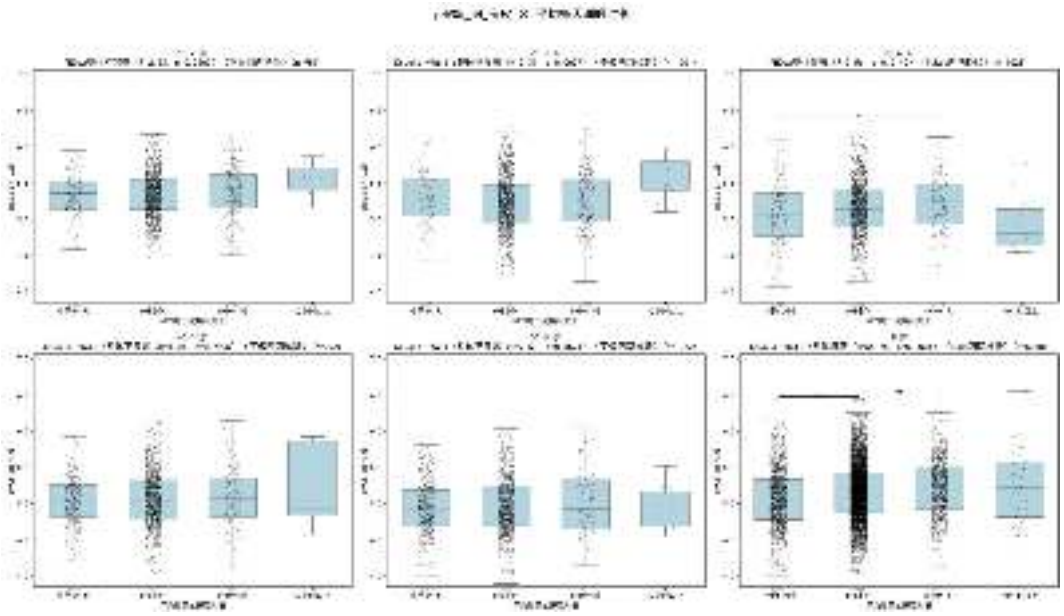
12 12

18-25 10 12 26-35

10-12 12 36-45 10

12 46-55 12

56-65 12



4.2.8 pH905_pH_ X

pH

pH

6 6 8 pH

8 10 pH 10

pH pH

18 25

pH 10 pH

26 35 pH 10

36 45 10 pH

6 8 8 10 pH

46 55 pH 56 65

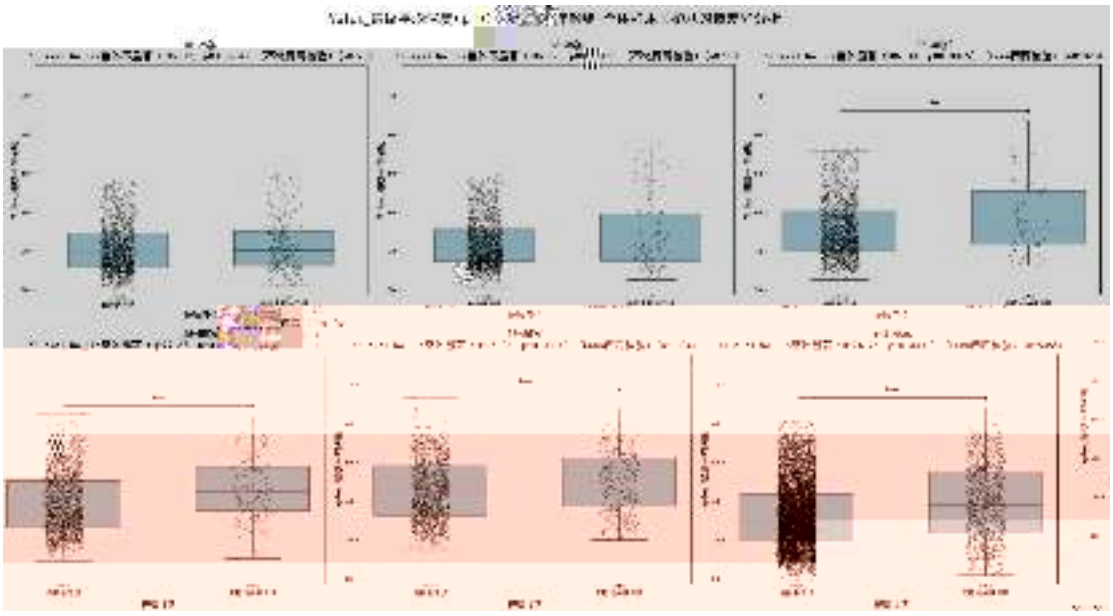
10 pH

6 10

H

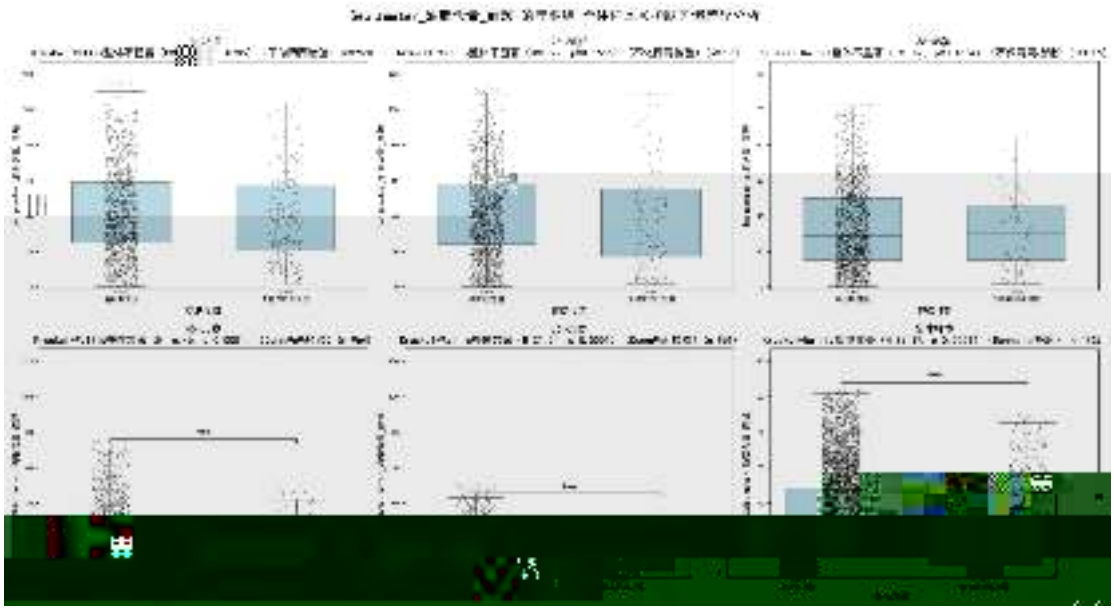
4.3

4.3.2 CM825_ _ X



4.3.3 Vplus_ X

" "



4.3.4 Sebumeter_ _ X

4.4

5000

BMI

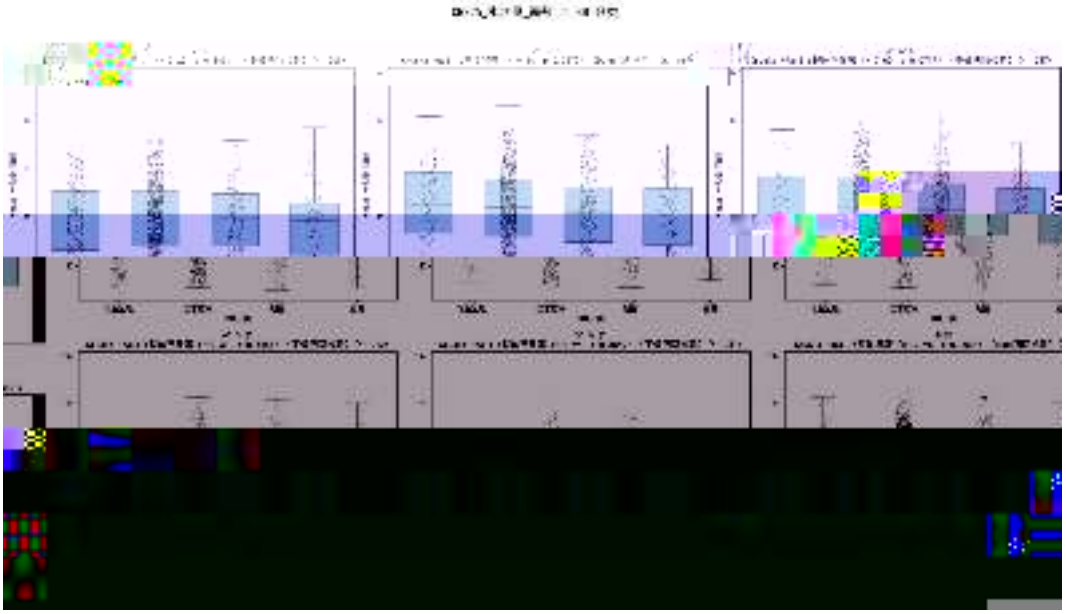
BMI 18.5 / BMI ≥ 24.0

BMI 18.5-24.0 “ ”

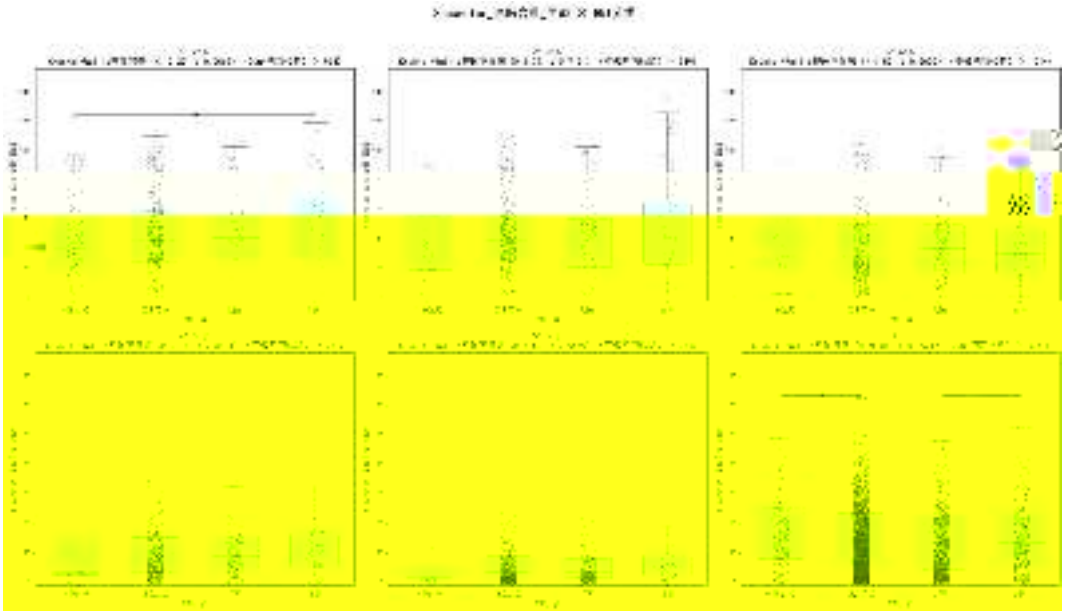
1

“ ” BMI

“ ”



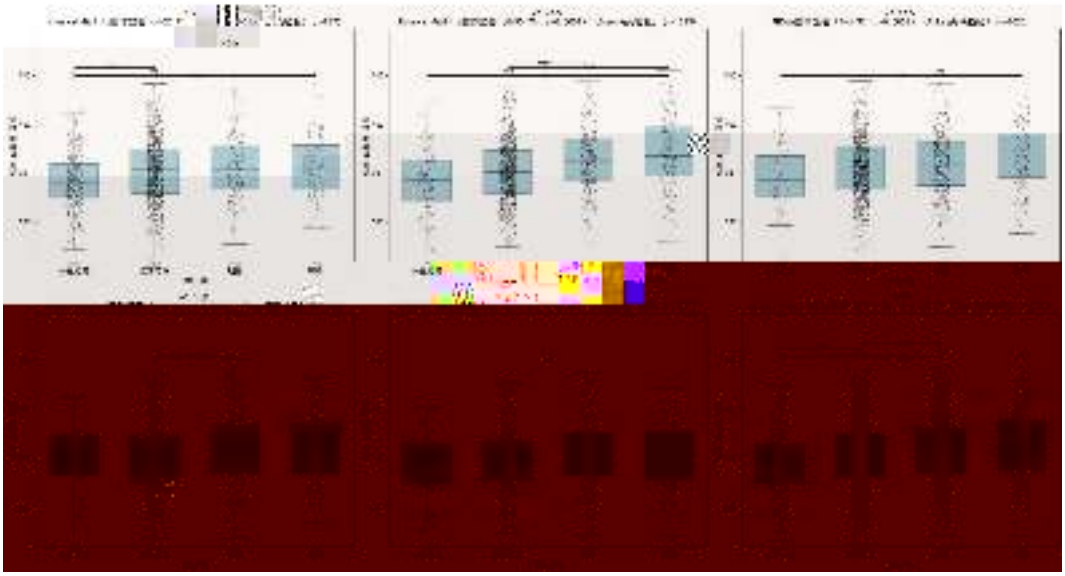
4.4.1 CM825_ _ XBMI



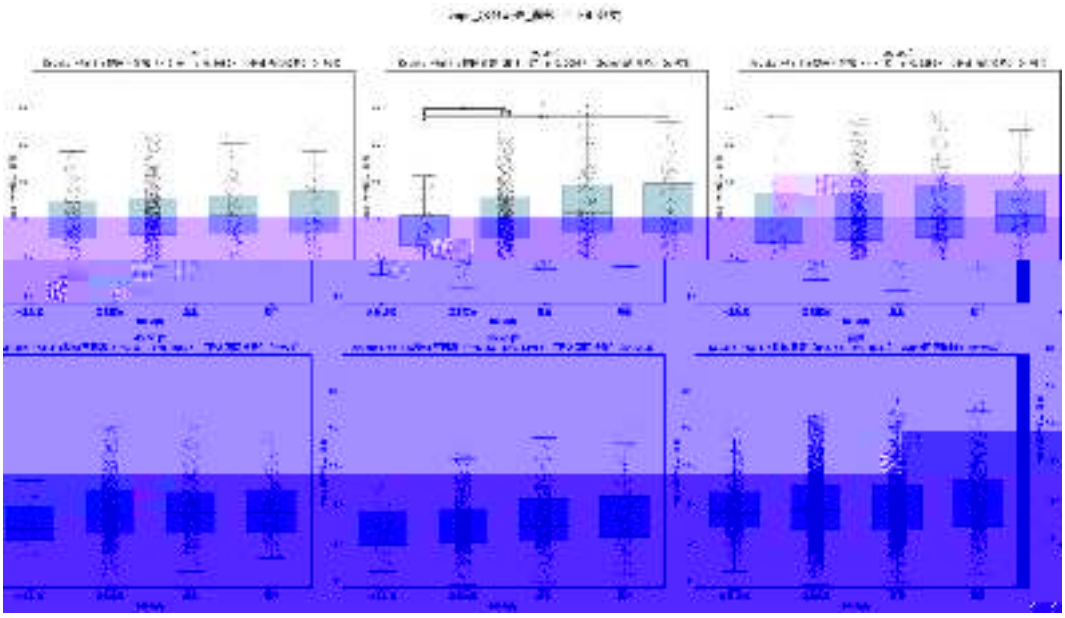
4.4.2 Sebumeter_ _ X BMI

BMI **24.0**

BMI



4.4.3 MX18_ _ X BMI



4.4.4 vapo_ _ X BMI

BMI

Lab L BMI a

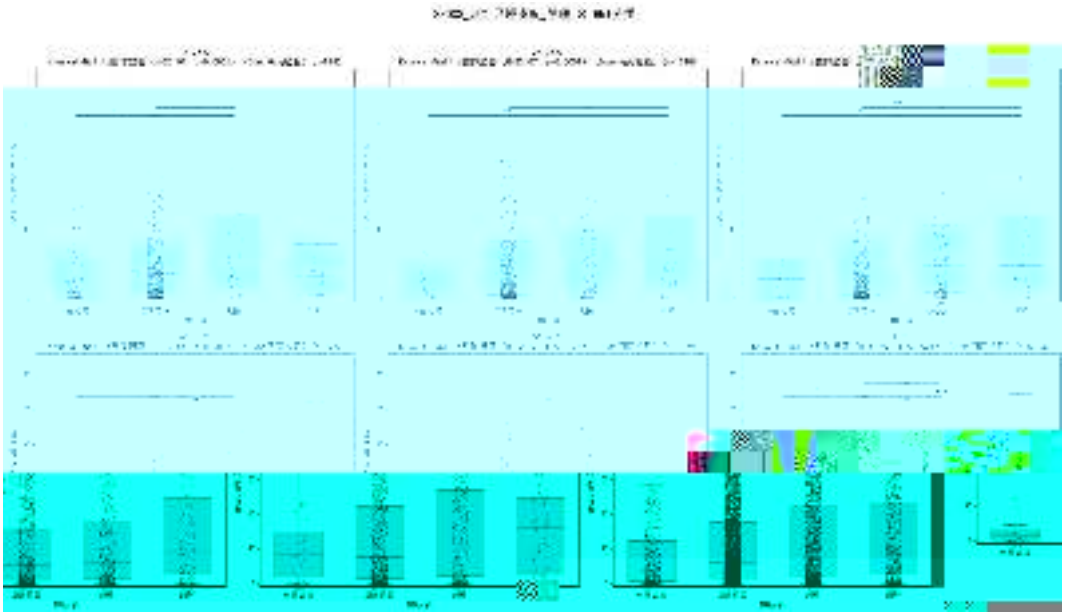
“ ”

BMI

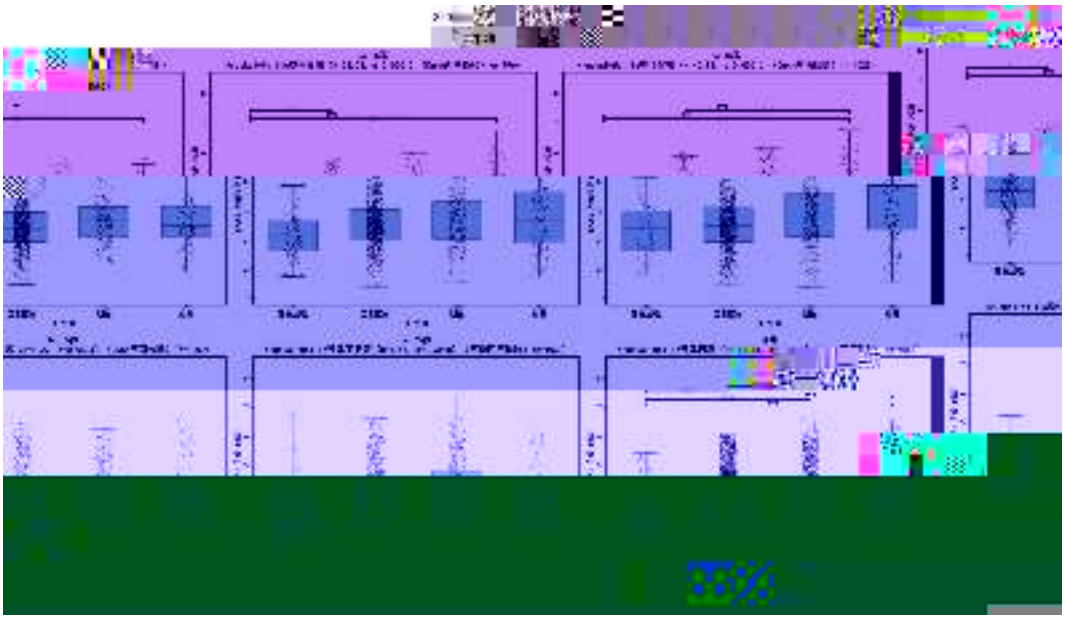
BMI

“ ”

BMI



4.4.6 SPOCS_ _ X BMI



4.4.7 SPOCS_ _ X BMI

BMI

BMI Lab a b

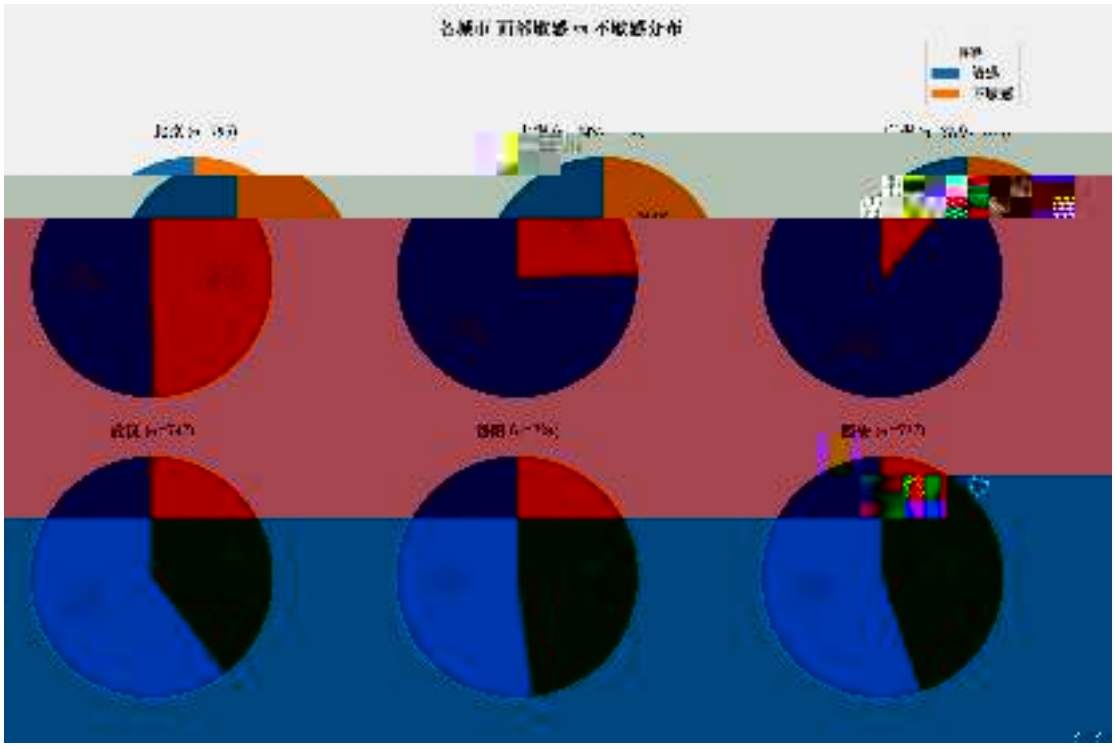
3

BMI

BMI

4.5

4.5.1



4.5.1

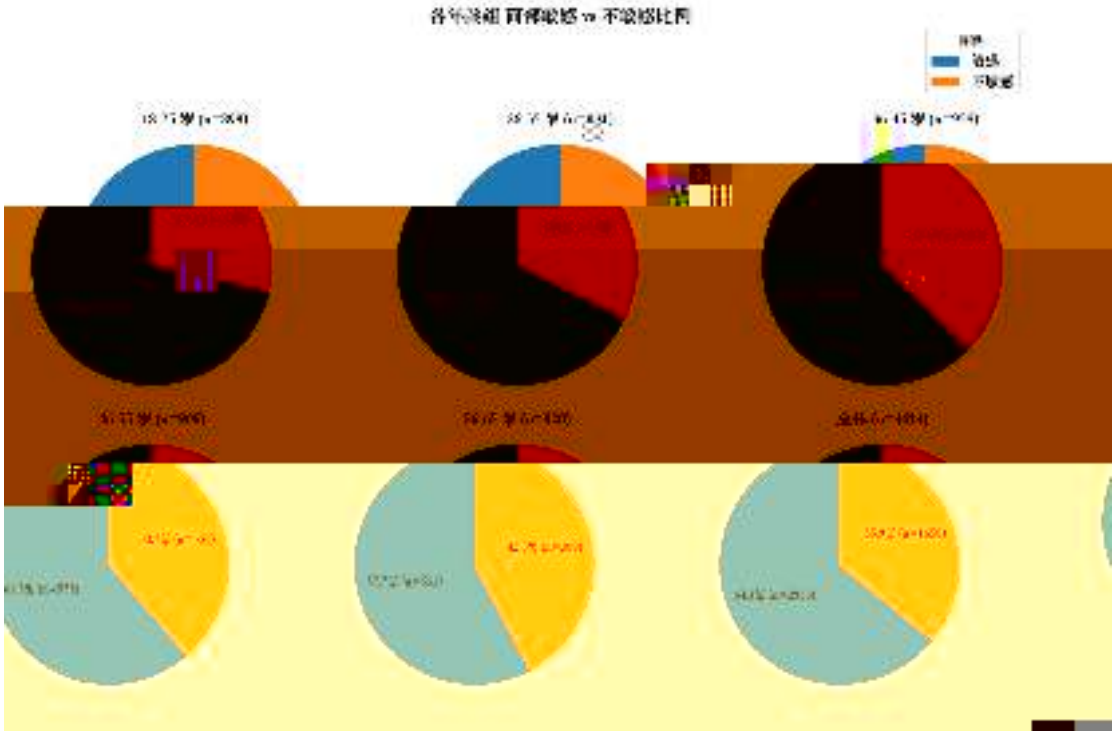
64.1%

88.3%

75.6% 60.4% 52.1%

55.1% 50.3%

4.5.2



4.5.2

64.1%

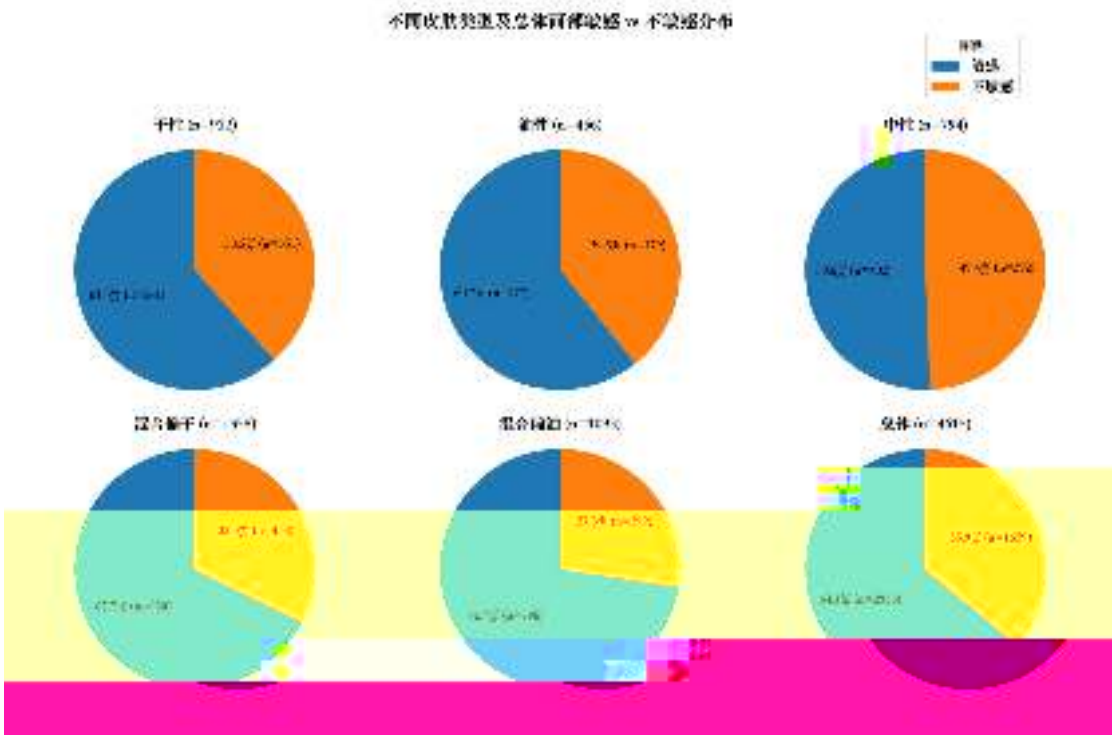
18-25 71.3%

26-35 67.6% 36-45 62.6% 46-55 61.3%

56-65 57.7%

18-25

4.5.3



4.5.3

72.7%

67.7%

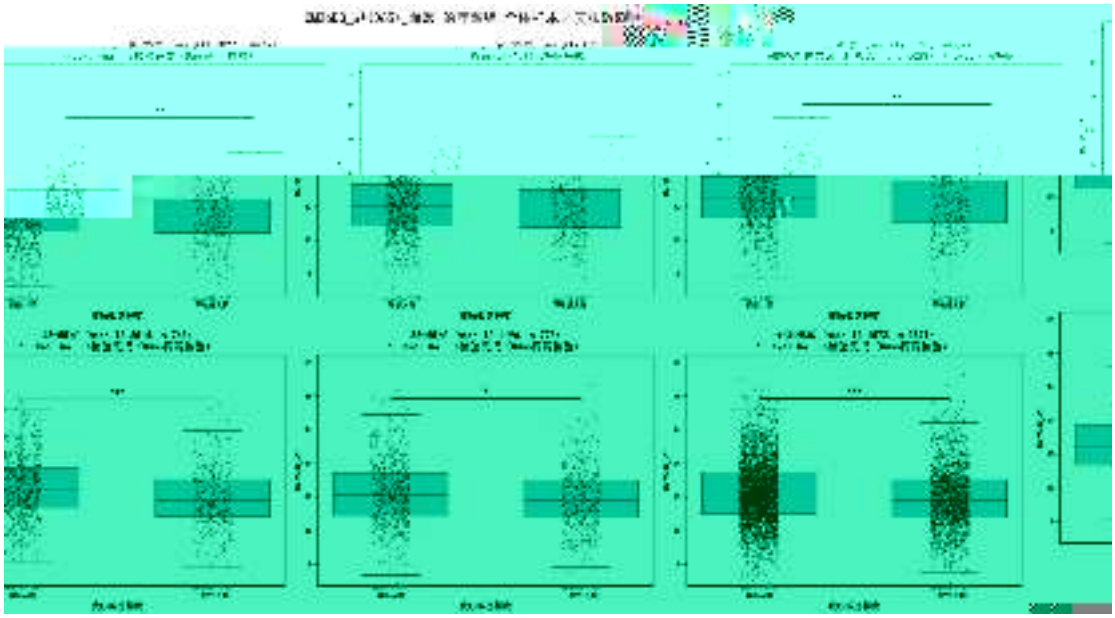
61.5% 60.7% 50.6%

72.7%

50.6%

4.5.4

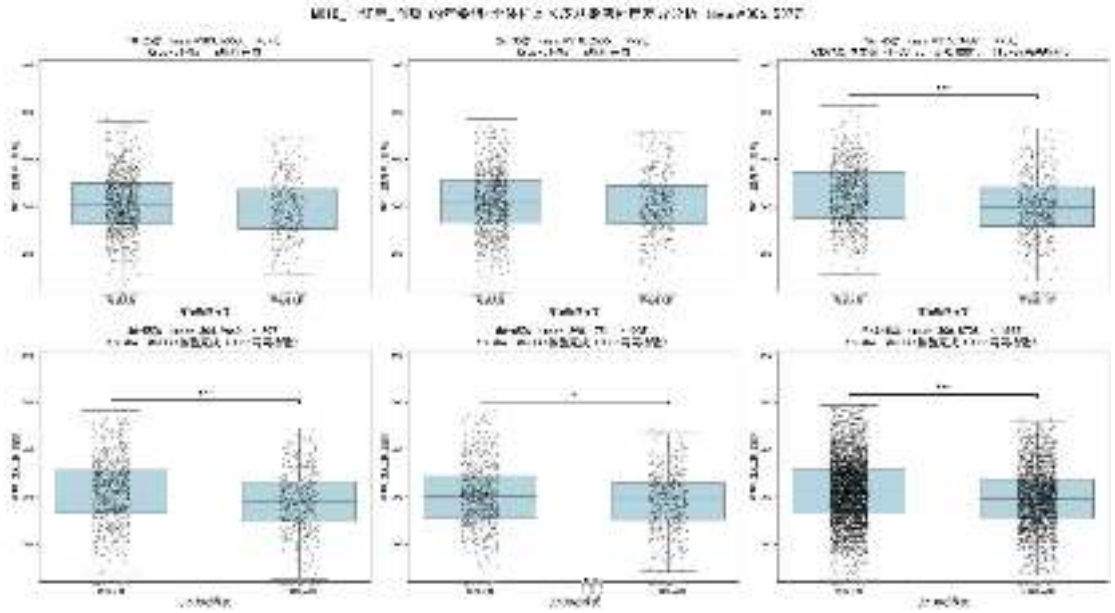
1



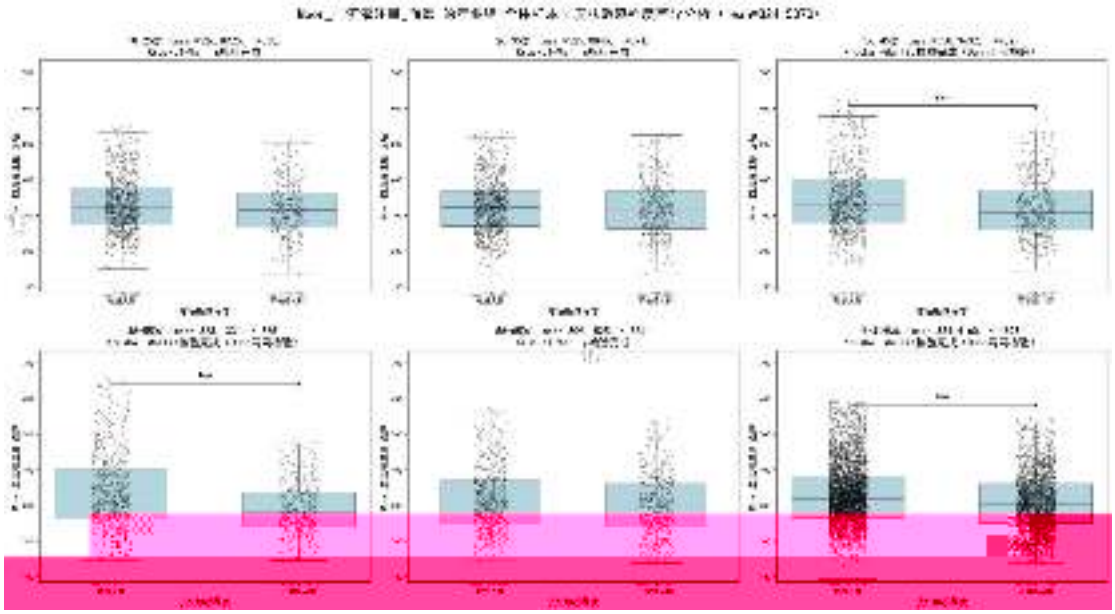
4.5.4 CM26DG_a* D65 _ X

CIE Lab **a**

b **L** **a**



4.5.5 MX18_ _ X

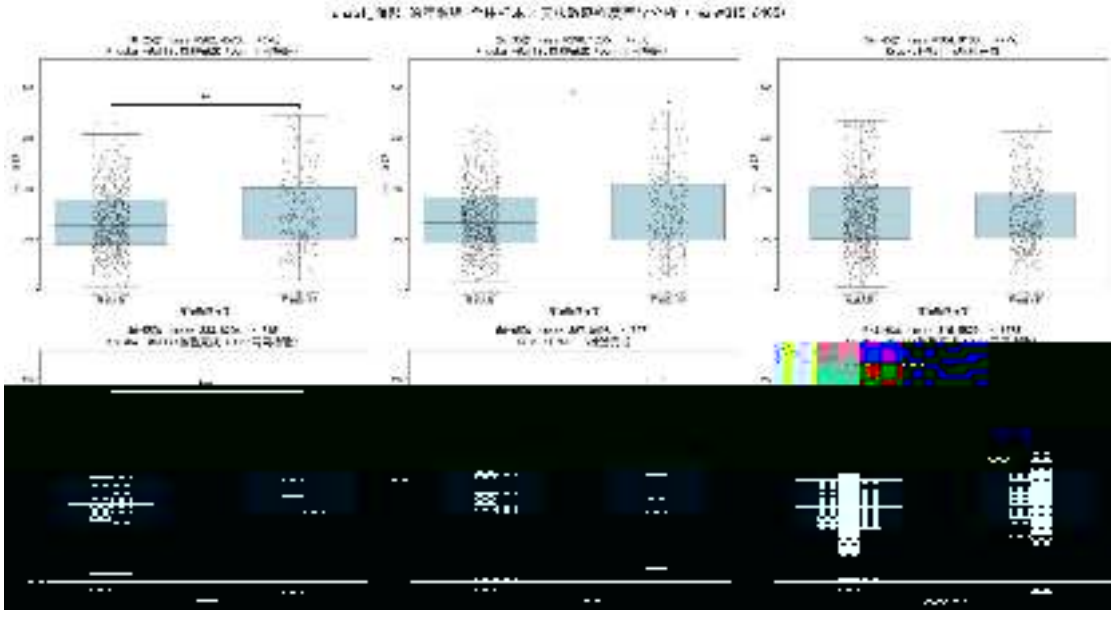


4.5.6 Moor_ _ X

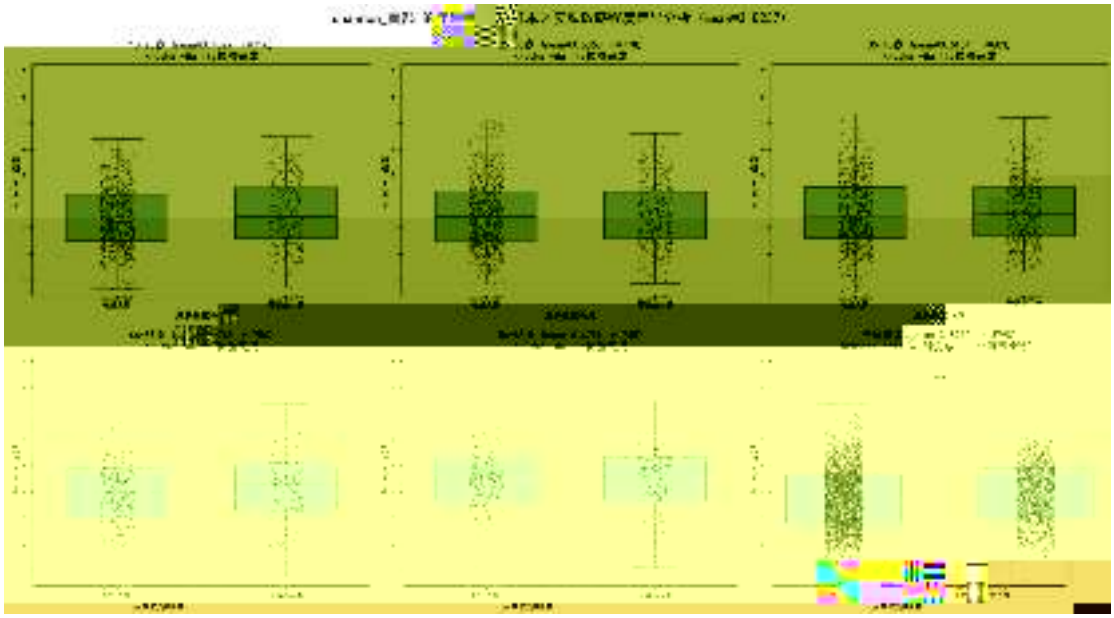
4.30

4.30

2



4.5.7 chao1_ X



4.5.8 shannon_ X

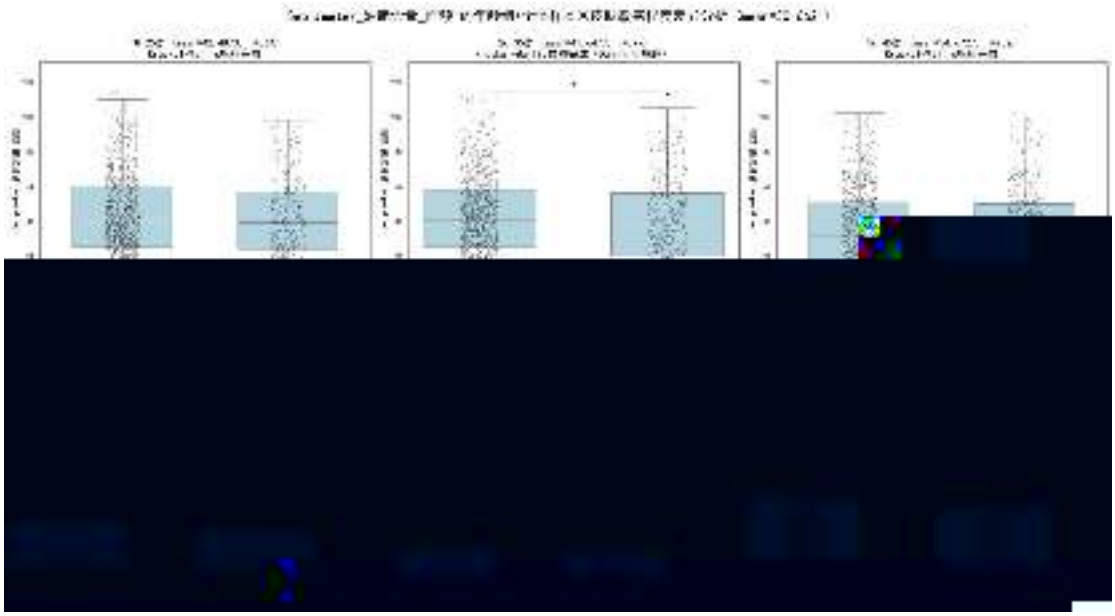
Chao1 Shannon

pH

TEWL

“ — — ”

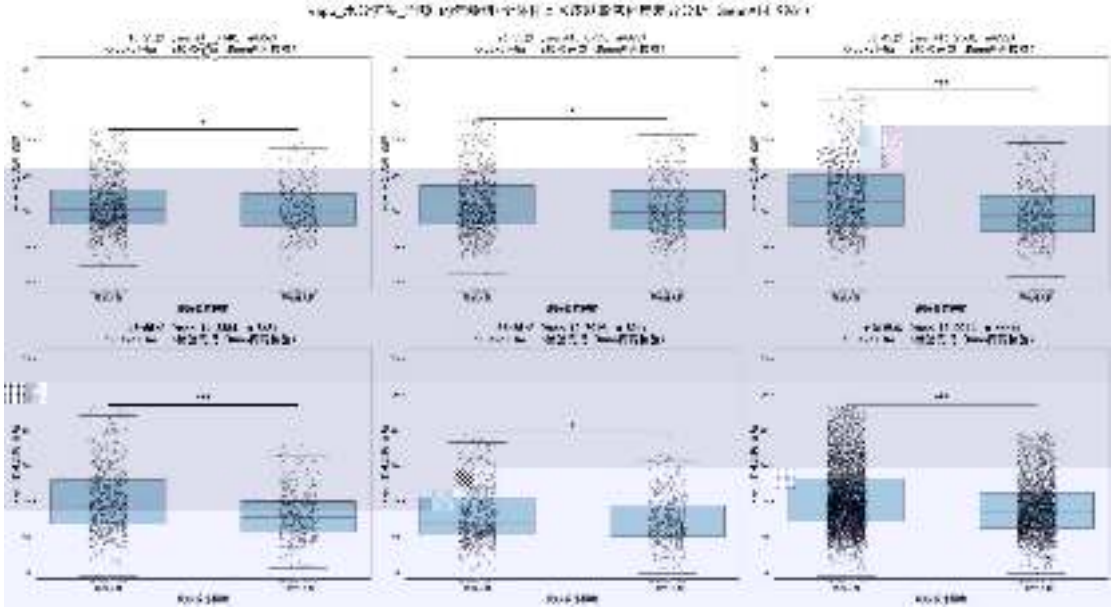
3



4.5.9 Sebumeter_ _ X

TEWL

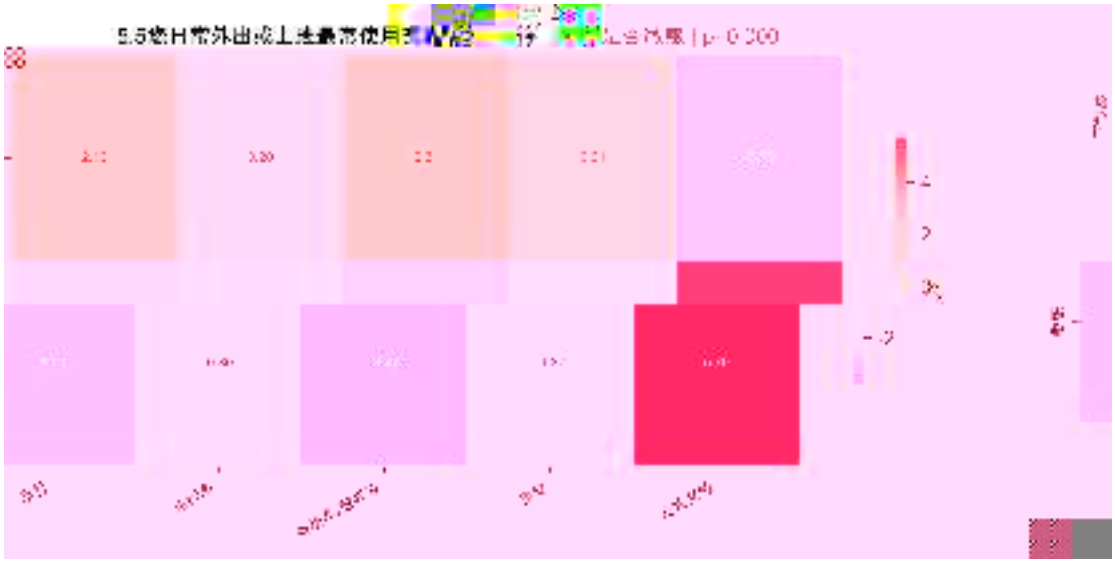
TEWL



4.5.10 vapo_ _ X

4

4.5.14 X



4.5.15 X

“1 – 2 ” “2 – 4 ”

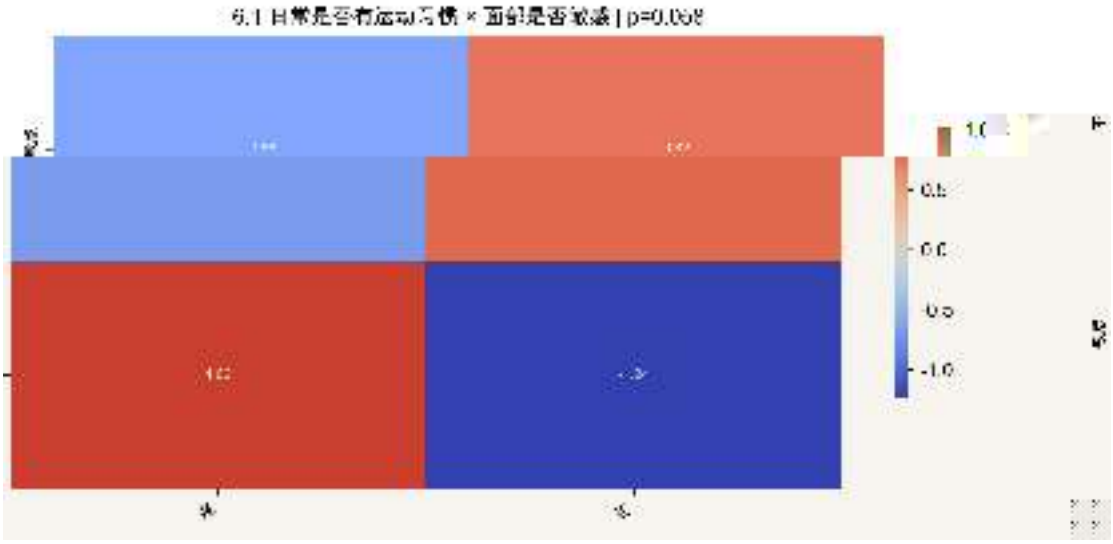
“ ≤1 ”

OR “ + ”

“ ” “

” OR 1

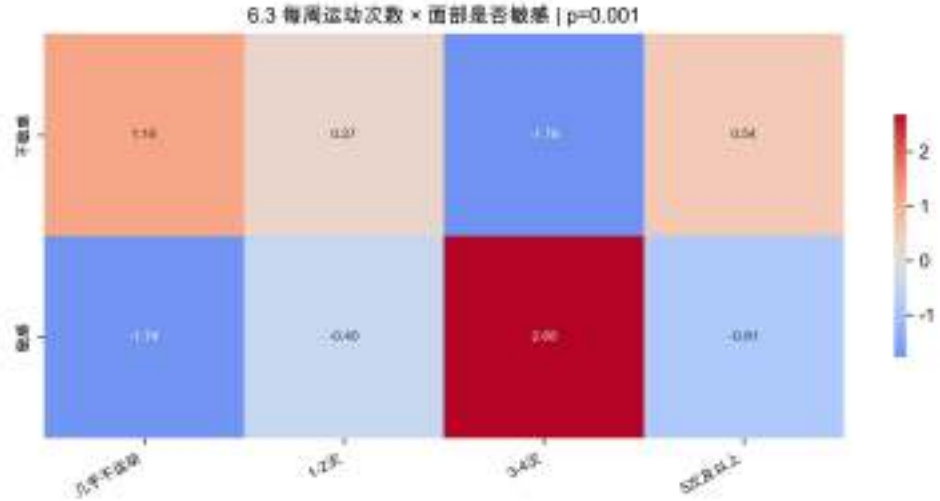
3



4.5.16 X

6.2 每天运动时长 × 面部是否敏感 | p=0.064
1.0
0.5
0.0
-0.5
-1.0

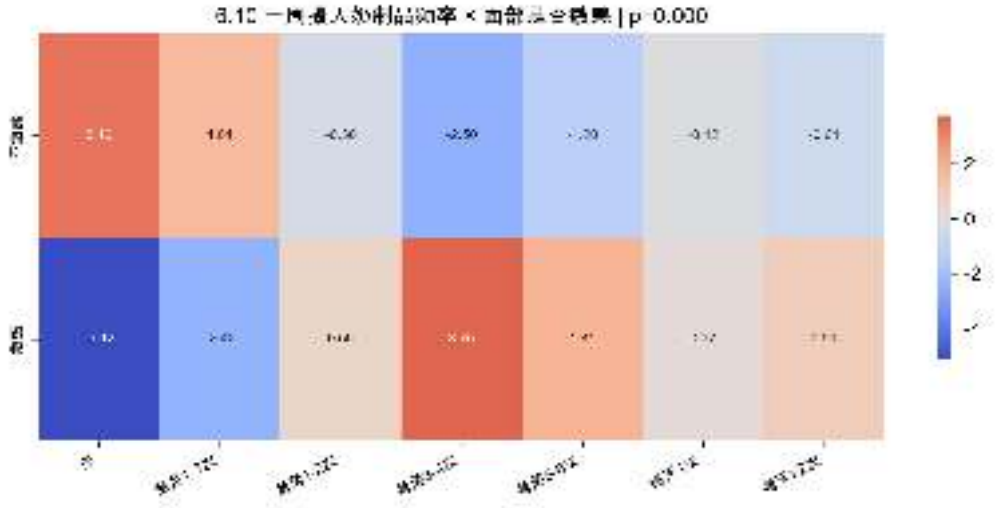
4.5.17 X


6.3 每周运动次数 × 面部是否敏感 | p=0.001
2
1
0
-1

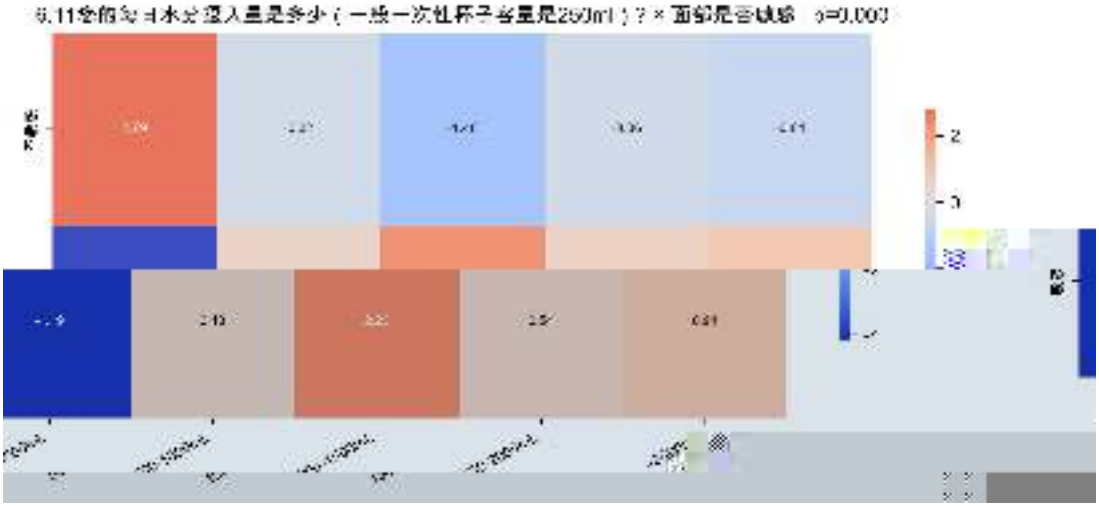
4.5.18 X

4.5.19 X

4.5.20 X



4.5.21 X

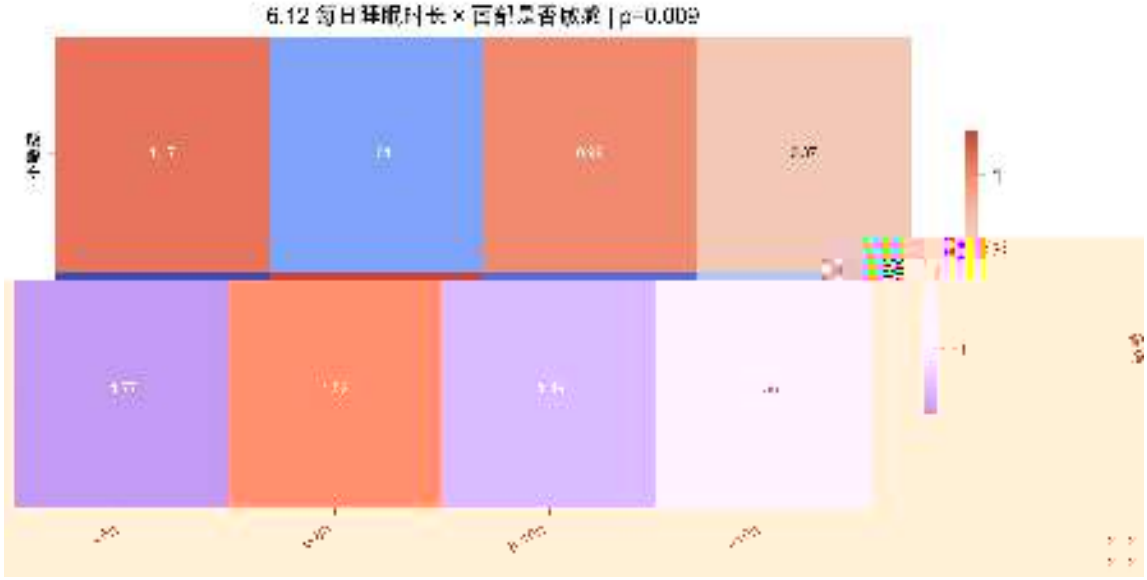


4.5.22 X

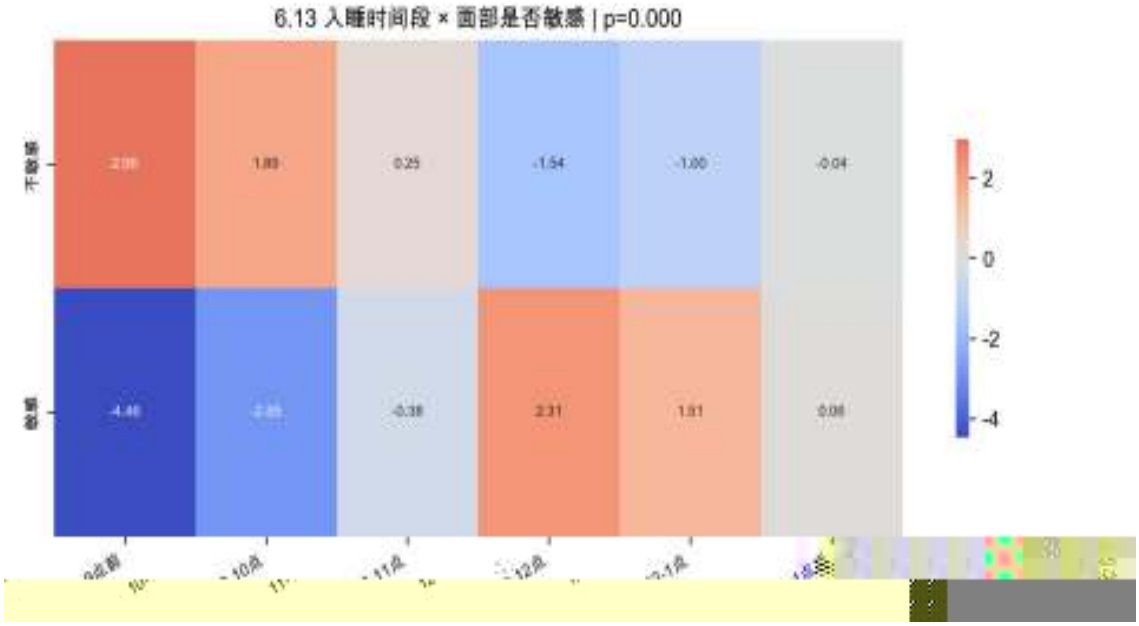
3 – 6

1000 mL

500 mL



4.5.23 X



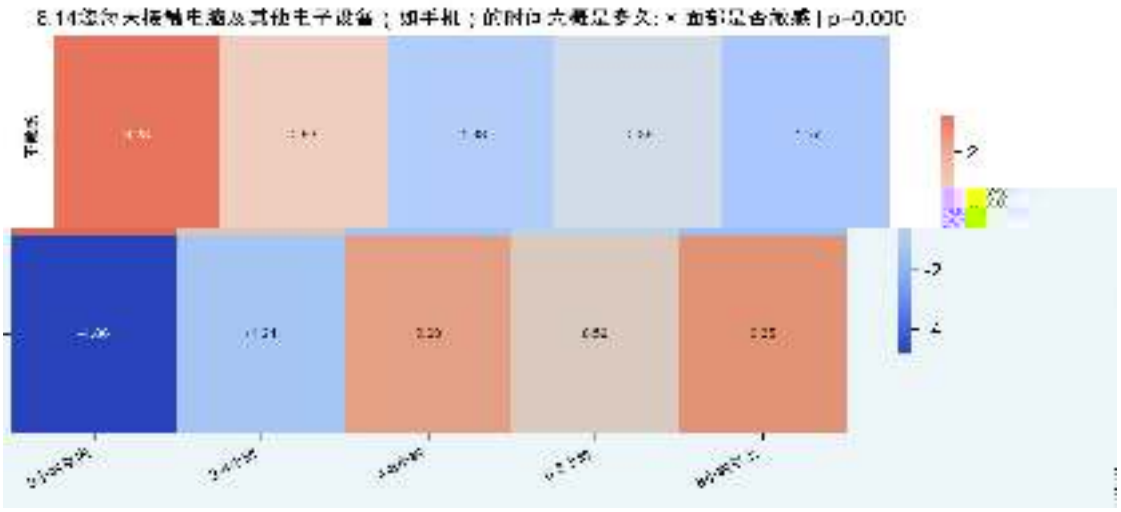
4.5.24 X

6.12 6 8 – 10 6 – 8

6.13 9 9 – 10 11 11 – 12 12 – 1 “ ”

“ ”

6

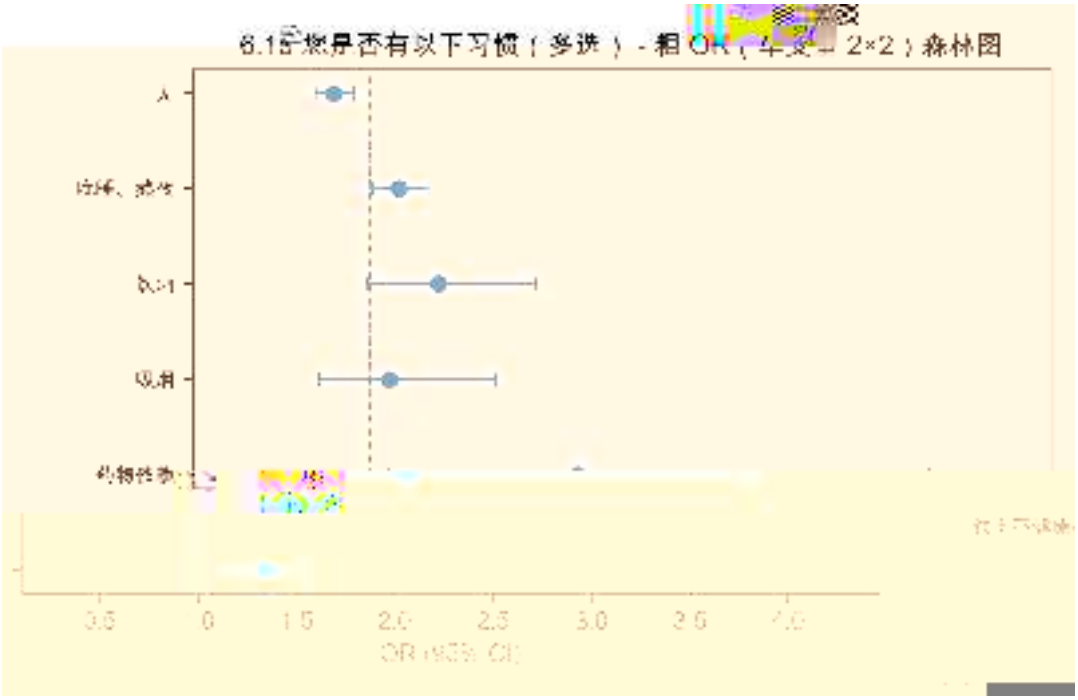


4.5.25 X

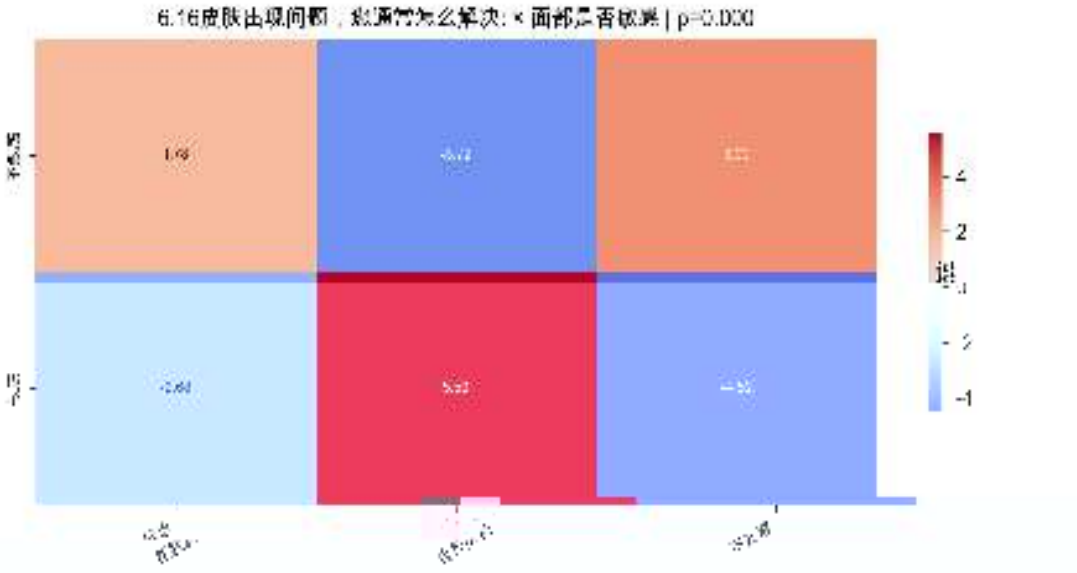
2

4 – 6 8

7



4.5.26 X

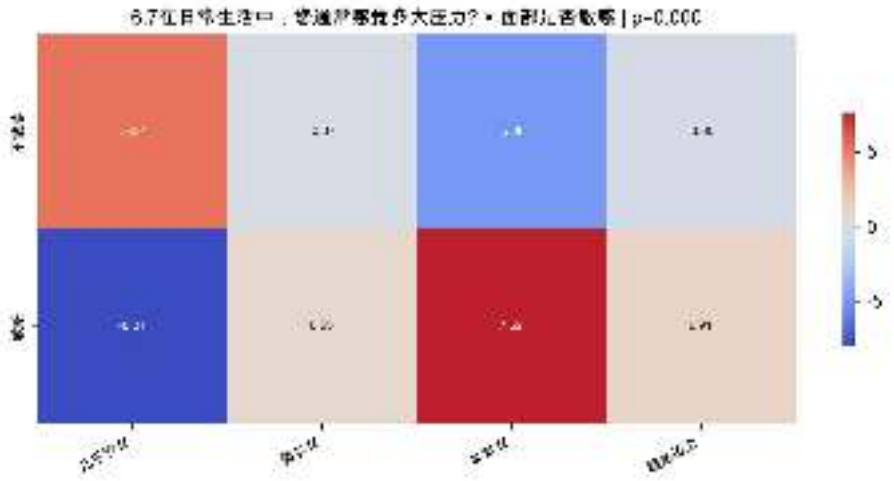


4.5.27 X

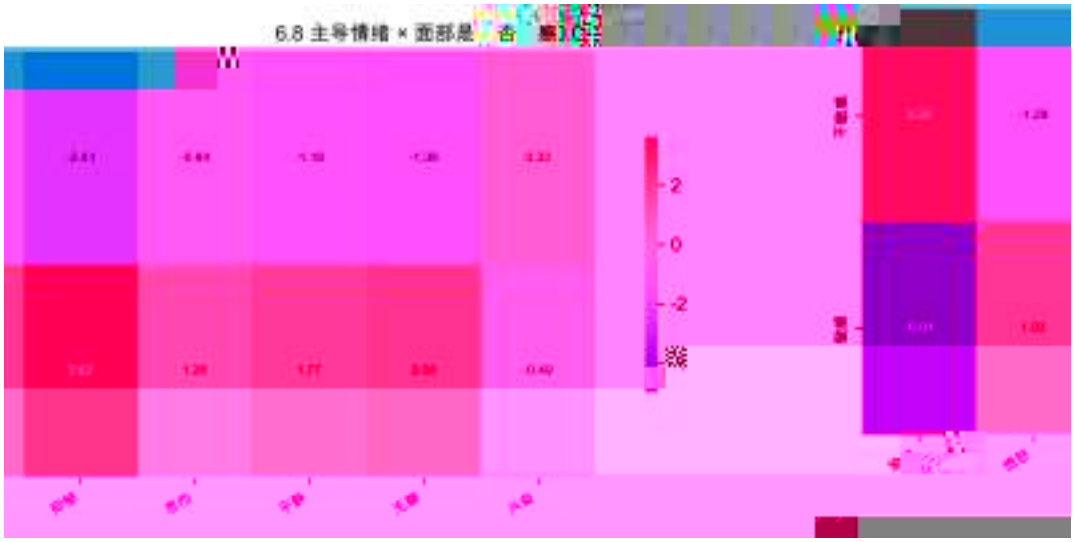
OR

6.15 “ ” “ ” “ ” “ / ”

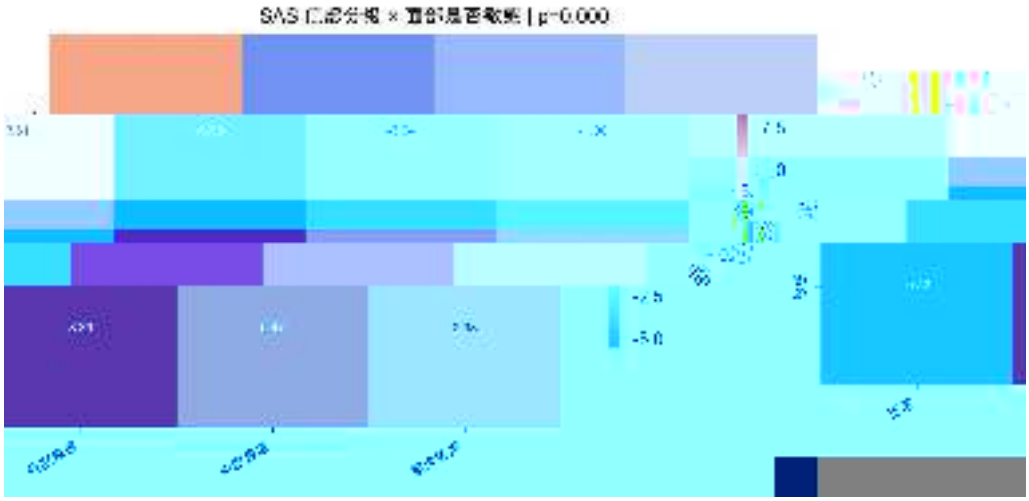
8



4.5.28 X



4.5.29 X



4.5.30 SAS X

SAS

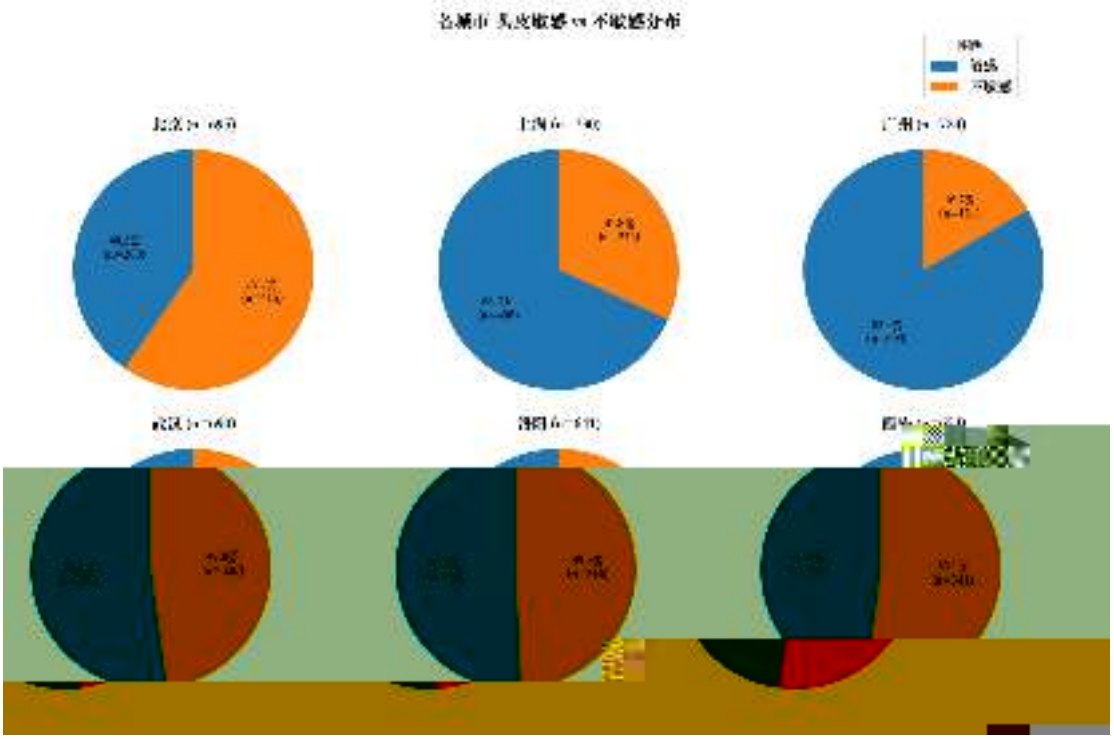
“ → → → ”

“ ” “

”

4.6

4.6.1



4.6.1

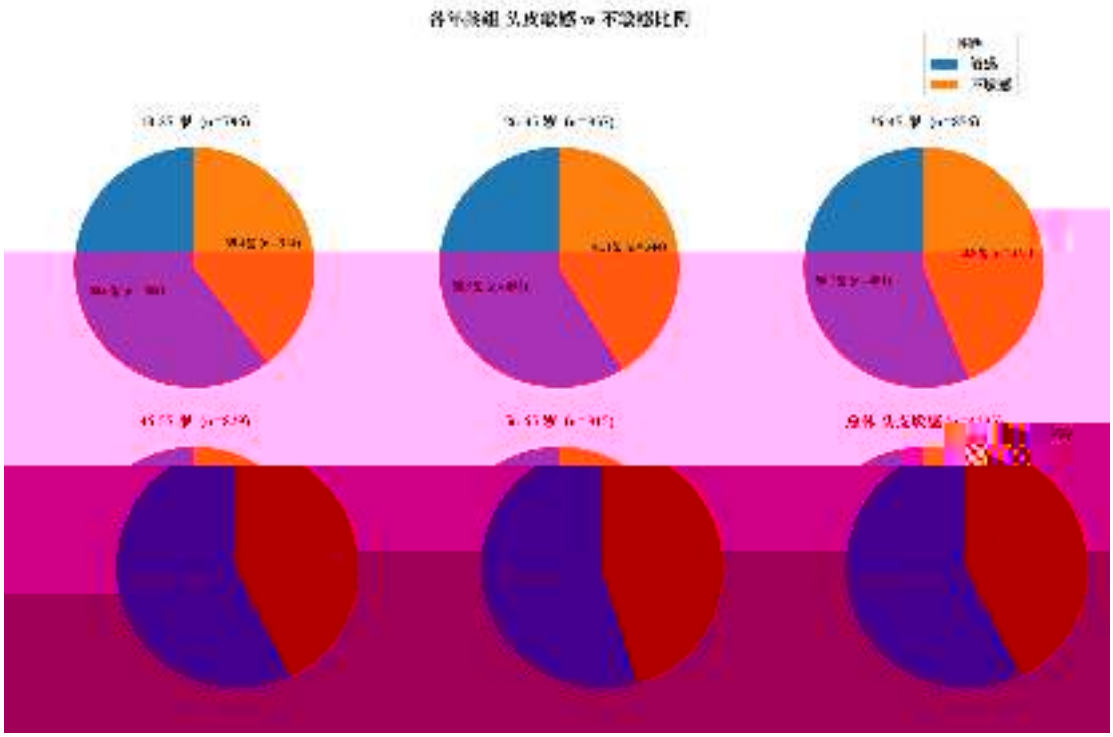
57.5%

83.3%

68.2%3

e) 7%

4.6.2



4.6.2

57.5%

18 – 25 60.6%

26 – 35 58.9% 36 – 45 56.2% 46 – 55 57.3%

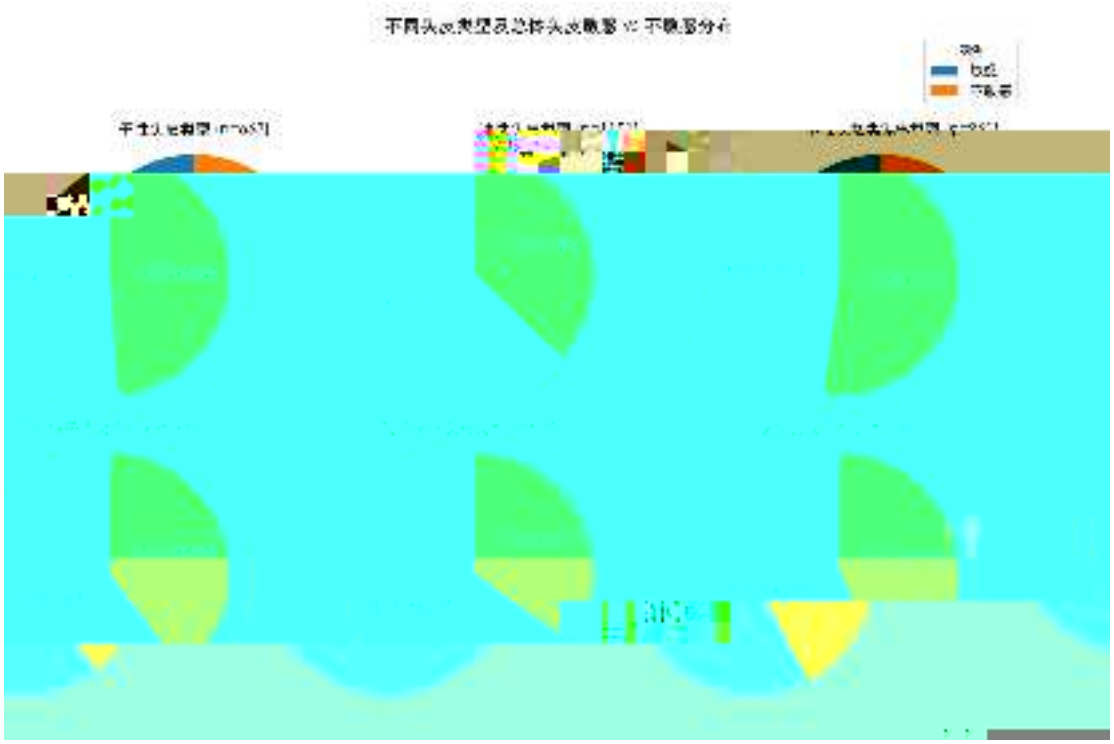
56 – 65 54.8% “

”

/

18 – 35

4.6.3

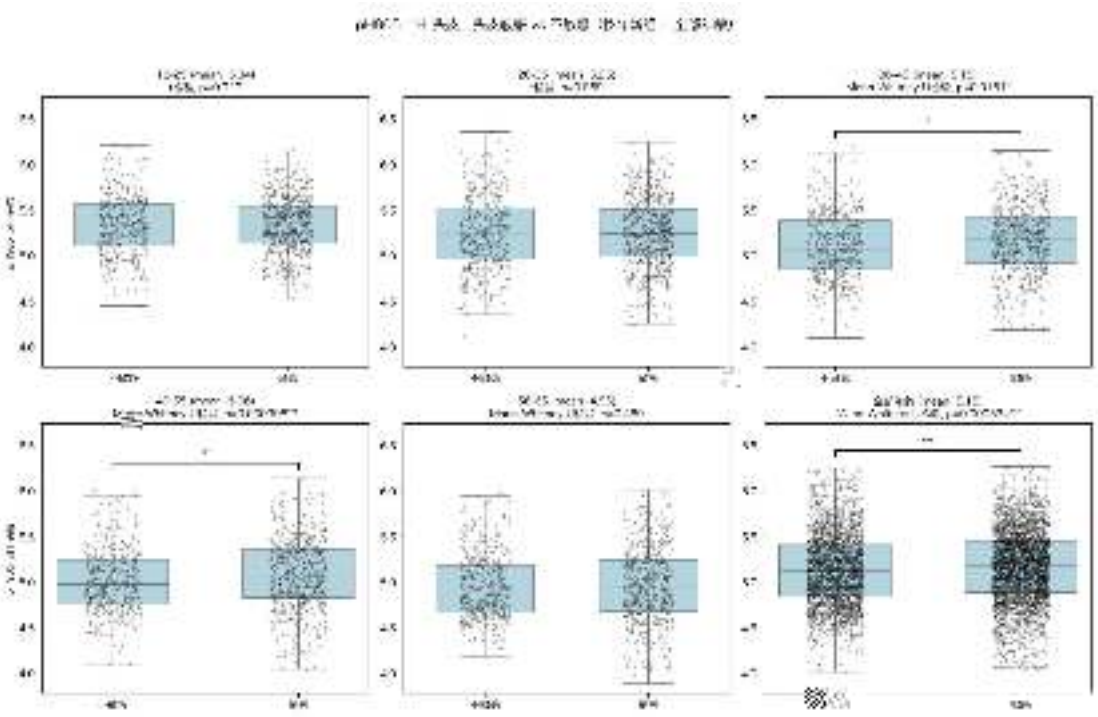


4.6.3

65.1% 62.9% 60.3%

51.0% 47.9%

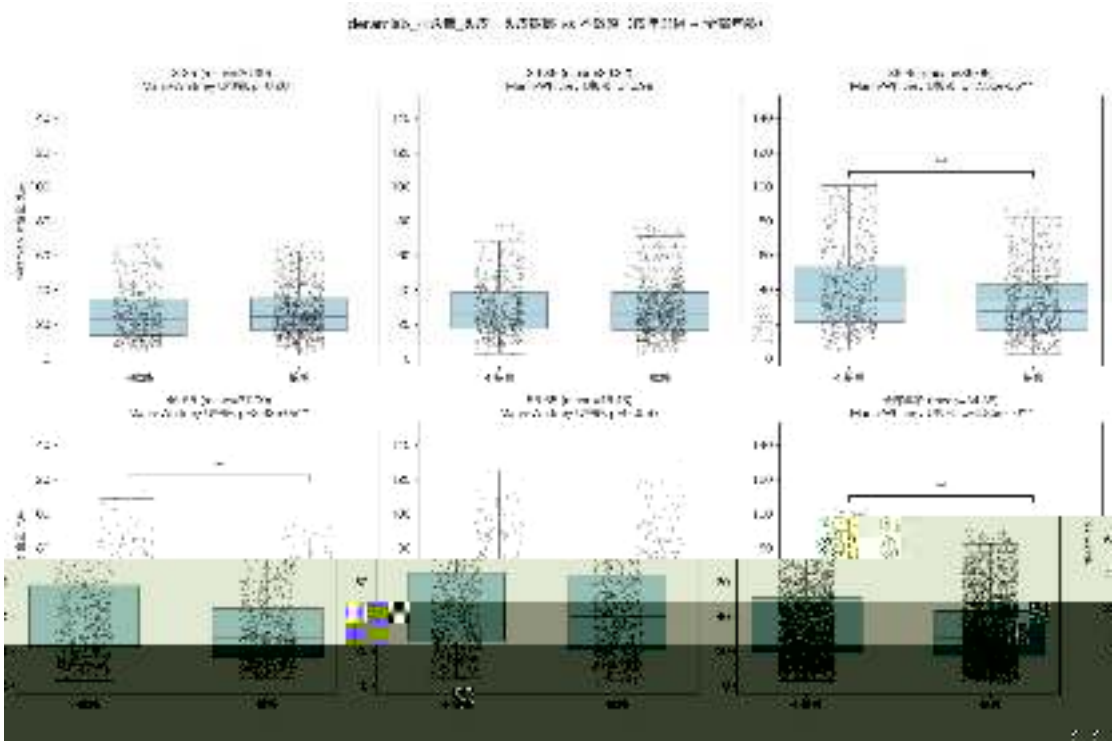
57.5%



4.6.4 pH905_pH_ X

pH 4.5 – 5.5 18 – 25 26 – 35
56 – 65 pH 36 –
45 46 – 55 pH
pH
pH 5.2
p<0.001 “
”

2



4.6.5 deramlab_ _ X

18 – 25

26 – 35 56 – 65 Mann-Whitney U

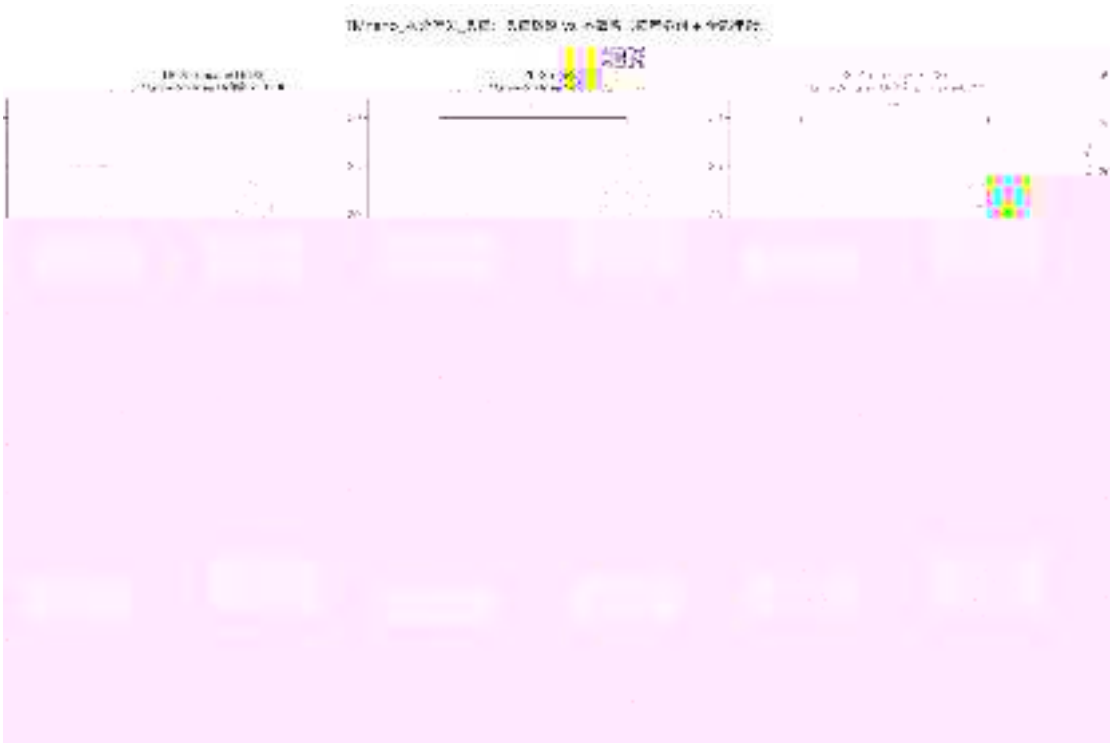
36 – 45 46 – 55

p

0.001

p 0.001

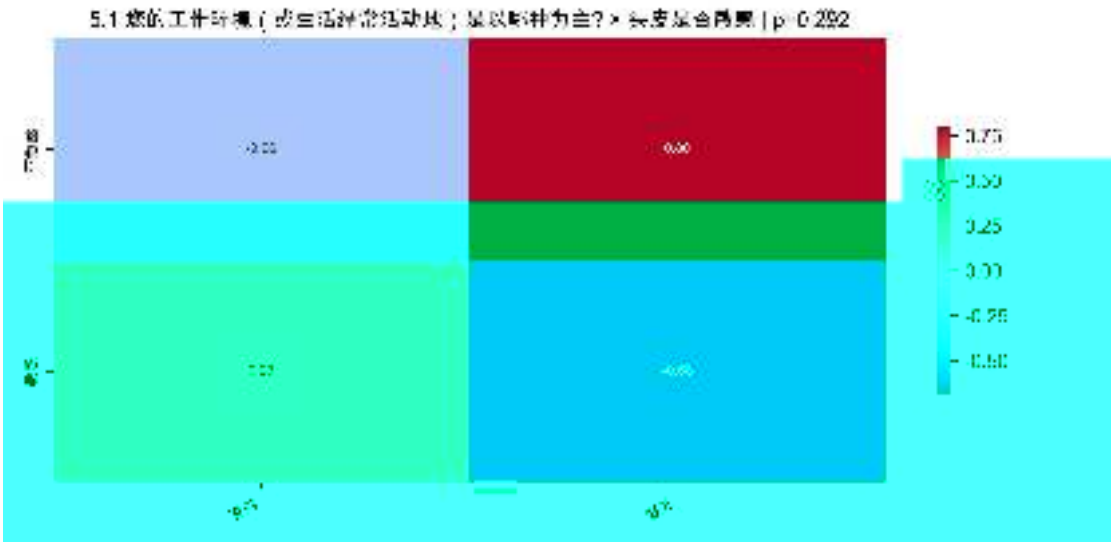
3



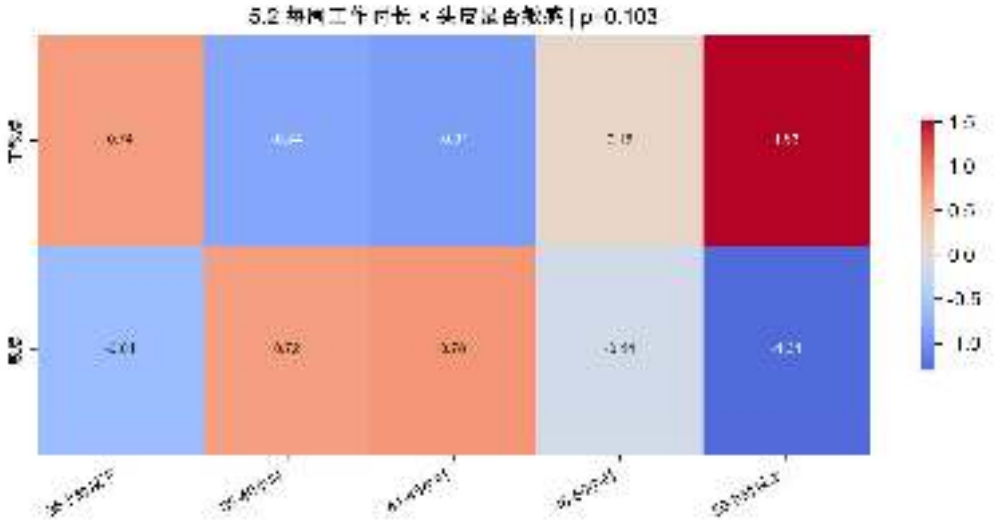
pH TEWL

4.6.5

1



4.6.9 X



4.6.10 X

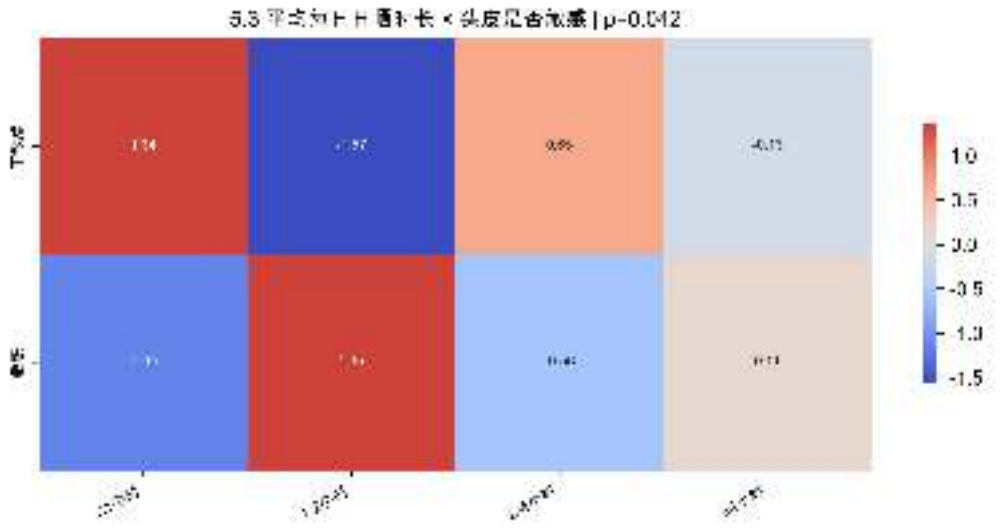
/ p=0.292

/

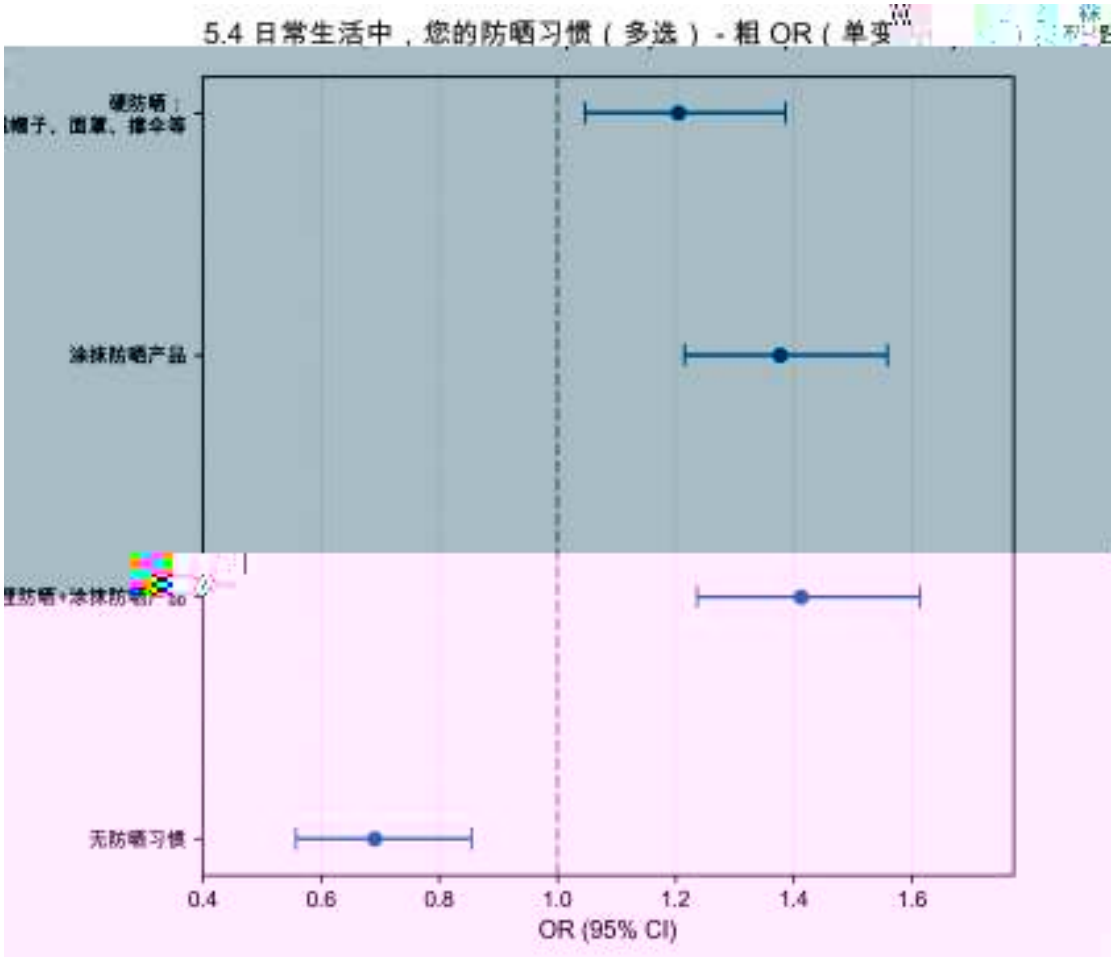
p=0.103 36 – 45

35 50

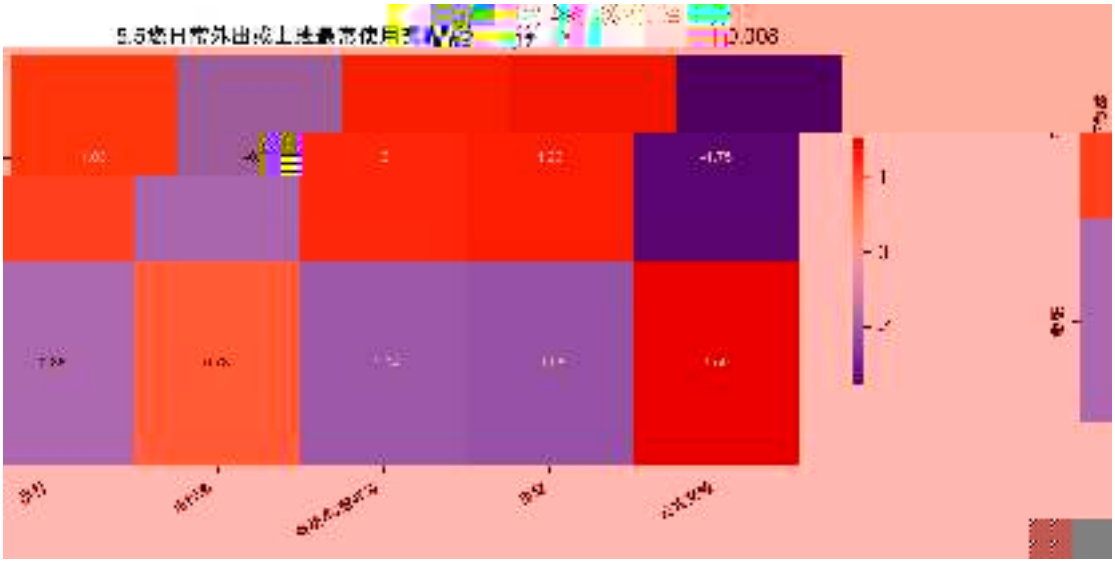
2



4.6.11 X

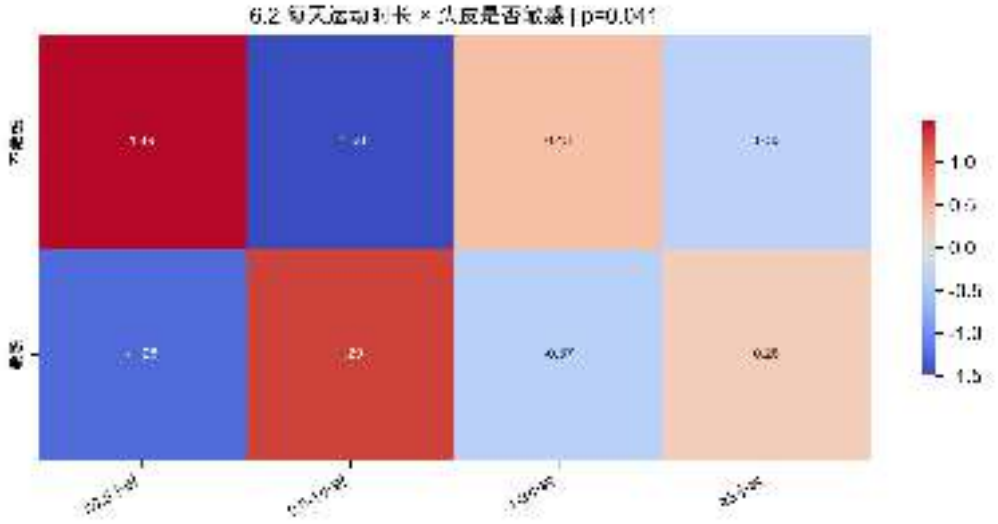


4.6.12 X

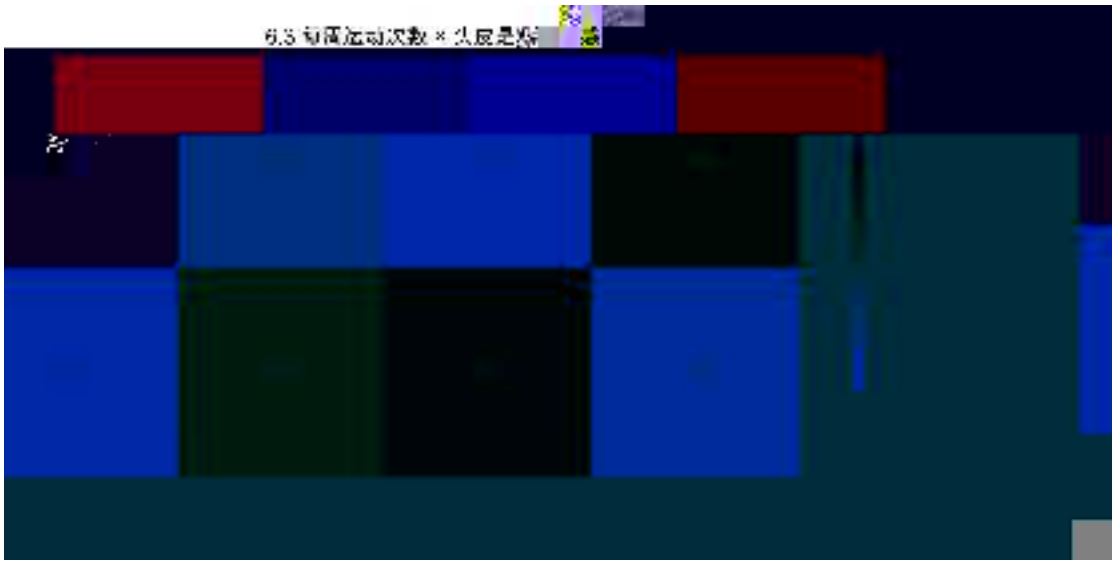


4.6.13 X

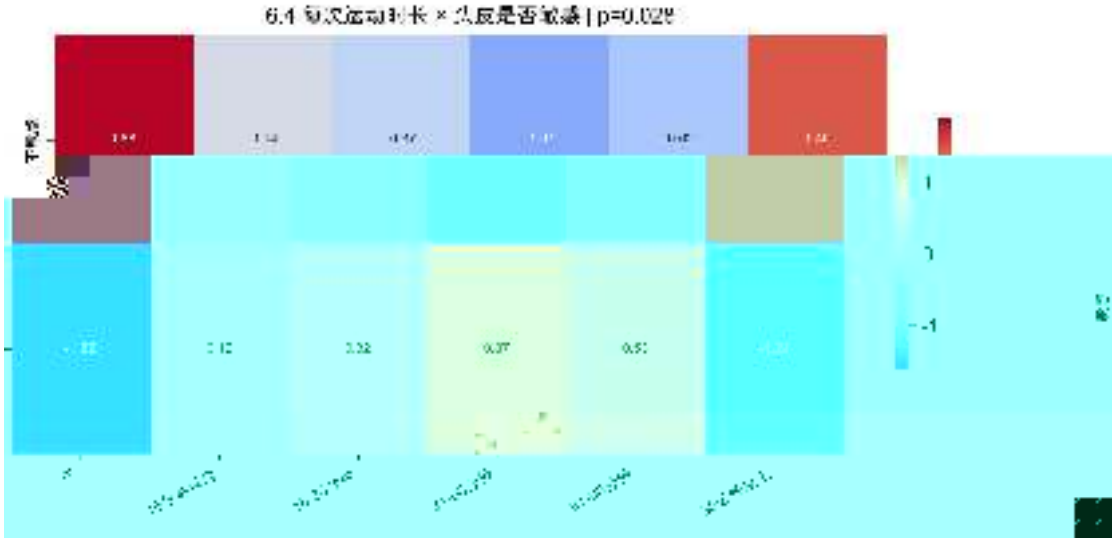
≤ 1



4.6.15 X



4.6.16 X



4.6.17 X

“ ” 6.1 ≈0.95

≈1.38

6.2 ≤0.5

≈1.49 0.5–1 ≈1.29 1

“

” 6.3 “ ”

≈1.92 3–4 ≈1.52

≥5

6.4 “ ”

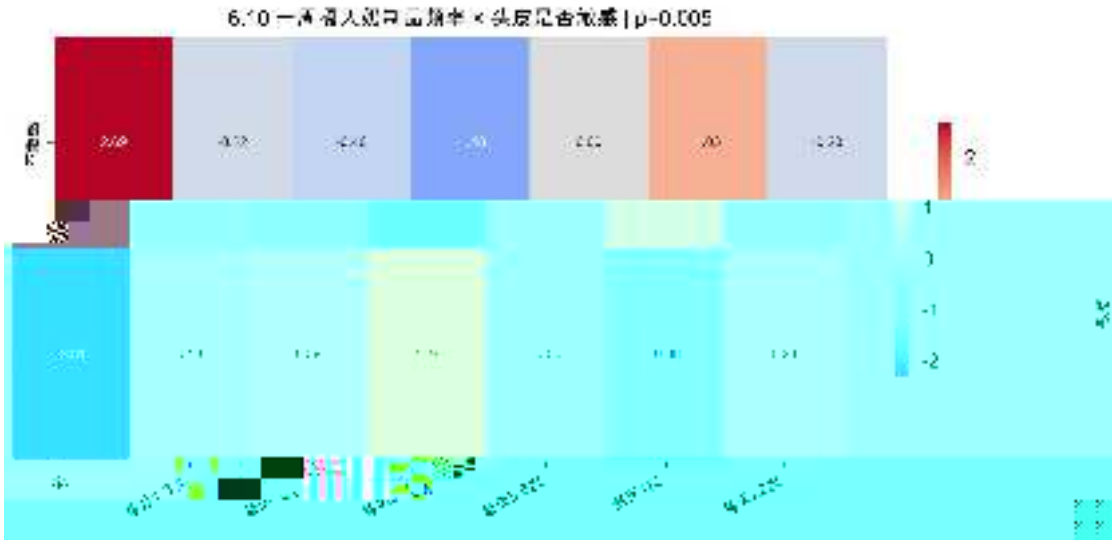
≈1.88 31–60 ≈0.87

≥90 ≈1.45

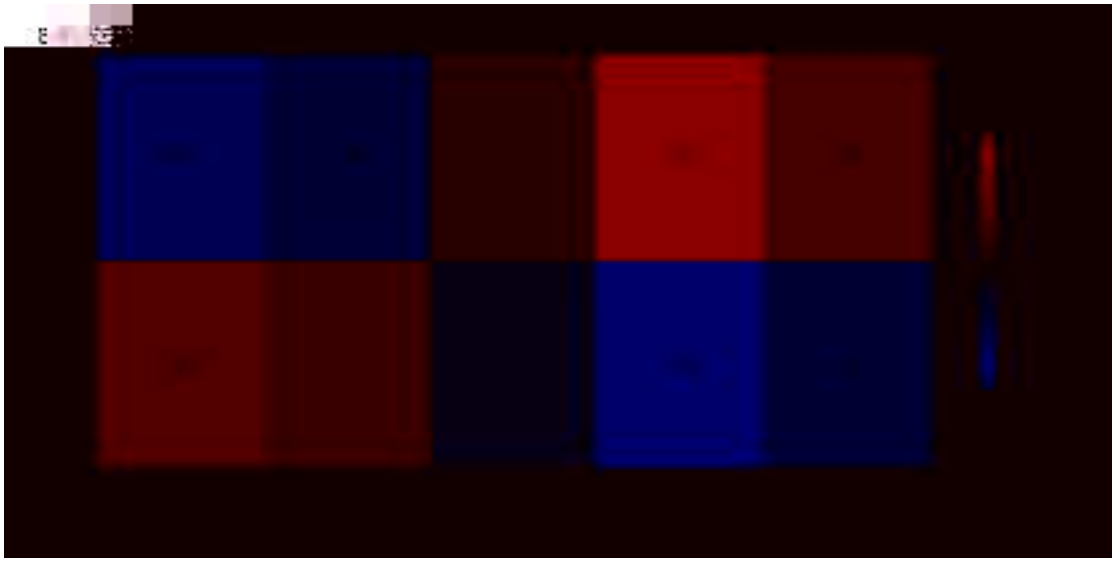
____“ ” “ ”

4

4.6.18 X



4.6.19 X



4.6.20 X

OR “ ” “ ”

OR 1

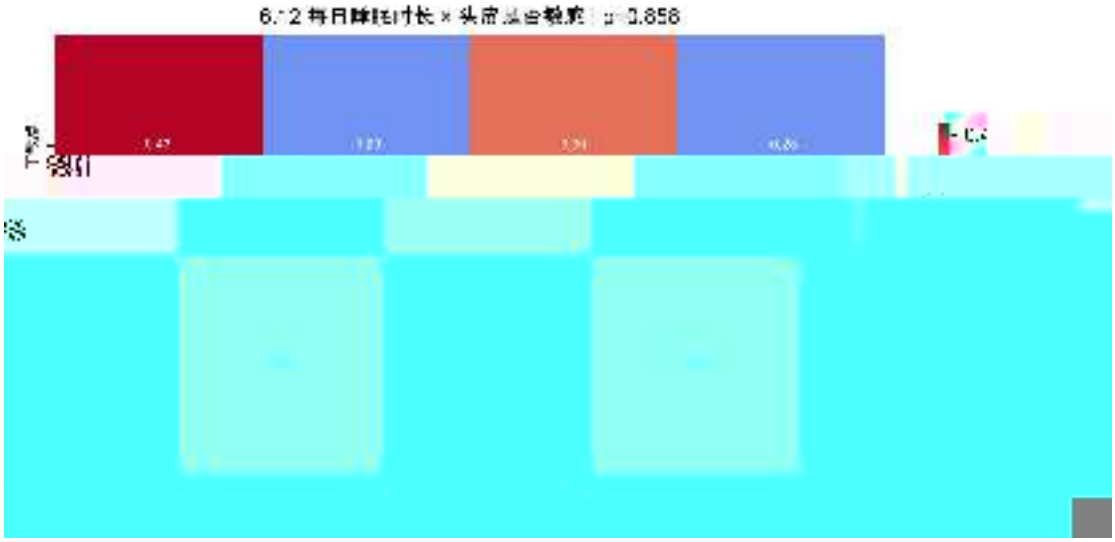
p=0.005 “ ” 3 – 4

“ ”

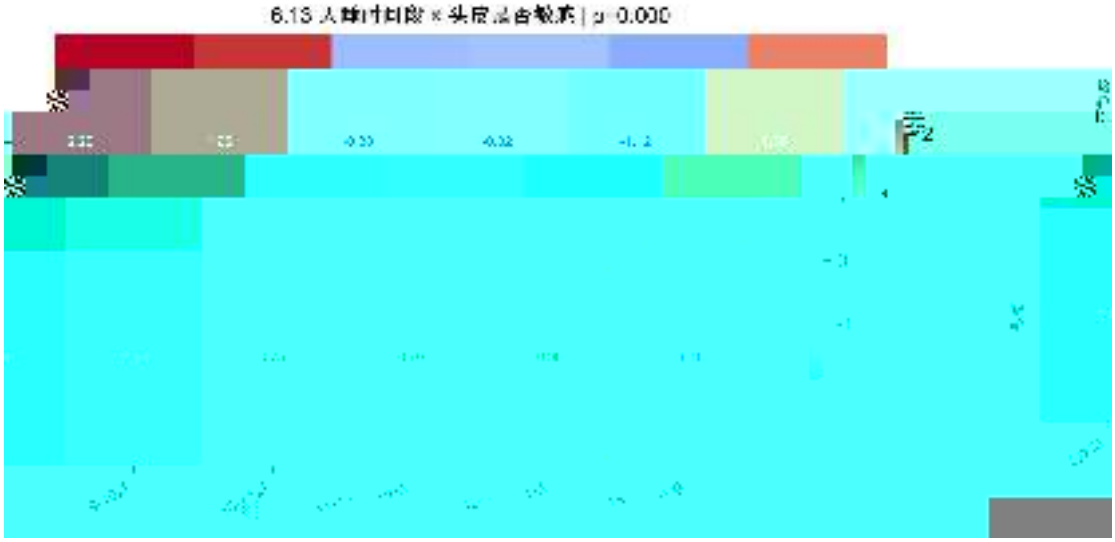
p=0.074

1500 – 2000 mL <1000 mL

5



4.6.21 X



4.6.22 X

p=0.858

/ 0 “ ”

<6h 8 – 10h 6 – 8h >10h

p<0.001

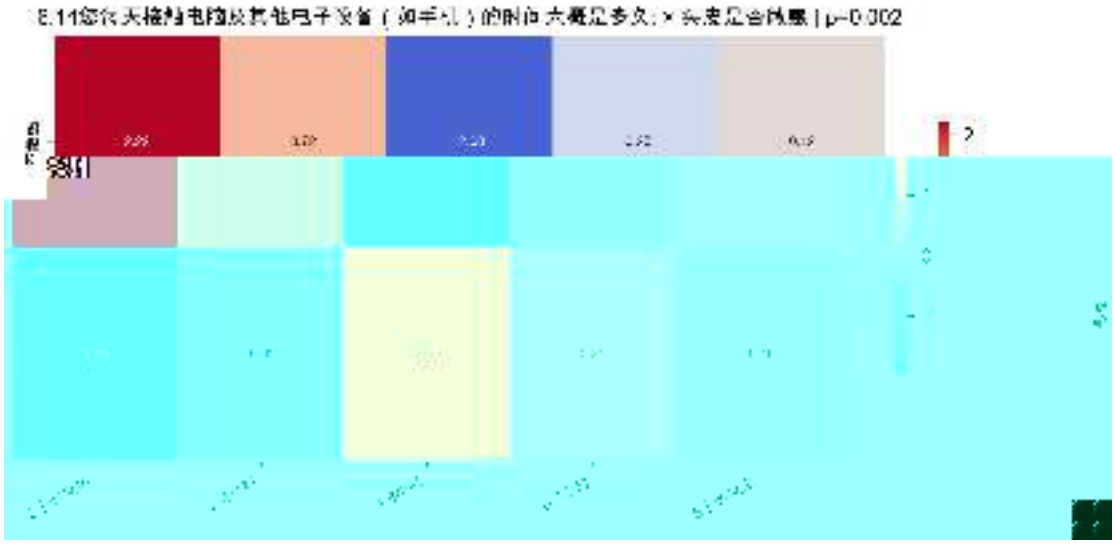
9 9 – 10

10 – 11 11 – 12 12 – 1

1

“ ” “ ”

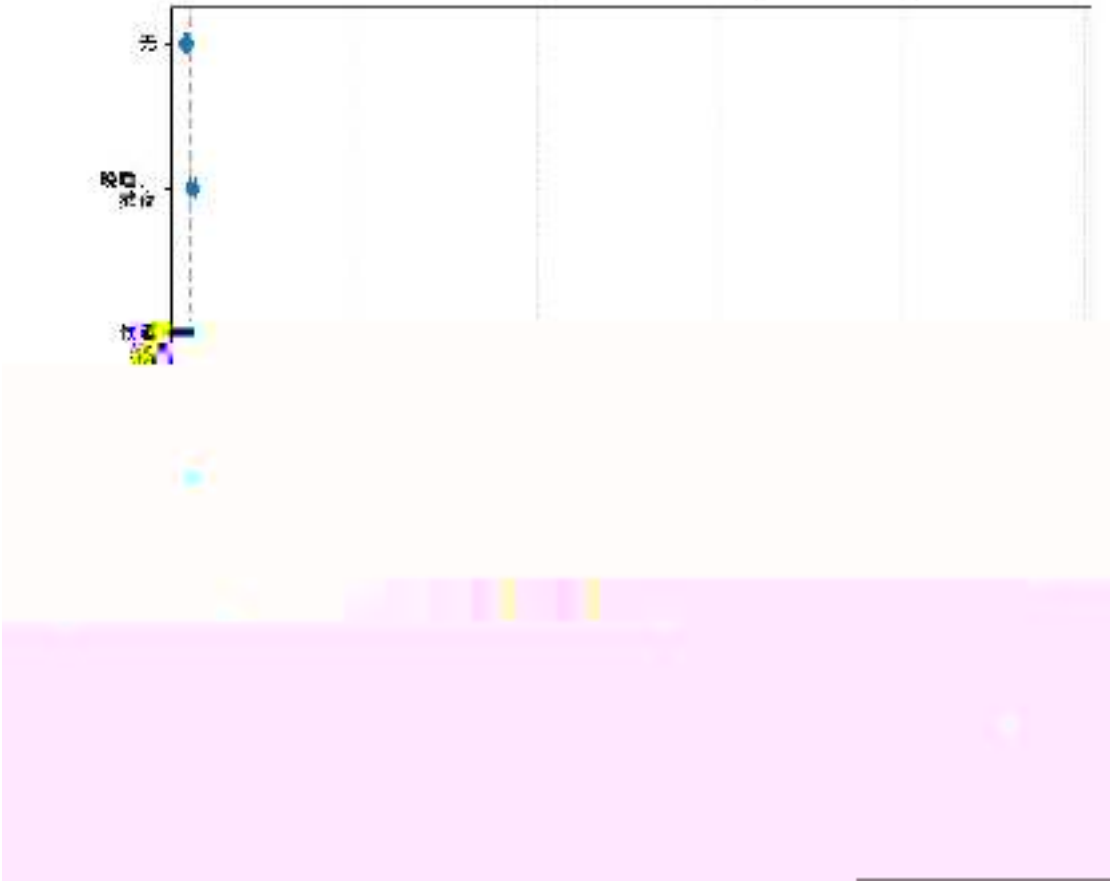
6

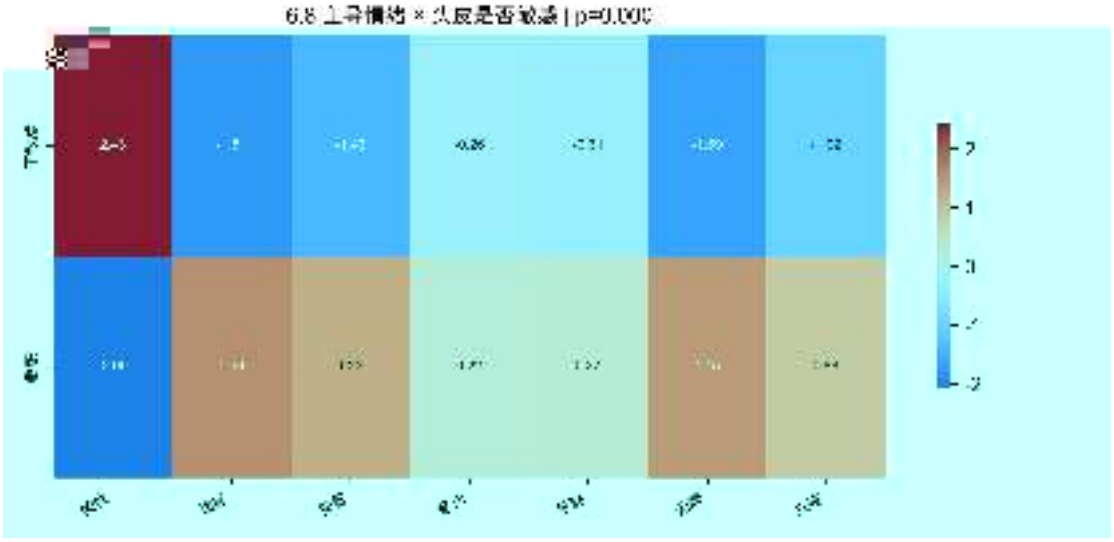


4.6.23 **X**

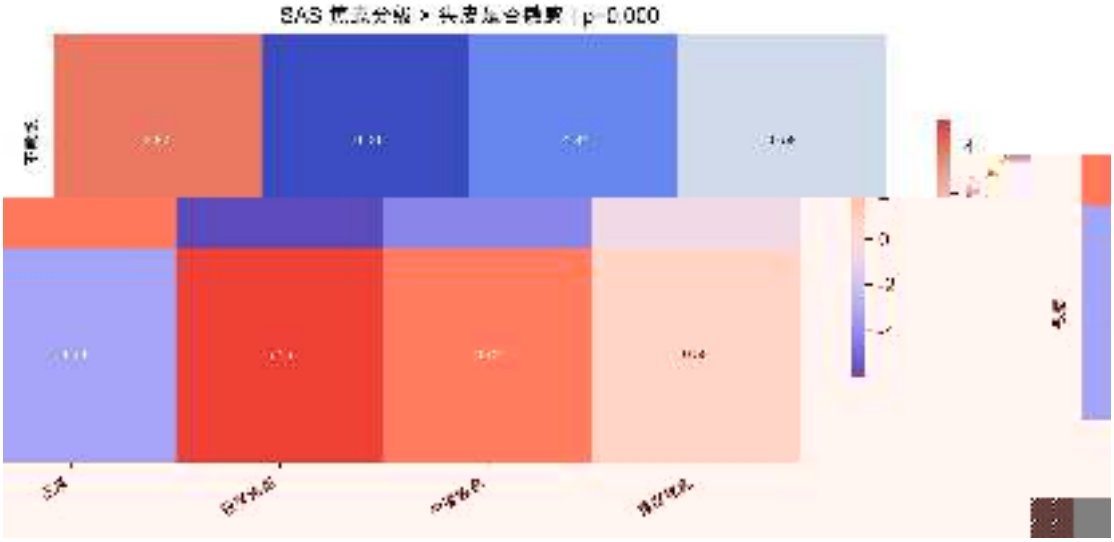
p=0.002

6.15 您是否有以下习惯（多选）- 粗 OR（单变量 2×2）森林图





4.6.27 X



4.6.28 SAS X

[14] , , , , , • .
[J]. , 2022, 45(2): 25-30.

[15] , , . [J].
,2020,50(9):5.DOI:10.3969/j.issn.1001-1803.2020.09.010.

[16] , , , .
[J]. ,2024,(03):35-39.
DOI:10.20099/j.issn.1000-4475.2024.0048.

[17]Watanabe K, Yamada A, Masuda H, Kashiwazaki E, Nakayama S, Kadokura T, Sakai K, Tashiro Y. Sample collecting methods for bacterial community structure analysis of scalp hair: non-invasive swabbing versus intrusive hair shaft cutting. SciRep. 2024 Sep 28;14(1):22461.

[18]Saxena R, Mittal P, Clavaud C, Dhakan DB, Roy N, Breton L, Misra N, Sharma VK. Longitudinal study of the scalp microbiome suggests coconut oil to enrich healthy scalp commensals. Sci Rep. 2021 Mar 31;11(1):7220. doi: 10.1038/s41598-021-86454-1.

[19]Shibagaki N, Suda W, Clavaud C, Bastien P, Takayasu L, Iioka E, Kurokawa R, Yamashita N, Hattori Y, Shindo C, Breton L, Hattori M. Aging-related changes in the diversity of women's skin microbiomes associated with oral bacteria. Sci Rep. 2017 Sep 5;7(1):10567.

[20] . T/ZGKSL 018—2024 [S]. 2024.

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