

红细胞稀释液(计数液)

货号: G3610

规格: 100mL

保存: 室温保存, 有效期 6 个月。

产品介绍:

红细胞 (red blood cell, RBC), 是血液中数量最多的一种血细胞。红细胞稀释液(RBC dilution)的作用原理是用等渗稀释液将血液按一定的倍数稀释, 充入计数池后显微镜下计数一定体积内红细胞数, 换算求出每升血液中红细胞的数目。该红细胞稀释液仅用于科研领域, 不用于临床诊断。

自备材料:

新鲜全血、微量吸管、细胞计数板、显微镜

操作步骤: (仅供参考)

1. 取小号试管, 加红细胞稀释液 2.0mL。
2. 用清洁干燥微量吸管取末梢血或抗凝血 10 μ L, 擦去管外余血后加至红细胞稀释液底部, 轻轻将血放出, 再轻吸上层清液清洗吸管 2~3 次, 立即混匀。
3. 混匀后, 用干净微量吸管将红细胞悬液充入计数池, 不得有空泡或外溢, 充池后静置 2-3min 后计数。
4. 高倍镜下依次计数中央大方格内四角和正中 5 个中方格内的红细胞。压线细胞按“数上不数下, 数左不数右”的原则进行计数。

计算:

$$\begin{aligned} \text{红细胞数/L} &= 5 \text{ 个中方格内红细胞数} \times 5 \times 10 \times 200 \times 10^6 \\ &= 5 \text{ 个中方格内红细胞数} \times 10^{10} \\ &= 5 \text{ 个中方格内红细胞数} / 100 \times 10^{12} \end{aligned}$$

式中:

×5	5 个中方格换算成 1 个大方格
×10	1 个大方格容积为 0.1 μ L, 换算成 1.0 μ L
×200	血液的实际稀释倍数应为 201 倍, 按 200 倍便于计算
×10 ⁶	由 1 μ L 换算成 1L

注意事项:

1. 采血时不能过于挤压, 针刺深度应适当。
2. 小试管、计数板均应清洁, 以免杂质、微粒等被误认为红细胞。
3. 在参考范围数值内, 两次红细胞计数相差不得超过 5%。
4. 不允许以血红蛋白浓度来折算红细胞数。
5. 为了您的安全和健康, 请穿实验服并戴一次性手套操作。

Red Blood Cell Dilution

Cat: G3610

Size: 100mL

Storage: RT, valid for 6 months.

Introduction

Red blood cell (RBC) is the most numerous blood cell in the blood. The principle of Red Blood Cell Diluent is to use isotonic diluent to dilute the blood in a certain number of times, fill it into the counting chamber, count the number of RBC in a certain volume under the microscope, and calculate the number of RBC in each liter of blood by conversion. The Red Blood Cell Diluent is only used in scientific research field, not in clinical diagnosis.

Self Provided Materials

Fresh whole blood, Micropipette, Cell counting plate, Microscope

Protocol(for reference only)

1. Take small test tube and add 2.0mL Red Blood Cell Diluent.
2. Take 10 μ L of peripheral blood with a clean and dry micropipette, wipe off the remaining blood outside the micropipette, add it to the bottom of Red Blood Cell Diluent, gently drain the blood, then gently suck the upper supernatant to clean the pipette for 2-3 times, and mix it immediately.
3. After mixing well, fill the red blood cells with a clean micropipette into the counting chamber. Pay attention to prevent bubbles or overflows. Leave it at room temperature for 2-3 min.
4. Under the high power microscope, count the platelets in the four corners of the central square grid and the central 5 square grids. Pressure line cells are counted according to the principle of "counting up and not counting down, counting left and not counting right".

Calculation:

The number of red blood cell/L = The number of red blood cells in 5 middle squares $\times 5 \times 10 \times 200 \times 10^6$
 =The number of red blood cells in 5 middle squares $\times 10^{10}$
 =The number of red blood cells in 5 middle squares/ 100×10^{12}

$\times 5$	5 middle squares convert to 1 large square
$\times 10$	The volume of a square grid is 0.1 μ L, which is converted into 1.0 μ L.
$\times 200$	The actual dilution ratio of blood shall be 201 times, but 200 times for calculation.
$\times 10^6$	Convert 1 μ l to 1L

Note

1. Avoid squeezing too much when collecting blood, and the acupuncture depth should be appropriate.
2. The small test tube and counting plate should be clean to avoid misidentification of cells.
3. Within the reference range, the difference between the two counts of red blood cells shall not exceed 5%.
4. Hemoglobin concentration is not allowed to convert the number of red blood cells.
5. For your safety and health, please wear experimental clothes and disposable gloves.