

Round Robin Test

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Round Robin Test

Round Robin Test 1:
February 2017

Round Robin Test 2:
August 2017

Round Robin Test 1: 4 laboratories

- 1) QUATEST 3(VN)**
- 2) QUATEST 1(VN)**
- 3) NFI(THA)**
- 4) JFRL(JPN)**

Round Robin Test 2: 9 laboratories

- 1) QUATEST 3(VN)**
- 2) QUATEST 1(VN)**
- 3) BQSFDMMS(THA)**
- 4) GDCM(CHINA)**
- 5) SGS Shanghai(CHINA)**
- 6) SGS Guangzou(CHINA)**
- 7) TUV(CHINA)**
- 8) TICP(CHINA)**
- 9) JFRL(JPN)**

Purpose

- **Evaluation of the performance of laboratories for the test of ISO 22196.**
- **Identification of problems in laboratories and initiation of actions for improvement.**
- **Identification of inter-laboratory differences.**
- **Education of participating laboratories based on the outcomes of such comparisons.**

Quotation from ISO 17043

Protocol

Samples

1) For *S. aureus*

Sample A: Treated and Non-treated

2) For *E. coli*

Sample B: Treated and Non-treated

Protocol

Samples A

Test surface:

Inside the concavity of the sample.

Cleaning of the test sample:

Do not clean or disinfect or sterilize the test samples prior testing.

Protocol

Samples B

Test surface:

There are one according to front and back in this sample.

Cleaning of the test sample:

This sample should be cleaned prior testing by wiping with 70 %ethanol in water.

Protocol

Test method

The procedures used in this method are as described in ISO 22196: 2011

If different way is used, the different part shall be recorded in the test report.

Reproducibility within same laboratory:

The test should be performed repeatedly 3 times by the same operator in different days.

Results

RRT 1

Lab.	Comment	n=3	Antibacterial Activity	
			<i>E. coli</i>	<i>S. aureus</i>
A	<i>S. aureus</i> : ATCC 12600	Day1	3.5	2.0
		Day2	3.6	2.1
		Day3	3.5	1.5
B		Day1	1.0	2.4
		Day2	0.9	2.5
		Day3	0.9	2.5
C	<i>E. coli</i> : DMST 4212/ATCC 25922 <i>S. aureus</i> : DMST 8840/ATCC 25923 Incubator humidity 80 %RH	Day1	0.5	2.2
		Day2	0.8	4.1
		Day3	1.1	4.3
D		Day1	4.5	0.9
		Day2	5.8	-0.3
		Day3	5.4	1.3

RRT 2

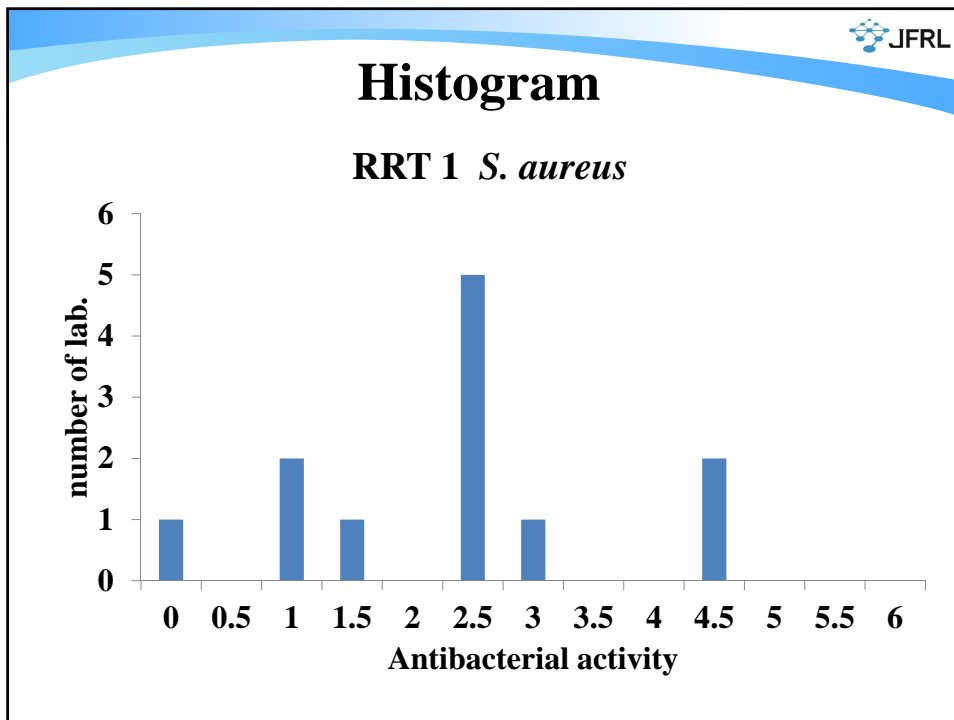
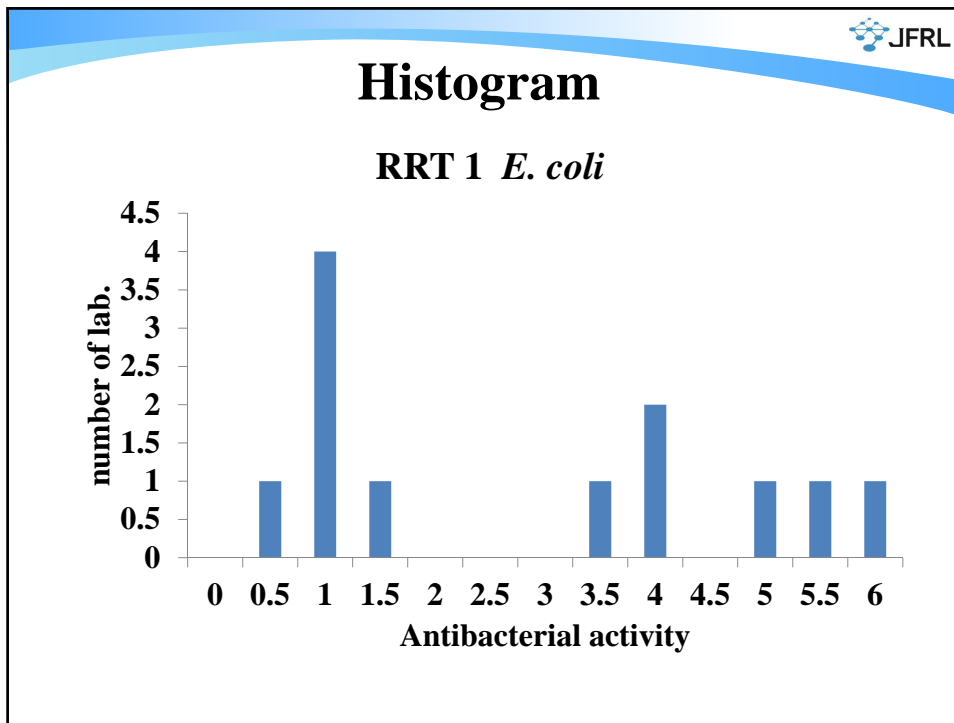
Results

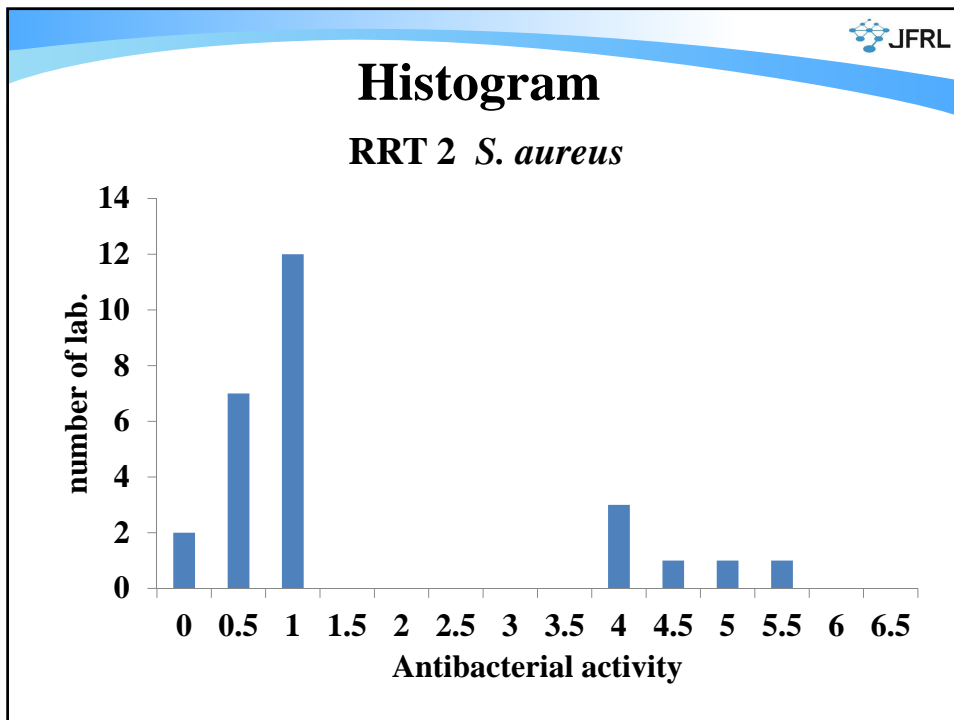
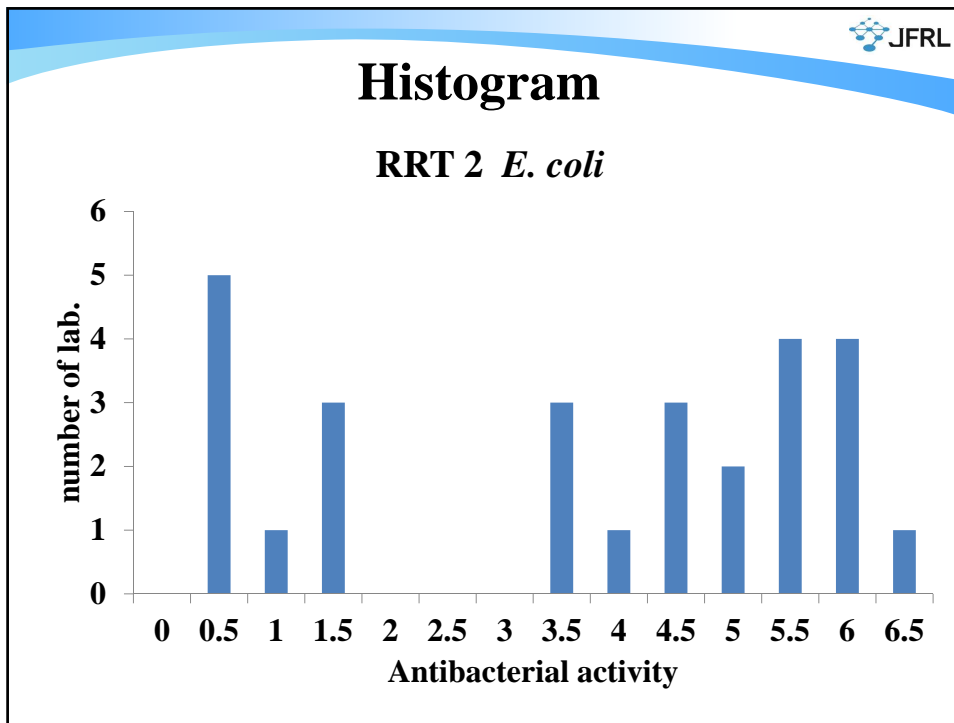
Lab.	Comment	n=3	Antibacterai Activity	
			<i>E. coli</i>	<i>S. aureus</i>
A		Day1	1.0	0.0
		Day2	1.0	0.0
		Day3	1.1	0.0
B		Day1	0.5	3.8
		Day2	0.7	4.8
		Day3	0.5	4.4
C	<i>E. coli</i> : ATCC 25922 Dilute suspension with Butterfied's phosphate buffer dilutionwater(BPB)	Day1	0.5	QA not pass
		Day2	0.3	0.1
		Day3	0.3	0.2
D		Day1	5.0	0.8
		Day2	5.2	0.5
		Day3	5.0	0.5
E		Day1	4.3	0.6
		Day2	4.2	0.6
		Day3	4.3	0.7

RRT 2

Results

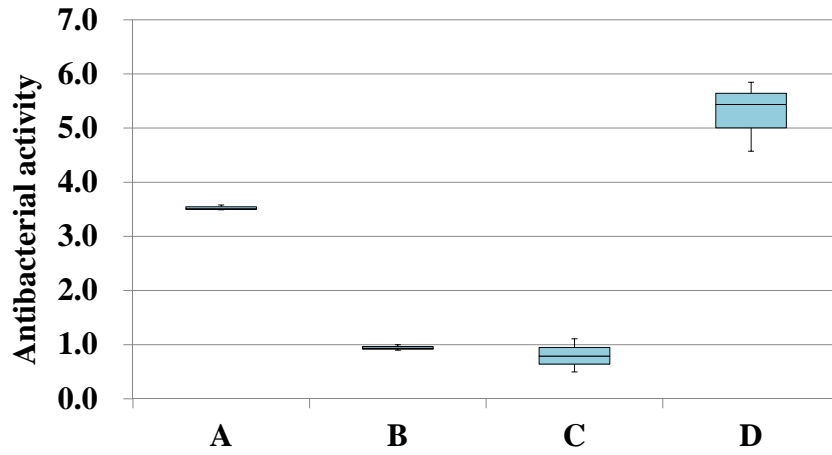
Lab.	Comment	n=3	Antibacterai Activity	
			<i>E. coli</i>	<i>S. aureus</i>
F		Day1	5.0	0.9
		Day2	5.7	0.5
		Day3	5.2	0.7
G		Day1	3.6	0.1
		Day2	3.1	0.1
		Day3	3.5	0.0
H		Day1	>5.8	3.7
		Day2	>5.1	5.4
		Day3	>5.7	3.9
I		Day1	>5.6	0.6
		Day2	4.9	0.8
		Day3	3.3	0.9





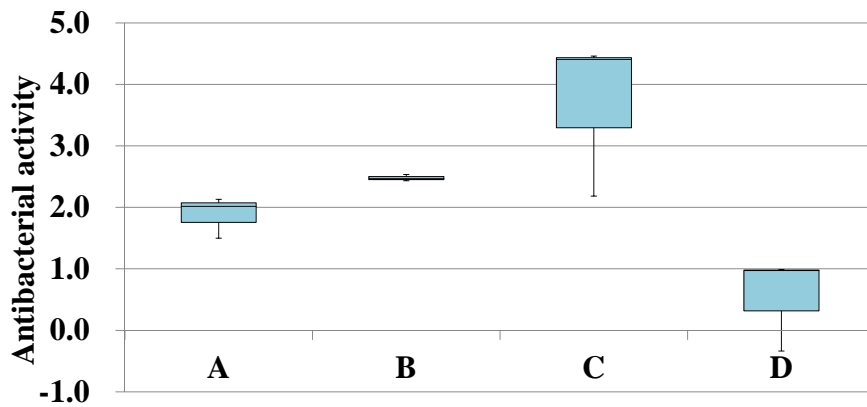
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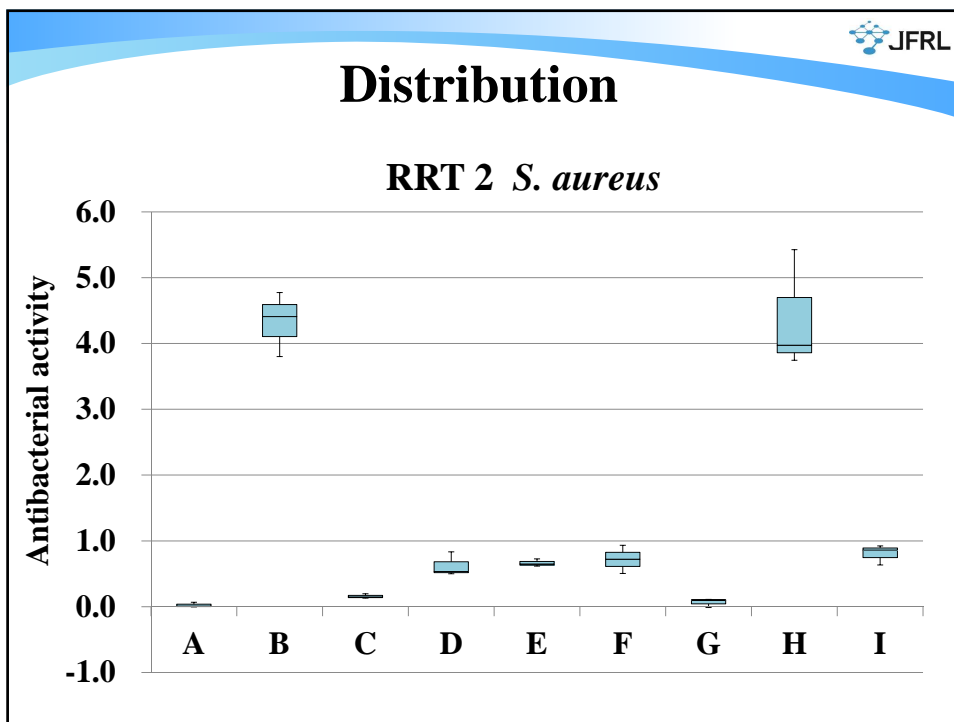
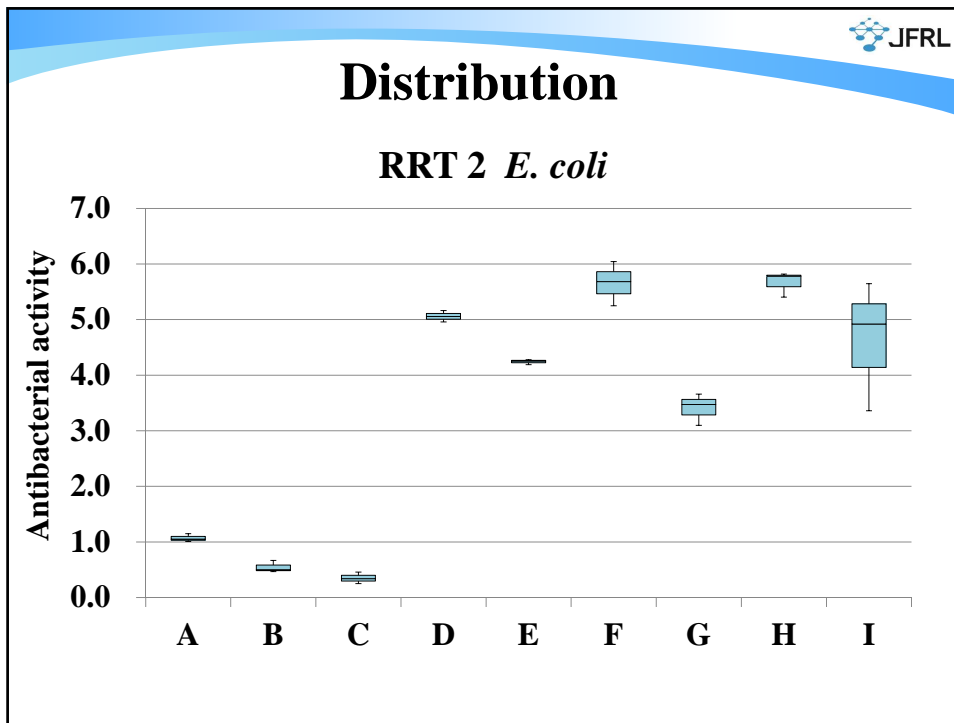
RRT 1 *E. coli*



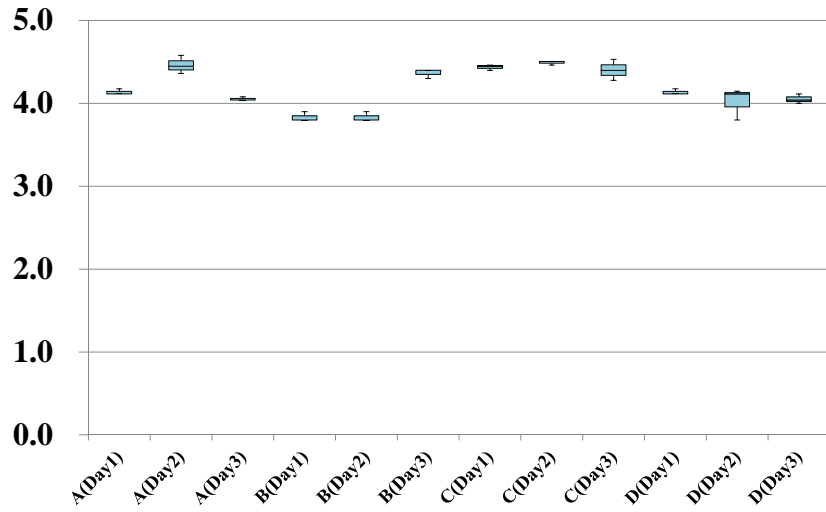
Distribution

RRT 1 *S. aureus*

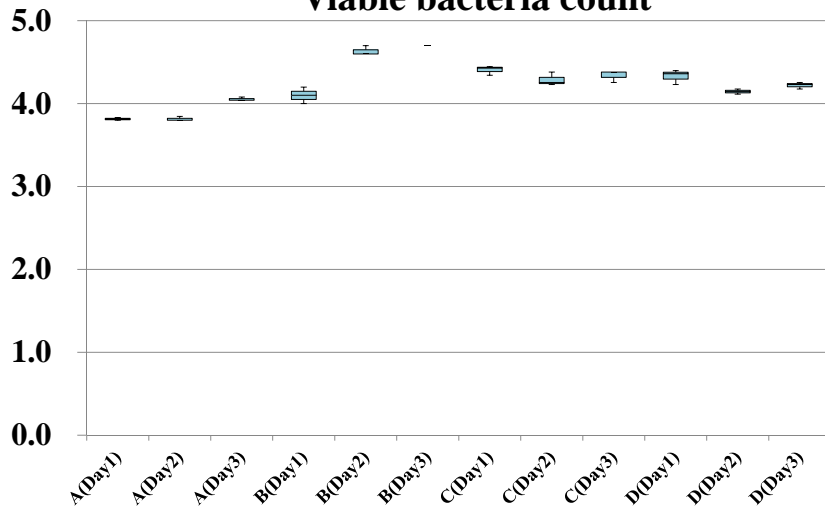


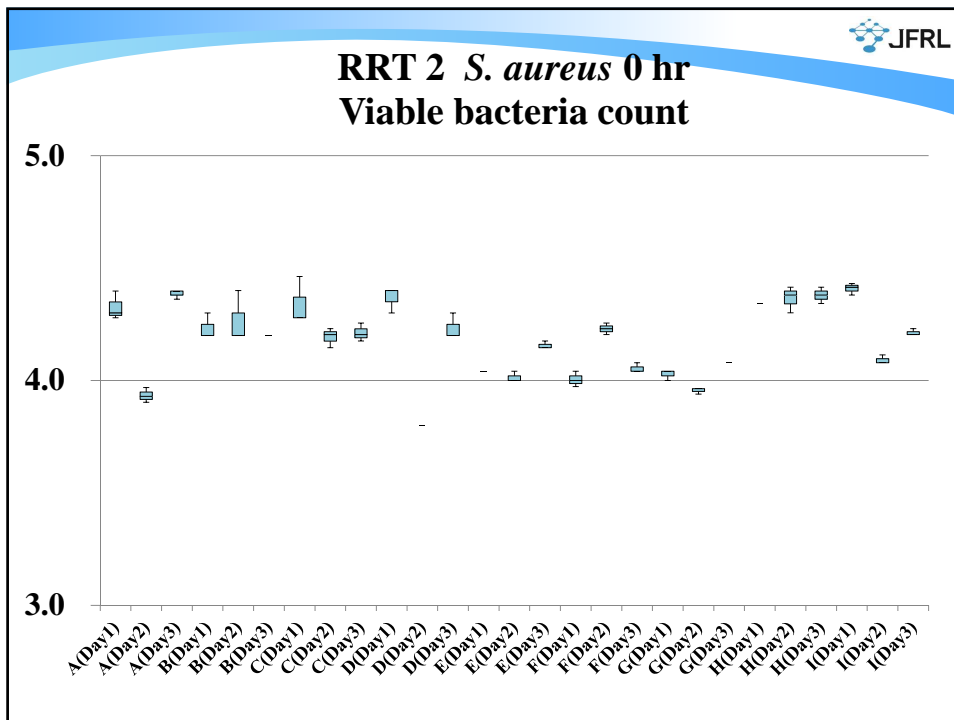
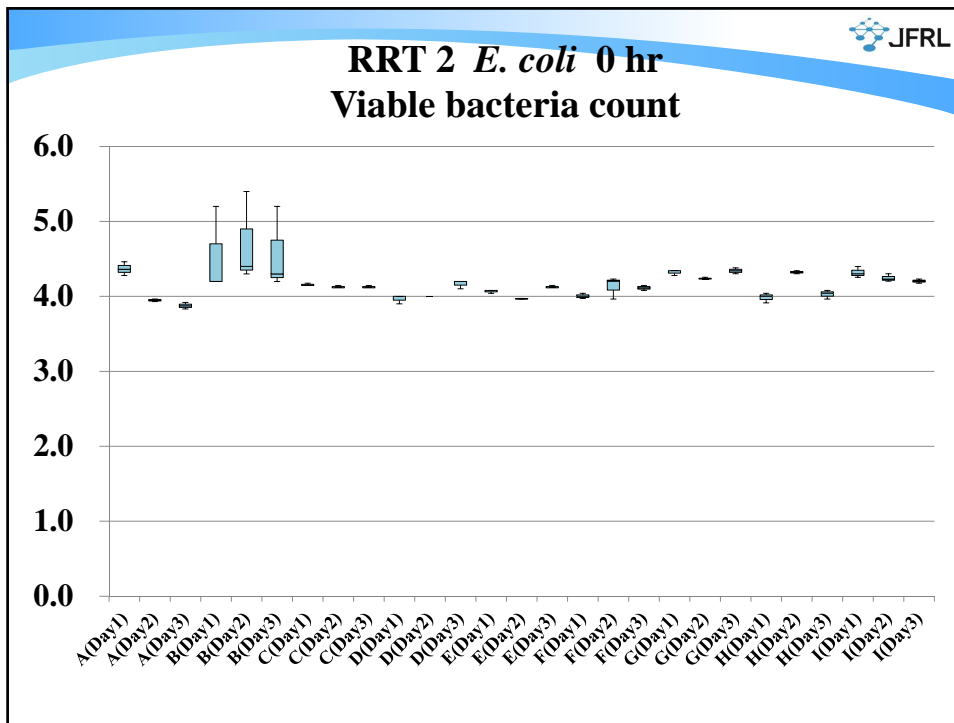


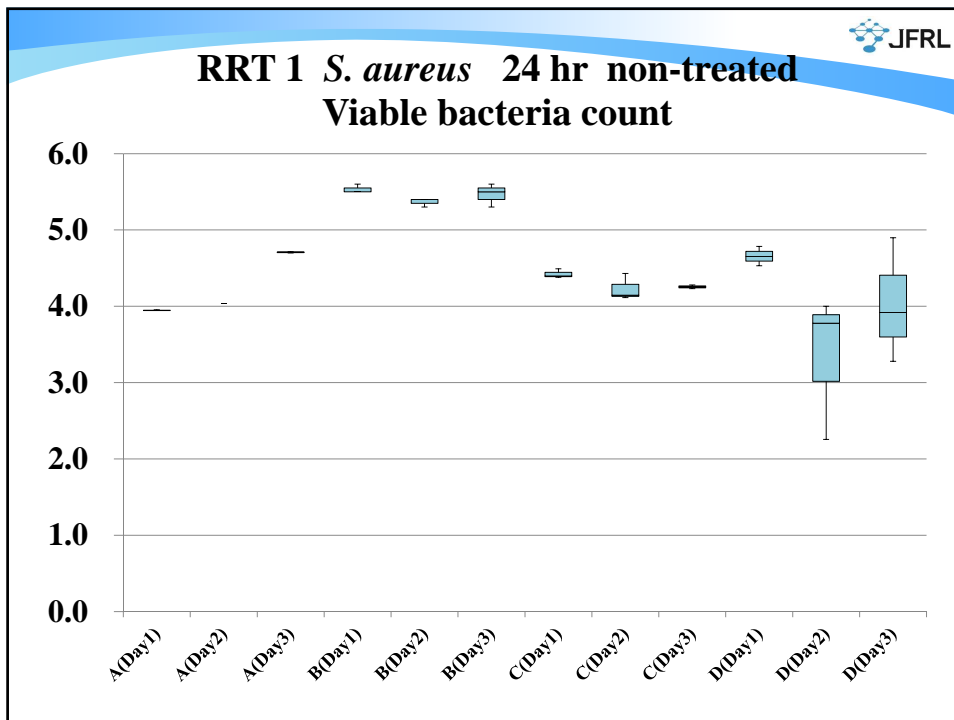
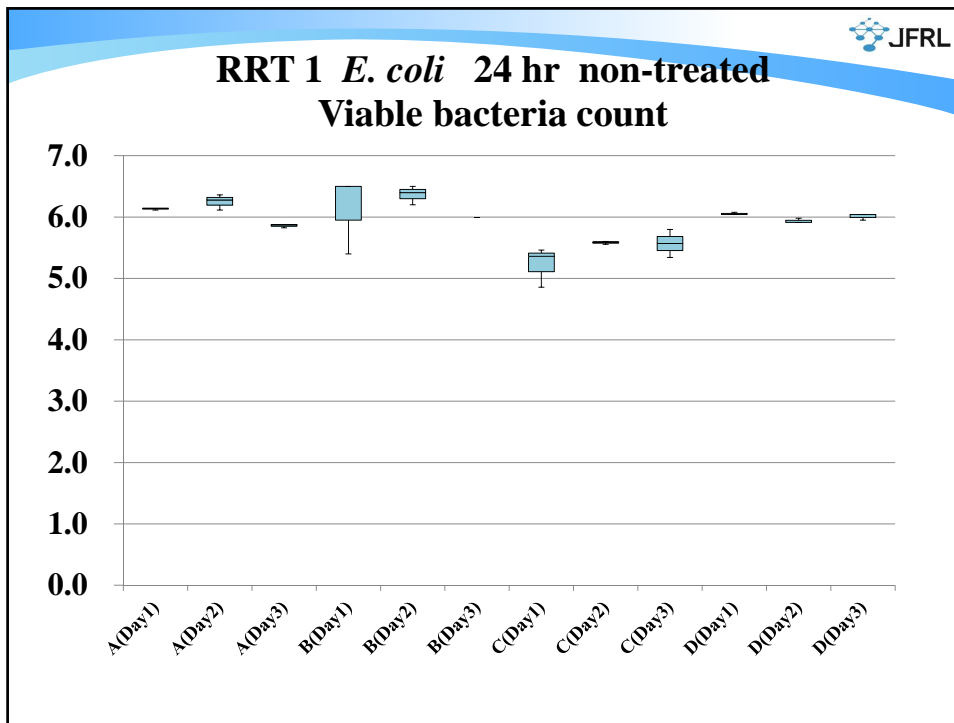
**RRT 1 *E. coli* 0 hr
viable bacteria count**

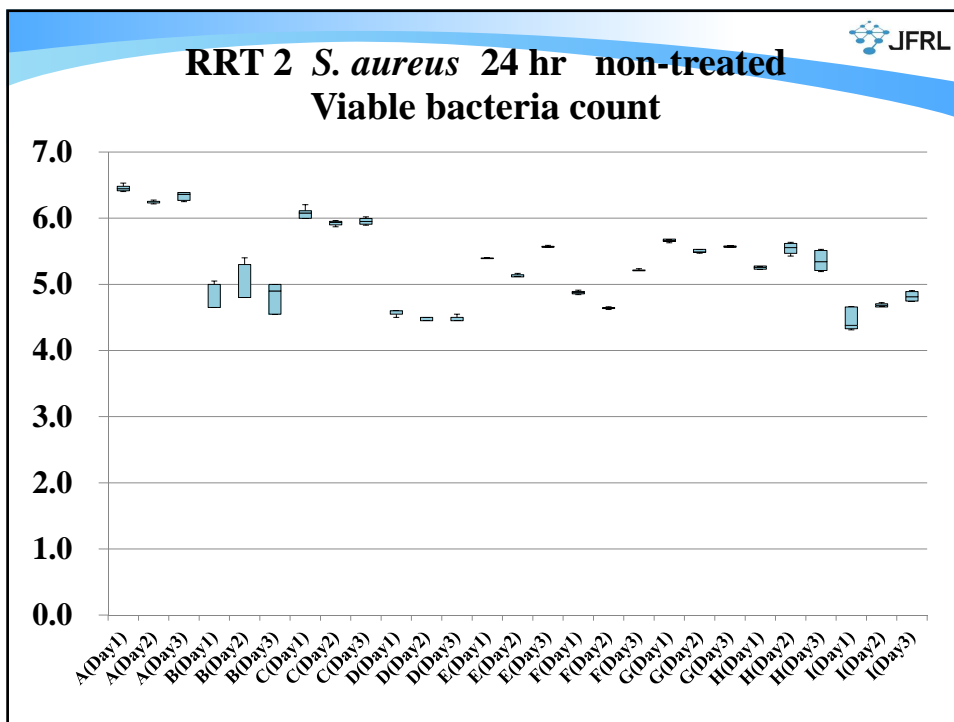
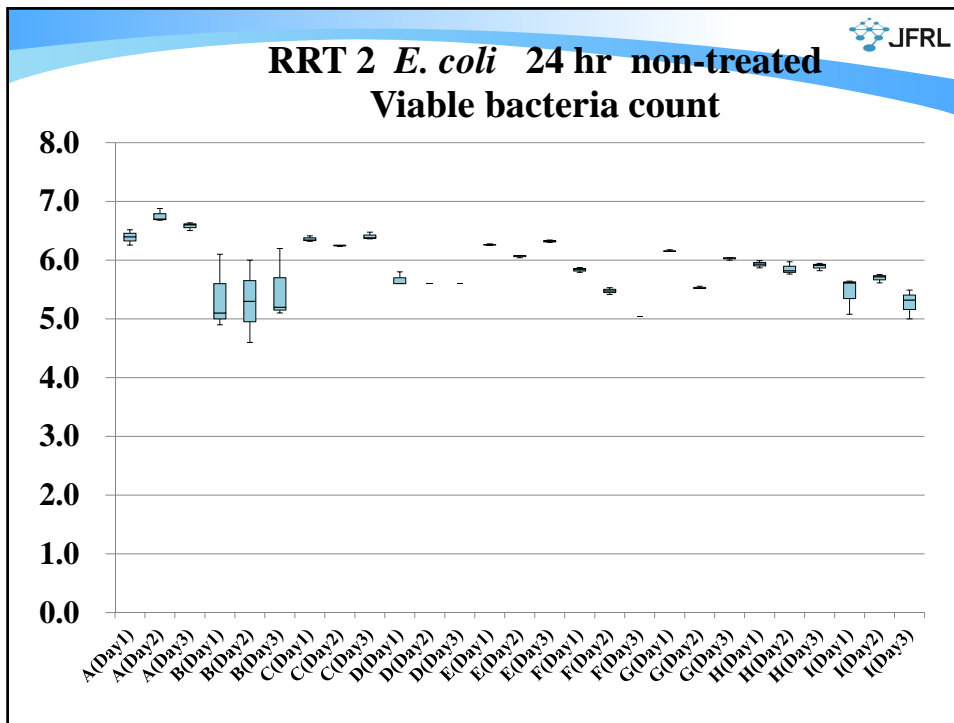


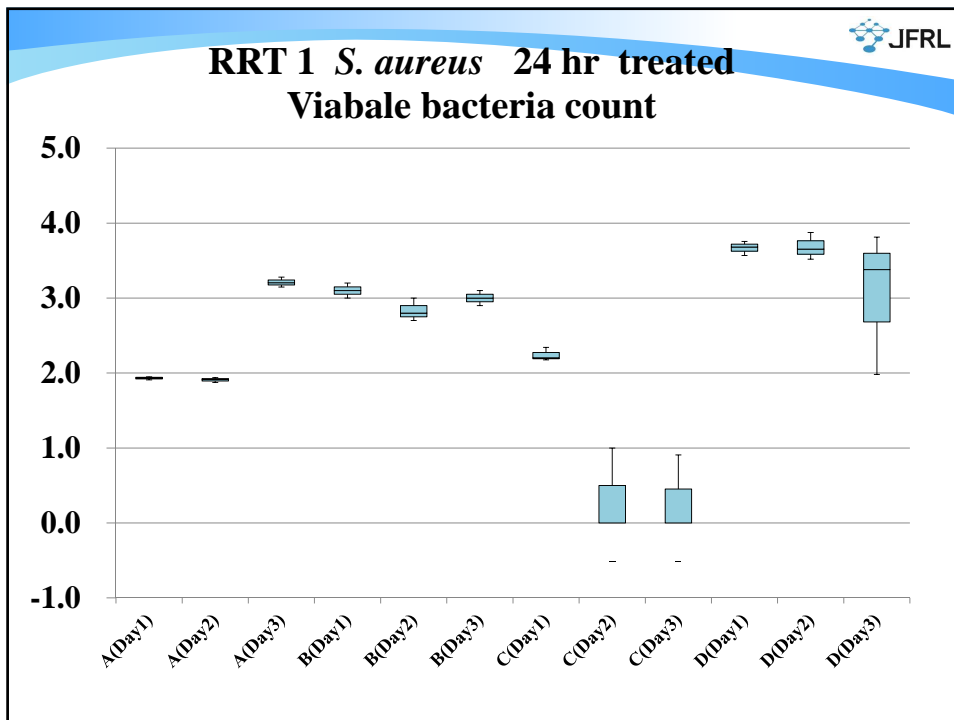
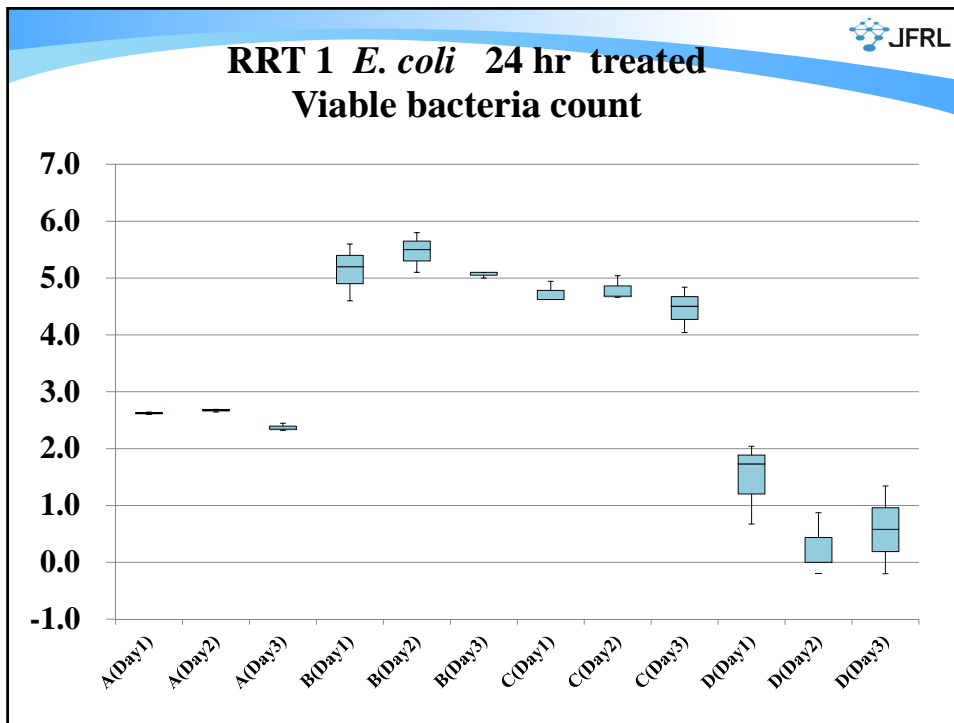
**RRT 1 *S. aureus* 0 hr
Viable bacteria count**

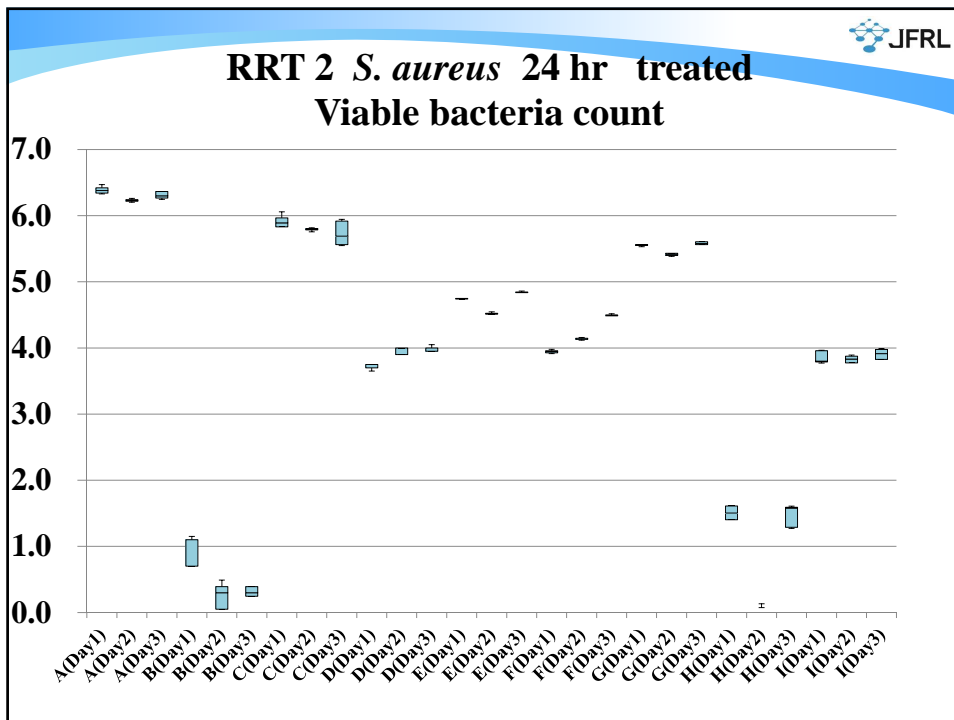
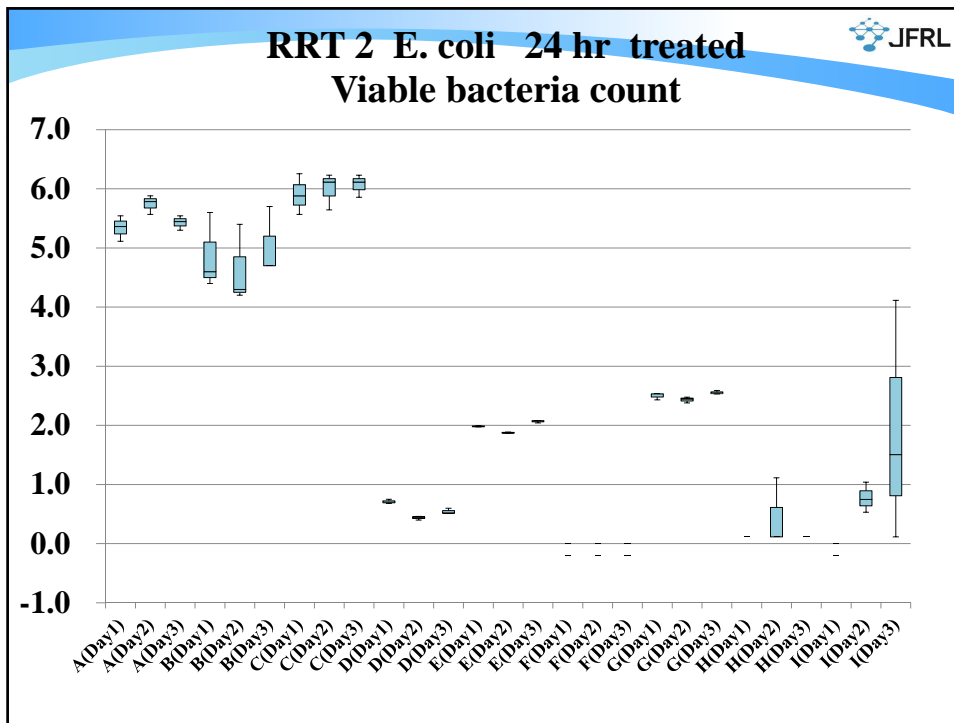












Discussion

The factor or reason with:

- 1) The antibacterial activity is the low/high**
- 2) Standard deviation of antibacterial activity is high/low**
- 3) Standard deviation of viable bacteria count is high/low**
- 4) Others**