

1. Poner los títulos y subtítulos en el lugar correcto.

SPRCA / Antibodies / Tube Testing / Antibody Screening: Denition, Methods & Applications / Gel Microcolumn Testing

Antibody screening procedures done in the lab may not be as easy as brewing your morning coffee, but the nuances involved in those lab tests are life-saving. (A) Blood antibodies are formed by the immune system in response to antigens (foreign substances) on the surface of blood cells. Some antibodies, such as A and B antibodies, are expected to be present in the blood and are used in the determination of your blood type. These antibodies are expected to be there, and are not the target of antibody screening. Instead, (B) antibody screening is used to detect unexpected antibodies that could cause harm to you if ever you will receive blood products or undergo a transfusion.

When you last visited a hospital, you've probably seen some tubes with various colored-tops being carried by nurses or medical technology sta. These are used to draw patient blood samples and are then carried to the lab for testing. (C) Although it's considered the old fashioned way to screen for antibodies, tube testing is still widely used. (D) This tried and true method is relatively cheap and produces quick results. Screening cells, type O blood cells that contain specic antigens, are used in this method and are tested against a patient's own serum. In tube testing, the cells are spun and then incubated at 37 degrees celsius.(E) Sometimes enhancements such as LISS (Low Ionic Strength Solution) are added to promote reactivity of antibodies. Then, anti-human globulin is added, and you can review the samples for agglutination, the clumping of cells. Tube tests are considered positive when agglutination or hemolysis (rupture or destruction) occurs. They are graded according to the presence of these characteristics. You should immediately read the test results after taking them out of the centrifuge. (F) A positive reaction in any of the three phases warrants further testing to identify which antibodies are present. Tests are considered negative in the absence of agglutination and/or hemolysis.

Another type of antibody screening that is used nowadays is the Gel Microcolumn Test. For this type of test, you will use porous gel columns impregnated with an anti-globulin reagent that traps antibodies bound to RBCs. You have to mix the patient's serum with reagents and add an enhancer such as LISS. They are allowed to incubate and then placed in the centrifuge. (G) A reactive test, a test positive for antibodies, occurs when agglutination occurs and cells stay towards the top of the gel column. A test is considered negative for antibodies when no agglutination occurs and cells move freely to the bottom of the gel column. Just like the coffee filter which traps the grounds but allows the water to go through, the gel column traps the agglutinated cells and the non-reactive cells ow to the bottom of the column. An advantage of the gel test is that you only need to use small volumes of serum and reagent to perform the test. Another is that results are stable, so another reviewer can look at the results of a patient's screening test even at a later time.

The third type of antibody screening that you may use while conducting tests is called the Solid Phase Red Cell Adherence Assay (SPRCA). This is a tubeless method using microtiter plates. (H) Microtiter plates are at plates with numerous wells that act as test tubes. To use this type of test, you will have to add the patient's plasma and an enhancer such as LISS to the well and allow them to incubate. If antibodies are present, they will bind to the antigens on the coating of the well, but unbound antibodies will wash off. They are then spun in a centrifuge and read. (I) A uniform layer of indicator RBCs at the bottom of the well represent a positive result. Solid phase testing is sensitive, less subjective in terms of interpretation, and stable enough that results can be read by another reviewer at a later time. Also, you will only need small amounts of both the sample and reagent to perform the test.

2. Unir las oraciones subrayadas del texto con su correspondiente traducción.

Escribir aquí la letra correspondiente.	Oración traducida.
	Una capa uniforme de glóbulos rojos indicadores en el fondo del pozo representa un resultado positivo.
	Una prueba reactiva, una prueba positiva para anticuerpos, ocurre cuando se produce la aglutinación y las células permanecen en la parte superior de la columna de gel.
	Una reacción positiva en cualquiera de las tres fases garantiza pruebas adicionales para identificar qué anticuerpos están presentes.
	Las placas de microtitulación están en placas con numerosos pozos que actúan como tubos de ensayo.
	Aunque se considera la forma tradicional de detectar anticuerpos, las pruebas de tubo todavía se usan ampliamente.
	Este método probado y verdadero es relativamente barato y produce resultados rápidos.
	Los anticuerpos de la sangre se forman por el sistema inmune en respuesta a los antígenos (sustancias extrañas) en la superficie de las células sanguíneas.
	El chequeo de anticuerpos se usa para detectar anticuerpos inesperados que podrían causarle daño si alguna vez recibe productos sanguíneos o se somete a una transfusión.
	A veces, se agregan mejoras como LISS (Solución de baja fuerza iónica) para promover la reactividad de los anticuerpos.

3. Respondé VERDADERO (V) o FALSO (F).

- a. Las oraciones C,D,F,G,H,I están escritas en presente simple porque describen.
- a. Las oraciones C,D,F,G,H,I están escritas en voz pasiva, ya que importan más los procesos.
- b. Las oraciones A,B,C,E son ejemplos de voz pasiva ya que interesa más la descripción de los procesos de laboratorio descriptos en el texto.
- c. La oración C contiene un ejemplo de presente simple y uno de voz pasiva.