CDA Count – [Whole Blood EDTA] Analysis

Objective

The objective of this test is to measure the Cluster of Differentiation Antigens (CDA) count, specifically evaluating immune cell subsets such as CD4 and CD8 T lymphocytes in whole blood collected in EDTA. This test is crucial in monitoring immune status in conditions like HIV/AIDS and immunodeficiency disorders.

Materials and Methods

Materials:
- Whole blood sample collected in EDTA anticoagulant tubes
- Flow cytometer with monoclonal antibodies targeting specific CD markers
- Standard laboratory equipment (pipettes, centrifuge)

Methods:
1. Sample Collection: Collect venous blood in EDTA tubes.
2. Staining: Incubate blood with fluorescently labeled monoclonal antibodies against specific CD markers.
3. Flow Cytometry: Analyze stained cells using flow cytometer to quantify CD subsets.
4. Data Analysis: Calculate percentages and absolute counts of CD cells.
5. Interpretation: Monitor immune function and disease progression.
6. Quality Control: Include appropriate controls and calibrators for accurate measurement.

Results

- Normal CD4 count: 500–1500 cells/µL (varies by lab)
- Normal CD8 count: 300–1000 cells/µL (varies by lab)
- Decreased counts may indicate immunodeficiency or HIV progression
- Elevated counts may be seen in certain infections or immune activation

Conclusion

CDA counting using flow cytometry is essential for immune monitoring, especially in HIV/AIDS management. Results guide therapeutic decisions and prognosis assessment.