

ESR MANUAL RACK USER'S MANUAL

Manual Access analyzer for Determination of the Erythrocyte Sedimentation Rate (ESR)

INTRODUCTION

ESR MANUAL RACK is a manual analytic system to determine the Erythrocyte Sedimentation Rate (ESR), capable of processing up to 10 samples simultaneously.

ESR MANUAL RACK requires a minimal handling of the sample, as the test is performed directly on the test-tube, admitting both open and vacuum tubes.

ESR MANUAL RACK takes the analysis in 30 min for 1 hour results. Results are expressed in Westergren millimeters and it is capable to process 20 samples per hour.

1. INSTALLATION & SAFETY REQUIREMENTS

In case of accidental spillage of the analyzed samples, the spill must immediately be cleaned with an appropriate disinfecting solution, to avoid possible contamination of the laboratory personnel and equipment. **Note: The device can be cleaned with water and soap solution. Do not use larger alcohol concentration, as it could damage the cover of the device**

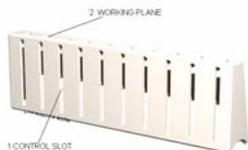
1.2 MEASUREMENTS. Weight : 0.11 Kgs. Width : 25.5 cm. Height : 8 cm. Depth : 4 cm.

1.3 DEVICE PLACE REQUERIMENT . The **MANUAL RACK** must be placed on a **perfectly flat and level surface not exposed to any vibrations**. It is recommendable to operate at room temperature, around **20° C**, and the maximum relative humidity must be **80% at 32° C**.

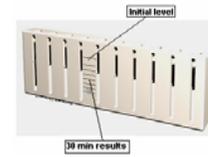
2.1 DESCRIPTION. The **Manual rack** has been designed to operate, either open or vacuum tubes containing a sodium citrate solution as anticoagulant.. The capacity of the working plane is 10 positions. The duration of the test for every sample is 30 minutes for 1 hour, and it is 1 hour for 2 hours result. In both cases results are expressed in Westergren millimeters. System throughput is 20 samples per hour.

2.2 CONTROL SLOT(1) . There is an upright slot in front of the **MANUAL RACK** for each position. We use this control slot to see sedimentation of blood for each sample.

2.3. WORKING PLANE (2) Located in the upper part of the Instrument, it features 10 positions for samples. Every position has a foam to hold the tube.



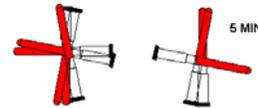
2.4 READING SCALE Located in the front part of the Instrument, and between each control slot, we can find the reading scale. By looking at the scale after 30 Min. we can obtain the 1 hour result of the sample, comparable to the 1 hour method.



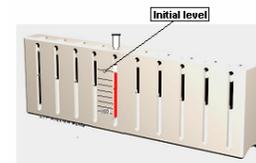
3.1 OPERATION. BEGINNING THE TEST. To begin the test, we must put the device in its correct place, taking into account section 1.2. The blood sample in tube must be **correctly levelled**, according to the **level** marking on the tube.



Then the sample should be shaken by slowly inverting the tube during approximately 5 minutes, before inserting it in the Instrument.



After that introduce the sample tube in one empty position levelled with the initial level mark in the reading scale. Then switch on a 30Min. chronometer.



Its very important not to move the device during the analysis, to avoid wrong results.

3.2 GETTING RESULTS. After **30 minutes** have passed from the start of the test, we can obtain the 1H result. Then we have to observe which is the blood level, and take the value beside the slot on the reading scale to determinate the results.

3.3 ANALITIC SAMPLE PROCESS

