NIZAM COLLEGE

Autonomous

Re-accredited by NAAC with B++

A Constituent College of Osmania University

Two days workshop on latest technologies in Rapid Microbial testing

22nd and 23rd February 2023

Program

22.02.23 Wednesday

10-11am Inaugural

11-11.30am Tea break

11.30am to 1 pm Chromagar based bacterial testing.

1-2 pm Lunch

2-4.30 pm Experiments on Chromagar based bacterial testing.

23.02.23 Thursday

10-11am Taking results of Chromagar based bacterial testing.

11-12am Advances in ELISA for detection of Microbes, Mycotoxins, Allergens, & Antibiotic etc.

12-1pm Extraction for ELISA

1-2 Pm Lunch

2-4 ELISA of Microbes Mycotoxins, Allergens, & Antibiotic

4Pm Valedictory Function

Resource Person

Dr. Navneeth Saxena

R-Biopharma Neugen Pvt Ltd

Contact

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Phone: 9441031626

Chief Patron

Prof D.Ravinder,

Vice chancellor, OU

Patron

Prof B.Bhima

Principal Nizam College

Organizing Secretary

Dr Chand Pasha

HoD Microbiology, NC

Organizing Committee

Dr Sandeepta Burgula

Dr Hameeda Bee

Dr Shanti Kumari

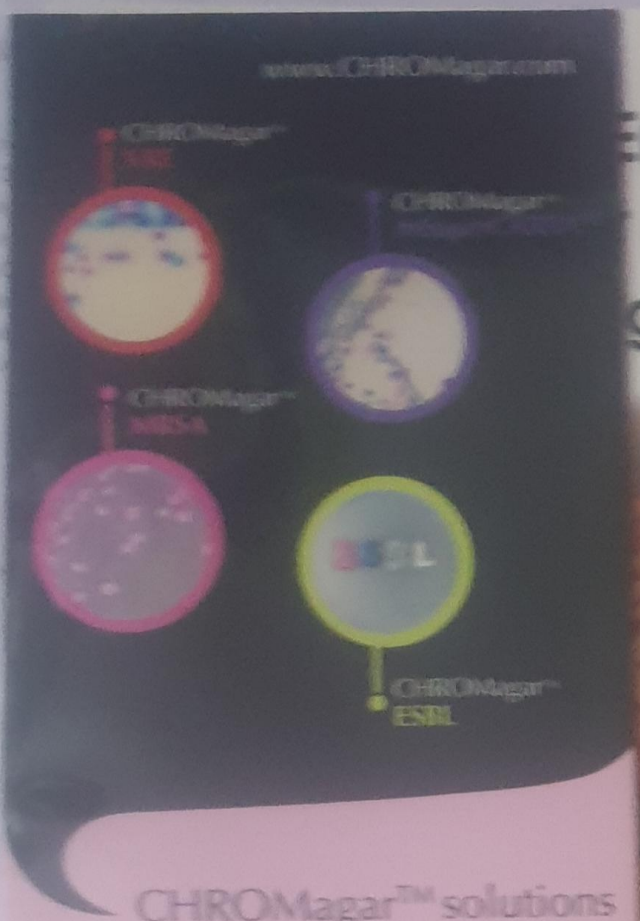
Dr SambaShiva

Dr Anju Nitin Rajan

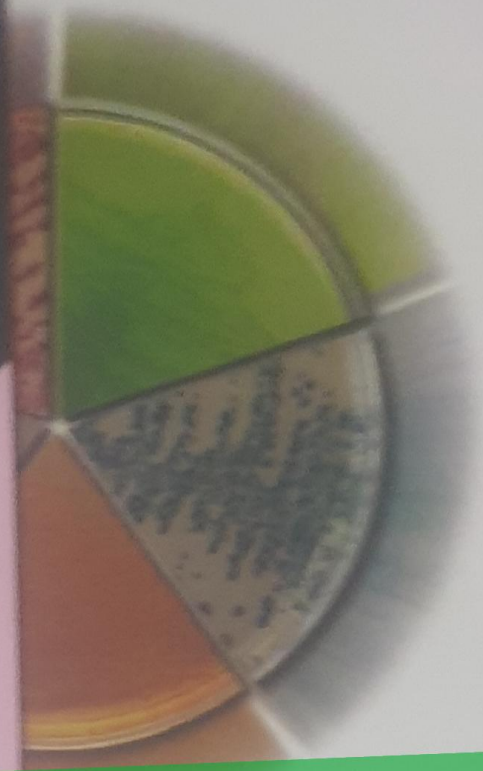
Only the Microbiology faculty members and students 15 each will be selected as first come first serve basis for free workshop. Apply through the following link

https://docs.google.com/forms/d/e/1FAIpQLSfTwuRnlCJW-PsdxWWdvopsSdOJTVeoC4xEDqV8yxCVvEG14Q/viewform?vc=0&c=0&w=1&flr=0

Organized by the Department of Microbiology, Nizam College, Osmania University



Enumeration
Identification
ganisms in urine



22-02-2023 Wednesday

richia coli,
Proteus mirabilis, KES group,
Pseudomonas aeruginosa and Enterococcus.

- Prepoured or plated media
- Isolation from urine within 18 - 24 hours
- Rapid, visual enumeration
- Chromogenic and conventional substrates
- Specific identification or orientation

URICHROM II

SALMONELLA

25 g Sample (Tomato)

[Primary Enrichment]

↓

225 ml Broth

sample preparation for Salmonella detection in Tomato

↓

Incubate for 16 ± 24

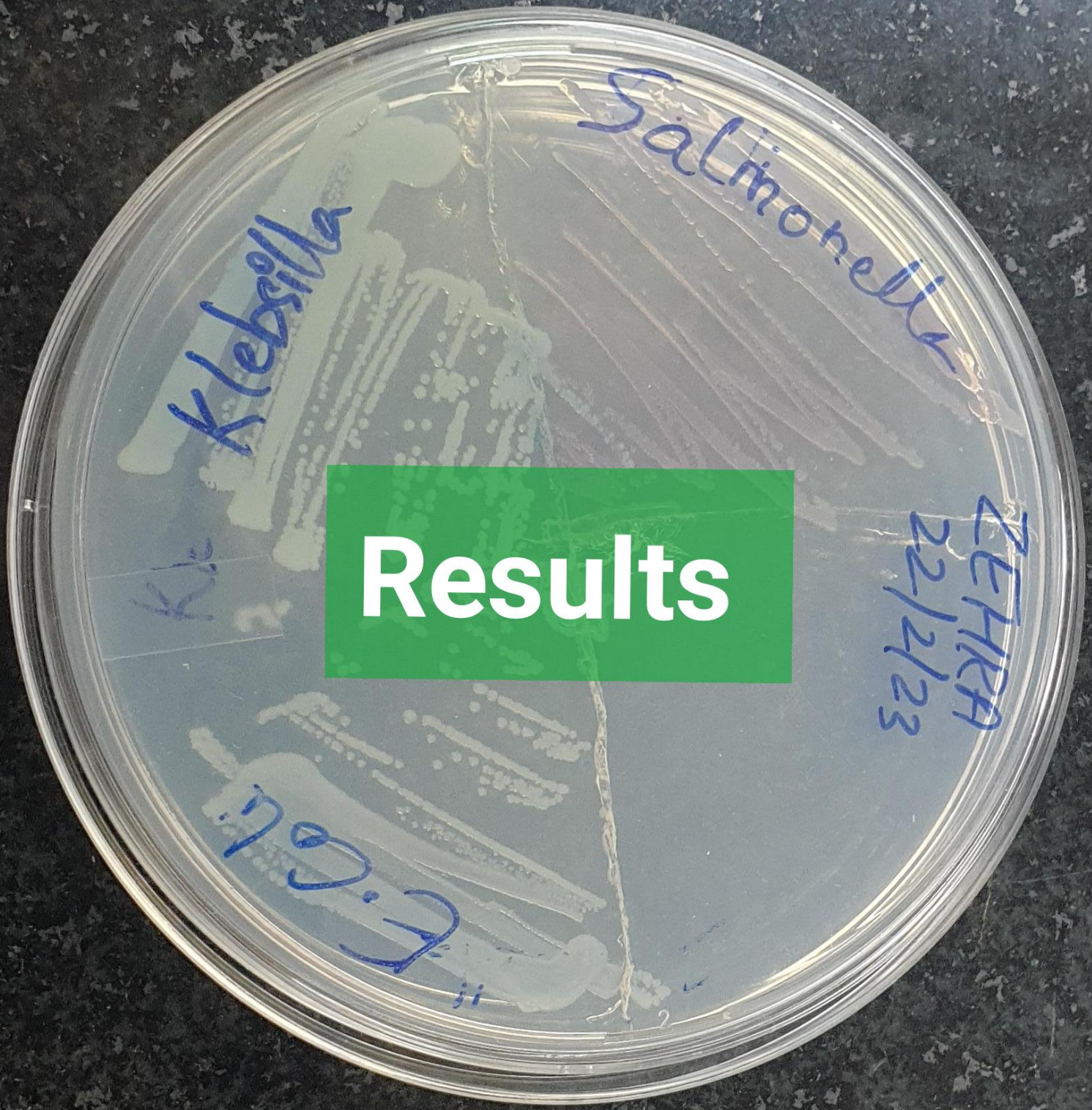
35 - 37°C [Secondary Enrichment]

↓

Ramba Quick Broth – 42°C

– 7hrs

0.1 ml → 10ml



Results

SAMPLE PREPERATION FOR NITROFURON IN SHRIMPS

(SEM)

- Mix 1 g of the homogenized sample Add 4 ml distilled water, 0.5 ml 1 M HCl+(Add spike for validation)
- Add 100 µl 10 mM 2-Nitrobenzoic aldehyde (in DMSO) by shaking vigorously

- Incubate at 50 °C for 3 hours or at 37 °C overnight (approx.16 h)
- Add 5 ml 0.1 M K2HPO4+ 0.4 ml 1 M Noah+ 10 ml ethyl acetate,
- Shake Vigorously for 30 sec.
- Centrifuge 10 min / 3000rpm / at room temperature
- Transfer 5 ml of the ethyl acetate layer (upper layer) into a new vial and Evaporate
- Dissolve the residue in 1 ml n-hexane (or n-heptane) and mix properly with 1ml sample buffer.
- Centrifuge10 min / 3000 g / at room temperature.
- Use 50 µl of the lower, aqueous phase per well in the assay. (For SEM)

Elisa Test Procedure:-

ELISA

- Insert a sufficient number of wells into the microwell holder for all standards and samples to be run. Record standard and sample positions.
- Pipet 50 µl of standard or prepared sample into separate wells. Use a new pipette tip for each standard or sample.
- Add 50 µl of conjugate to each well.
- Mix gently by shaking the plate manually.
- incubate for 30 min (+/- 1) at room temperature
- Pour the liquid out of the wells and tap the microwell holder vigorously upside down against absorbent paper (three times in a row) to ensure complete removal of liquid from the wells. Fill all the wells with 250 µl wash buffer. Empty the wells again. Repeat two more times.
- Add 100 µl of substrate/chromogen to each well.
- Mix gently by shaking the plate manually and incubate for 15 min (+/- 1) at room temperature.
- Add 100 µl of stop solution to each well.
- Mix gently by shaking the plate manually and measure the absorbance at 450 nm. Read within 15 minutes after addition of stop solution.

23-02-2023 Thursday

R-Biopharm Neugen Group., First Floor, Plot No 70/71, Road no.3,IDA Phase I, Cherlapally, Hyderabad, Telangana -500051, INDIA.

RIDASCREEN Aflatoxin B1 30/15

SAMPLE PREPERATION FOR CORN

- weigh 5 g of ground and homogenized sample into a suitable container
- add 25 ml of 70 % methanol.
- shake vigorously for three minutes (manually or with shaker)
- filter the extract through Whatman No. 1 filter (or equivalent) or centrifuge (10 min / 3500 g / room temperature)
- dilute 1 ml of the obtained filtrate or clear supernatant with 1 ml of distilled or deionized water
- use 50 µl of the diluted filtrate per well in the test.

Elisa Test Procedure:-

- Insert a sufficient number of wells into the microwell holder for all standards and samples to be run. Record standard and sample positions.
- Pipet 50 µl of standard or prepared sample into separate wells. Use a new pipette tip for each standard or sample.
- Add 50 µl of conjugate to each well.
- Add 50 µl of antibody to each well.
- Mix gently by shaking the plate manually.
- incubate for 30 min (+/- 1) at room temperature
- Pour the liquid out of the wells and tap the microwell holder vigorously upside down against absorbent paper (three times in a row) to ensure complete removal of liquid from the wells. Fill all the wells with 250 µl wash buffer. Empty the wells again. Repeat two more times.
- Add 100 µl of substrate/chromogen to each well.
- Mix gently by shaking the plate manually and incubate for 15 min (+/- 1) at room temperature.
- Add 100 µl of stop solution to each well.
- Mix gently by shaking the plate manually and measure the absorbance at 450 nm. Read within 15 minutes after addition of stop solution.

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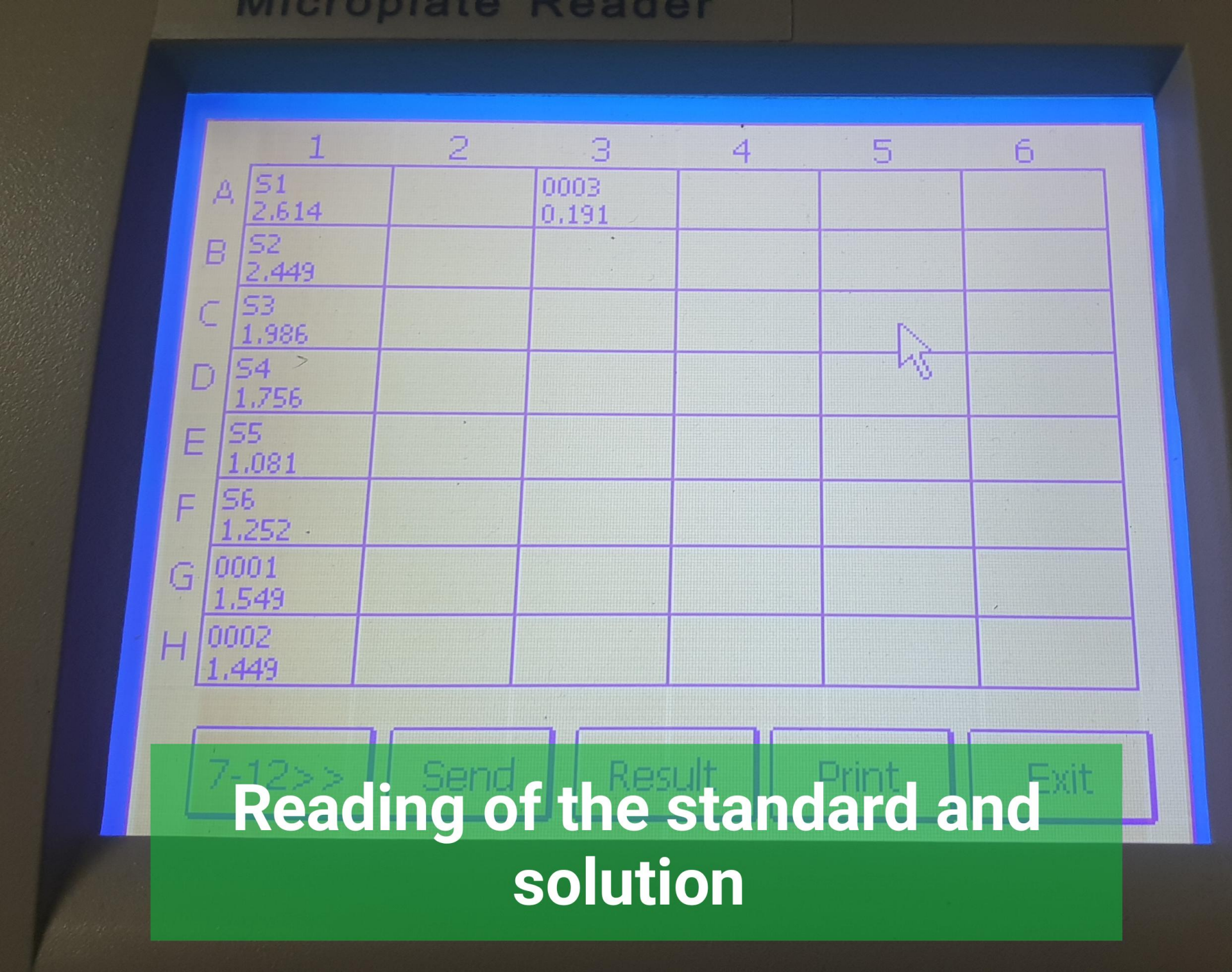
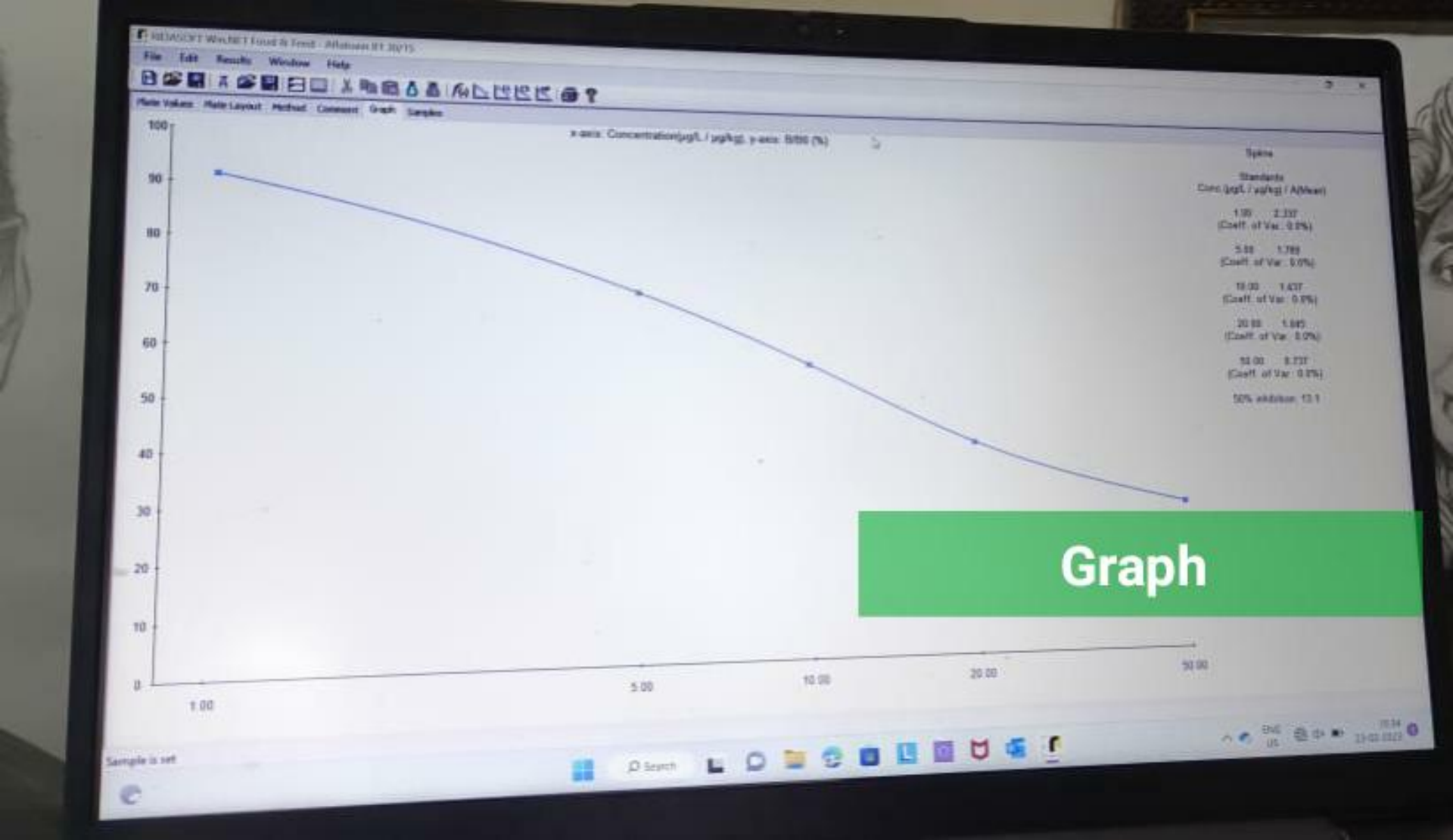
Detection of Aflatoxin B1 In corn



Reading of the standard and solution


File Edit Results Window Help
Plate Values Plate Layout Method Comment Graph Samples
100
90
80
70
60
50
40
30
20
10
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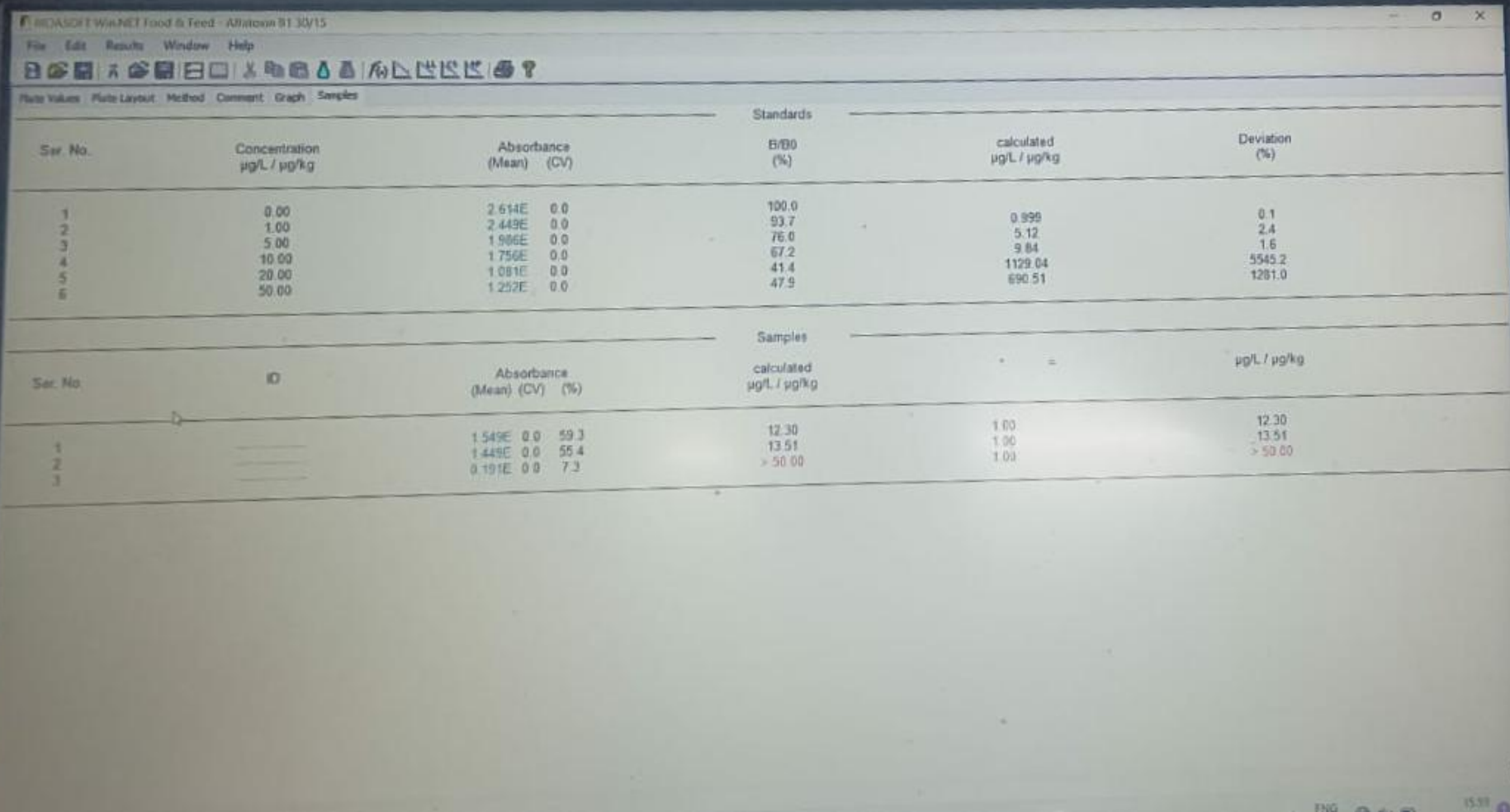
Graph
Sample is set


RIDASOFT WinNET Food & Feed - Aflatoxin B1 30/15
File Edit Results Window Help
Plate Values Plate Layout Method Comment Graph Samples
Standards
Ser. No.
Concentration µg/L / µg/kg
Absorbance (Mean) (CV)
B/B0 (%)
calculated µg/L / µg/kg
Deviation (%)
1 0.00 2.614E 0.0 100.0
2 1.00 2.449E 0.0 93.7 0.999 0.1
3 5.00 1.986E 0.0 76.0 5.12 2.4
4 10.00 1.756E 0.0 67.2 9.84 1.6
5 20.00 1.081E 0.0 41.4 1129.04 5545.2
6 50.00 1.252E 0.0 47.9 690.51 1281.0
Samples
Ser. No
ID
Absorbance (Mean) (CV) (%)
calculated µg/L / µg/kg
µg/L / µg/kg
1 1.549E 0.0 59.3 12.30 1.00 12.30
2 1.449E 0.0 55.4 13.51 1.00 13.51
3 0.191E 0.0 7.3 > 50.00 1.00 > 50.00


RAPID MICROBIAL TESTING
22nd and 23rd
Afternoon
Microbiology Departi
Nizam College
NIZAM COLLEGE
Certificate


Microbiology
NIZAM COLLEGE
(Autonomous) Reaccredited with B++
A Constituent College of Osmania University
WELCOME TO
TWO DAYS WORKSHOP
ON LATEST TECHNOLOGIES IN
RAPID MICROBIAL TESTING
22nd and 23rd February 2023
Morning
torium Centenary Block
Nizam College
Microbiology
Nizam Col
NIZAM COLLEGE