



**FC-BIOS** Sdn Bhd

*Excellence in Laboratory & Process Supplies*

# Optimizing Detection with Fluorescence, Absorbance and Luminescence

A Summary Report for the Microplate Reader Workshop

by FC-BIOS Sdn Bhd

Powered by: **Thermo Fisher**  
SCIENTIFIC

# Workshop Overview

## Introduction

FC-BIOS's first-ever in-house workshop on microplate reader technologies, held at our HQ. Combining theory and hands-on sessions on fluorescence, absorbance, and luminescence – it marks a new step in our efforts to support technical education in life sciences.

## Objective

- To provide participants with a comprehensive understanding of **absorbance, fluorescence, and luminescence** detection methods
- For participants to **make informed choices** in experimental designs across research, diagnostics, and environmental testing

## Date & Venue

20 - 21 May 2025 | FC-BIOS HQ Training Room



# Workshop Agenda

## Day 1 – 20 July 2025

- Focus:
1. Introduction of Microplate Reader
  2. Application of Detection Modes
    - o **Absorbance and Turbidity: Principles, Applications and Measurements**
    - o **Fluorescence: Principles, Applications and Measurements**
  3. Absorbance and Turbidity Application - Protein Concentration using BCA Assay
  4. Data Analysis of Absorbance and Turbidity Data

## Day 2 – 21 July 2025

- Focus:
1. Fluorescence Application: ssDNA Quantification using Fluorescence Approach
  2. Application of Detection Modes
    - o **Luminescence: Principles, Applications, and Measurements**
  3. Discussion for Fluorescence Application Data
  4. Luminescence Application: ATP Determination
  5. Open Discussion



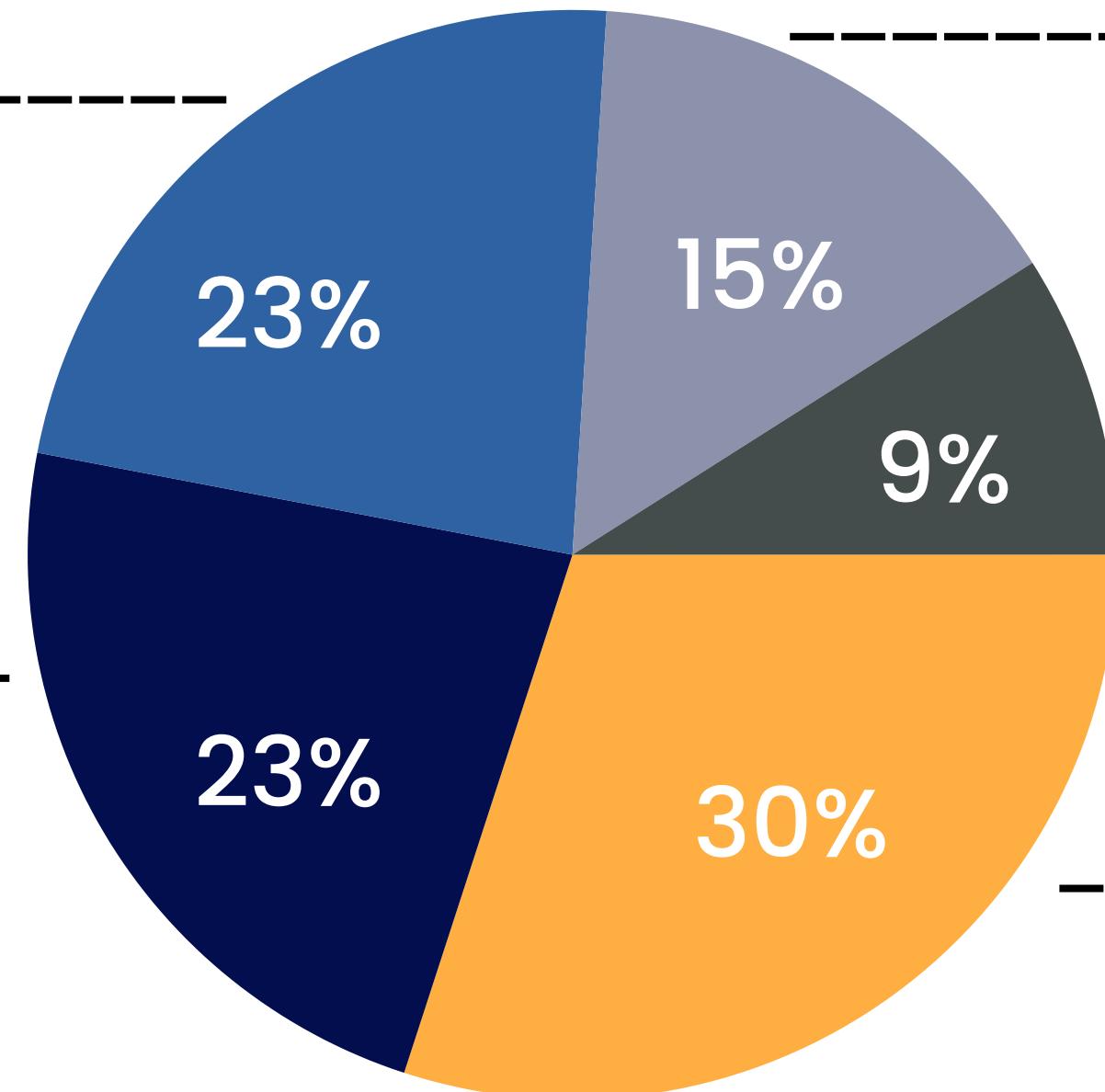
# Session Recap

Total Participants: **12 participants** from different institutions  
Participants are all from research institutes and facilities

- Participants Breakdown:
  - **Postgraduate Students (PhD Students)** - 3
  - **Postgraduate Students (Master's Students)** - 5
  - **Research Officers** : 3
  - **Lab Technologies** : 2
- Institutions Represented:
  - **Institute for Medical Research (IMR), National Institutes of Health (NIH)**
  - **International Medical University (IMU)**
  - **Management and Science University (MSU)**
  - **Universiti Malaya (UM)**
  - **National Public Health Laboratory (MKAK)**



## Participants Segmentation



### International Medical University (IMU)

- 3 participants
- Postgraduates (Master's)

### Management & Science University (MSU)

- 3 participants
- Postgraduates (Master's and PhD)

### Universiti Malaya (UM)

- 2 participants
- Postgraduates (Master's and PhD)

### National Public Health Laboratory (MKAK)

- 1 participant
- Lab Technologist

### Institute for Medical Research (IMR), National Institutes of Health (NIH)

- 4 participants
- Research Officers and Lab Technologists

# Feedback Summary

**5/5**

## Overall Satisfaction

All participants gave the workshop a perfect rating – 5 out of 5 for overall satisfaction with how the workshop is conducted.

**5/5**

## Overall Relevancy

All participants gave the workshop a perfect rating for how relevant the workshop is to their job - indicating strong value for practical roles

### What They Found Most Helpful:

- Fluorescence and Absorbance Techniques
- Hands-On Sessions, especially on:
  - Photometry basics
  - Sample handling and analysis
- Practical skills directly linked to daily tasks (eg. enzyme testing)

### What They Liked Most:

- Hands-on experience
- Friendly and knowledgeable speakers
- Real-world application relevance
- Clear explanation, supportive staff and lab accessibility

### Follow-Up Interest:

- 75% of the participants would like to have a **follow-up educational talk (TechTalk)** on the product.
- 40% of the participants are **interested in the Thermo Fisher product line** and would like to be contacted.

# Milestones & Roadmap

2026



## Basic Detection Workshop (Completed)

Optimizing Detection with Fluorescence, Absorbance and Luminescence

## Advanced Microplate Reader Workshop

*Title: TBC*

## Basic Detection Workshop - 2<sup>nd</sup> Phase

## Advanced Microplate Reader Workshop

*Focus: Troubleshooting and complex assay setups*

## Application-Based Workshop

*Focus: Real-world protocols + case studies*

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