



Indole Assay Kit (Colorimetric)

Indole Assay Kit (Colorimetric) is a detection kit for the quantification of Indole in bacterial growth medium.

Catalog number: ARG82170

Package: 100 tests

For research use only. Not for use in diagnostic procedures.

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INTRODUCTION

Indole is an aromatic heterocyclic organic compound with formula C_8H_7N . It has a bicyclic structure, consisting of a six-membered benzene ring fused to a five-membered pyrrole ring. Indole is widely distributed in the natural environment and can be produced by a variety of bacteria. As an intercellular signal molecule, indole regulates various aspects of bacterial physiology, including spore formation, plasmid stability, resistances of drugs, biofilm formation, and virulence. The amino acid tryptophan is an indole derivative and the precursor of the neurotransmitter serotonin. [Provide by Wikipedia: Indole]

PRINCIPLE OF THE ASSAY

This Indole Assay Kit (Colorimetric) is a simple colorimetric assay that measures the amount of indole present in bacteria growth medium. This assay kit is based on a modified version of Ehrlich's and Kovac's reagents, which reacts with indole to produce a colored compound at O.D. 565 nm. The intensity of this colored compound is directly proportional to the indole in the sample.

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MATERIALS PROVIDED & STORAGE INFORMATION

The kit is shipped at room temperature. Store all components at 4°C upon receiving. Shelf life: 6 months after receipt.

Component	Quantity	Storage information
Reagent	12 mL	4°C
Standard (10 mM Indole)	100 µL	4°C

MATERIALS REQUIRED BUT NOT PROVIDED

- Microplate reader capable of reading at O.D. 565 nm
- Clear flat-bottom 96 well microplate
- Deionized or Distilled water
- Pipettes, pipette tips and Multichannel micropipette reservoir

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TECHNICAL NOTES AND PRECAUTIONS

- Wear protective gloves, clothing, eye, and face protection especially while handling blood or body fluid samples.
- Reagents are for research use only. Normal precautions for laboratory reagents should be exercised while using the reagents. Please refer to Material Safety Data Sheet for detailed information.
- All reagents should be mixed by gentle inversion or swirling prior to use. Do not induce foaming.
- Before using the kit, spin tubes and bring down all components to the bottom of tubes.
- It is highly recommended assaying the Standards and samples in duplicates.
- Change pipette tips between the addition of different reagent or samples.

SAMPLE COLLECTION & STORAGE INFORMATION

The sample collection and storage conditions listed below are intended as general guidelines. Sample stability has not been evaluated.

Bacteria growth media: assay directly.

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REAGENT PREPARATION

- **Standards:** Prepare 1 mL of 100 μ M Premix by mixing 10 μ L of the Standard (10 mM) and 990 μ L of the blank medium (E.g., bacterial growth medium). Dilute standards as follows.

Standard tube	Indole (μ M)	medium (μ L)	Standard Premix, 100 μ M (μ L)
S1	100	0	200
S2	50	100	100
S3	25	150	50
S4	0	200	0

ASSAY PROCEDURE

Equilibrate all components to room temperature. Briefly centrifuge the tubes before opening.

	Standard well	Sample well
Standard	100 μ L	
Sample		100 μ L
Working Reagent	100 μ L	100 μ L
Tap plate to mix briefly and thoroughly.		
Read the absorbance at O.D. 565 nm . (520-590 nm)		

Note: Use of a multi-channel pipettor is recommended.

CALCULATION OF RESULTS

1. Subtract blank value (S4) from the standard values and plot the ΔOD against standard concentrations. Determine the slope and calculate the indole concentration of Sample as follows:

$$\text{Indole } (\mu\text{M}) = [(\text{OD}_{\text{Sample}} - \text{OD}_{\text{Blank}}) / \text{Slope } (\mu\text{M}^{-1})]$$

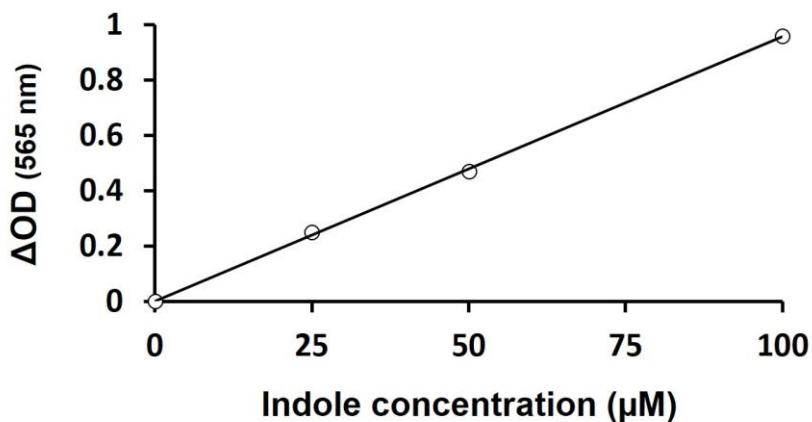
Note:

- $\text{OD}_{\text{Sample}}$, OD_{Blank} : the O.D. 565 nm values of the sample and media blank (S4), respectively.
2. Conversions: 1 μM Indole equals 1.172 mg/dL, or 11.72 ppm.

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EXAMPLE OF TYPICAL STANDARD CURVE

The following figures demonstrate typical results with the Indole Assay Kit (Colorimetric). One should use the data below for reference only. This data should not be used to interpret actual results.



QUALITY ASSURANCE

Sensitivity

3 µM