

CLINICAL SIGNIFICANCE

Lyse Reagents are in vitro diagnostics reagents used to determine erythrocytes (RBC), leukocytes (WBC) and the leukocyte subpopulations, thrombocytes (PLT) and measurement of hemoglobin (HGB) concentration. Lyse Reagents come under low to moderate risk class of in vitro diagnostics and it is used for primary screening of blood samples.

Lyse Reagent is not a stand-alone reagent, to detect & analyze whole blood. It needs semi auto/fully auto Hematology analyzers. Lyse Reagent is aqueous solution which is ready for use and can be applied straight from the container; no special reagent preparation is necessary. Instrument adds diluents and lytic reagent automatically while measuring and display hematogram. Measurement results are printed out by outer printer or inner thermal recorder. Read the instruction manual carefully and follow the directions when using any mode analyzer.

PRINCIPLE

The Lyse Reagent is a chemical composition of organic buffers, anesthetics, and germicides in an osmotically balanced neutral solution that includes the following:

A reagent system for substantially lysing red blood cells in a whole blood sample prior to leukocyte analysis, the reagent system comprising first reagent for substantially lysing the red blood cells in the whole blood sample, wherein the first reagent includes: a spooning compound; an acid selected from the group consisting of halogenated carboxylic acids, phosphoric acid or combinations thereof; and a second reagent for quenching the activity of the first reagent, wherein the second reagent includes a base and has a pH value of about 8 to 12.

REAGENT COMPOSITION

Reagent: Lyse Reagent

SAMPLE COLLECTION AND PRESERVATION

Collect whole blood into an appropriate blood collection tube with anticoagulant (EDTA).

REAGENT PREPARATION

Ready to use reagent.
Perform priming after connecting the reagent to the instrument.

REAGENT STORAGE AND STABILITY

When stored between 15-30°C, the reagent is stable till the expiration date stated on the bottle and kit box label.

REFERENCE VALUES

The reference values are only indicative in nature. Every laboratory should establish its own normal ranges.

MANUAL ASSAY PROCEDURE

1. Connect the tubing of Lyse Reagent with hematology cell counter.
2. Perform the priming of Lyse Reagent to prepare the reagent for analysis.
3. Then push the sample aspiration button and aspirate the blood sample.
4. Wait for analysis to complete.
5. Note or take printout of the readings.

QUALITY CONTROL

It is recommended to run random samples along with pathological blood controls which are commercially available to verify the performance of the measured procedure. The values of controls should match with the control sheet data.

NOTES

Always use the fresh blood sample for better accuracy and results. Before testing Blood Samples and controls should be mixed well for efficient results.

BIBLIOGRPHY

- 1- Segal et al. "Hemolytic properties of synthetic glycosides" J. Pharma. Sci. (1978) 67(11): 1589-1592. *
- 2- Tatsumi, N., "Alterations of Saponin Hemolysis during Storage of ACD Blood", Vax Sanguinis, vol. 41, No. 1 (Jul. 1981); pp. 18-24.

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