

Analytical validation of lal kinetic assay for detection

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What does the LAL assay detect? The limulus amoebocyte lysate (LAL) test is a simple method for the detection of viable and non-viable Gram-negative bacteria. Certain cell-wall lipopolysaccharides (i.e. endotoxins) of this bacterial group lead to gelation of blood cell (amoebocytes) lysates of the *Limulus polyphemus* crab.

What is the kinetic LAL method? The Limulus amoebocyte lysate (LAL) kinetic assay is a test that is used to detect and quantify gram negative bacteria endotoxins (aka: lipopolysaccharides [LPS], or endogenous pyrogens) that may be present in biotechnological products.

What is the detection limit of LAL assay? Our Kinetic-QCL ® Kinetic Chromogenic LAL Assay kits have a sensitivity range from 0.005 to 50 EU/ml. These kits contain co-lyophilized lysate/substrate and matched control standard endotoxin. Bulk kit configurations are also available.

What types of things are tested using LAL? The LAL test is a bacterial endotoxin test (BET) employed by medicinal product manufacturers worldwide. Specifically, the LAL test is a means of detecting and in some cases quantifying the presence of endotoxins, also known as lipopolysaccharides (LPS), deriving from gram negative bacteria.

What is the accuracy of LAL test? The gel-clot LAL test assay This purely qualitative LAL test method is simple and economical but low on sensitivity (LoD of 0.015 – 0.5 EU/ml), adequate for just swift and informal testing during the initial stages of a product's development.

Is LAL test qualitative or quantitative? The chromogenic LAL assay is a quantitative test that produces a yellow colour (chromogenic) as the result of an enzymatic reaction triggered by the activation of limulus clotting factor C by the presence of bacterial endotoxin in a sample (fig.

What is the purpose of kinetic assay? Specifically, the kinetics assay used by Pardo-Andreu et al. (2006), is an enzyme-based method used to continuously assess the activity of a given enzyme in a solution (What are enzyme kinetic assays? An overview, 2021).

What is the kinetic method of analysis? In kinetic methods, measurement of the analytical signal is made under dynamic conditions in which the concentrations of reactants and products are changing as a function of time. Generally, in analytical chemistry many methods of analysis are based on the equilibrium state of the selected reaction.

What is the LAL reagent used for? What is the LAL test used for? The LAL test is used to detect and measure instances of bacterial endotoxin contamination in drugs, biological products, medical devices, and others. The LAL test is the most sensitive and specific means to detect bacterial endotoxin.

What is the principle of LAL? The principle of the LAL test is a reaction between LPS and a substance (clottable protein) contained within amoebocyte cells derived from the blood of the horseshoe crab, as illustrated in Figure 11.4 (of which *Limulus polyphemus* is the most commonly used species, although other species, such as *Carcinoscorpius* and ...

How to interpret endotoxin results? It is a qualitative or semi-quantitative test that is used to screen for the presence of endotoxins. A clot formation is interpreted as a positive result for the presence of endotoxin and if no clot forms, this is interpreted as the sample being endotoxin free.

How do you test for limit of detection? The 'Limit of Detection' (LOD) is the lowest concentration of a substance in a sample that can be consistently detected with a certain level of certainty, typically 95%. It is determined by first establishing the Limit of Blank (LOB) and then adding the standard deviation of samples with low

concentrations.

What is the protocol for LAL test? a) Reconstitute 10 ng vial endotoxin with 5.0 mL LAL Reagent Water. b) Vortex the vial of Endotoxin for at least 15 minutes. 4.4. 1 Each assay should include serial two-fold dilutions of the Control Standard Endotoxin (CSE) which bracket the sensitivity value on the label, and dilutions of the test sample.

What are the advantages of LAL test? The LAL assay offers numerous advantages over the rabbit pyrogenic test. The assay allows for direct quantification of endotoxin levels without individual variability while minimizing potential sources of error.

What is the difference between a LAL test and a pyrogen test? It is recommended that the LAL method is the test of choice for detecting endotoxin in that product instead of the Rabbit Pyrogen test. The LAL test is more sensitive, requires less sample, can be completed in less than 1 hour, and is much less expensive than the rabbit test.

What else can LAL be used to test for? The LAL (limulus amebocyte lysate) testing, also known as bacterial endotoxin testing, is an in vitro assay used to detect the presence and concentration of bacterial endotoxins in drugs and biological products, and is an important part of pharmaceutical microbiology.

What is the ISO standard for LAL test? ISO 29701:2010 describes the application of a test using Limulus amebocyte lysate (LAL) reagent for the evaluation of nanomaterials intended for cell-based in vitro biological test systems.

What is the variability and test error with the LAL assay? LAL Test Variability
The LAL assay has an inherent variability of 50% to 200% (or one 2-fold error either side of each endotoxin standard). Variation arises, for kinetic assays, from the slope of the endotoxin standard curve. Test variation can arise from a range of test inputs, including: Test tubes.

Who invented the LAL test? In 1964, Levin and Bang made the novel discovery that the lysate from Atlantic horseshoe crab (*L. polyphemus*) coagulated upon contact with bacterial endotoxins, and their epoch-making research findings

contributed to the remarkable development of the LAL test.

What is the sample size for LAL? Sample Requirements For liquid samples, a minimum of 0.6 ml is required and powder sample require enough material to reconstitute into a minimum of 1 ml pyrogen-free water.

What is the turbidimetric technique in LAL test? The turbidimetric method is based on the principle that endotoxins cause the aggregation of a compound called Limulus ameocyte lysate (LAL), which is derived from the horseshoe crab's blood cells. NJ Labs previously published an article about extraction of this compound from horseshoe crab blood.

What is the LAL reagent used for? What is the LAL test used for? The LAL test is used to detect and measure instances of bacterial endotoxin contamination in drugs, biological products, medical devices, and others. The LAL test is the most sensitive and specific means to detect bacterial endotoxin.

What is the purpose of the bacterial endotoxin test? The Bacterial Endotoxin Test, or Lumulus Ameocyte Lysate (LAL) Test, quantifies endotoxins that are part of the cell wall of gram-negative bacteria. Performed as a lot release test, the Bacterial Endotoxin or LAL Test assesses medical devices coming in contact with cerebrospinal fluid or the cardiovascular system.

What is the LAL test for sterility testing? The Limulus ameocyte lysate (LAL) test is an alternative method to the rabbit pyrogen test focussed on detection of pyrogenic substaces in sterile parenteral drugs.

What is the principle of LAL test for pyrogen testing? The principle of the LAL test is a reaction between LPS and a substance (clottable protein) contained within amoebocyte cells derived from the blood of the horseshoe crab, as illustrated in Figure 11.4 (of which Limulus polyphemus is the most commonly used species, although other species, such as Carcinoscorpius and ...

The Hundred Languages of Children: The Reggio Emilia Experience in Transformation

What is the Reggio Emilia Approach?

The Reggio Emilia Approach is a progressive educational philosophy that originated in the small town of Reggio Emilia, Italy, in the post-war era. It emphasizes the innate potential of children and believes that they learn through active exploration, play, and collaboration. The approach values children's "hundred languages" of expression, including art, music, dance, drama, and construction.

How is the Reggio Emilia Approach being transformed?

In recent years, the Reggio Emilia Approach has undergone a process of transformation to meet the changing needs of children and the modern world. This transformation includes:

- **Embracing digital technologies:** Children are increasingly exposed to and using digital technologies. The Reggio Emilia Approach integrates these technologies into the classroom to enhance creativity and communication.
- **Fostering global connections:** The Approach encourages children to connect with other cultures and perspectives through projects and collaborations. This promotes understanding and respect for diversity.
- **Empowering children as changemakers:** Children are not seen as passive recipients of knowledge but as active agents of change. The Approach provides opportunities for children to participate in decision-making and take responsibility for their learning and environment.

What are the benefits of the transformed Reggio Emilia Approach?

The transformed Reggio Emilia Approach offers numerous benefits for children:

- **Promotes creativity and innovation:** By nurturing children's "hundred languages," the Approach fosters their imagination and problem-solving abilities.
- **Enhances critical thinking and collaboration:** Through group projects and open-ended discussions, children develop their critical thinking and communication skills.
- **Inspires social responsibility:** By connecting children with the wider community and encouraging them to engage in meaningful projects, the

Approach promotes empathy and a sense of social justice.

How can parents and educators implement the Reggio Emilia Approach?

Parents and educators can implement the Reggio Emilia Approach by:

- **Providing a stimulating environment:** Create spaces where children have access to a variety of materials and opportunities for exploration.
- **Observing and listening to children:** Pay attention to their interests, ideas, and questions. Use these observations to guide your teaching.
- **Documenting children's learning:** Keep a record of their creations, conversations, and experiences to reflect on their progress and growth.

What are the notes of cellular respiration? Cellular respiration is a series of chemical reactions that break down glucose to produce ATP, which may be used as energy to power many reactions throughout the body. There are three main steps of cellular respiration: glycolysis, the citric acid cycle, and oxidative phosphorylation.

What is cellular respiration notes 9th grade? Cellular respiration is how all living things make energy. When an animal eats and digests food, it is broken down and absorbed by the cells as glucose molecules. Simultaneously, they take in oxygen which travels through the lungs, bloodstream, and into the cells.

How does the cell get glycolysis going? How does the cell get glycolysis going? It uses the energy of 2 molecules of ATP.

What is the energy of the high energy electrons used for every time to high energy electrons move down the electron transport chain? In the electron transport chain, electrons are passed from one molecule to another, and energy released in these electron transfers is used to form an electrochemical gradient. In chemiosmosis, the energy stored in the gradient is used to make ATP.

What is respiration short notes? The transfer of oxygen from the outside environment to cells within tissues, as well as the removal of carbon dioxide in the opposite way, is referred to as respiration. It is a biological reaction that takes place within the cells of living organisms.

What is cellular respiration class 9? It's the process of breaking down food materials within the cell to produce energy and then trapping that energy for ATP production. The process occurs in the cytoplasm and mitochondria of the cell.

What is respiration Class 9 notes? "Respiration is defined as a metabolic process wherein, the living cells of an organism obtains energy (in the form of ATP) by taking in oxygen and liberating carbon dioxide from the oxidation of complex organic substances."

What is respiration grade 9? Respiration is the biochemical process in which the cells of an organism obtain energy by combining oxygen and glucose, resulting in the release of carbon dioxide, water, and ATP (the currency of energy in cells).

What is the science 9 cellular respiration? Cellular respiration is the process that occurs in the mitochondria of organisms (animals and plants) to break down sugar in the presence of oxygen to release energy in the form of ATP. This process releases carbon dioxide and water as waste products. 8.

How is ATP made in glycolysis? ATP is created directly from glycolysis through the process of substrate-level phosphorylation (SLP) and indirectly by oxidative phosphorylation (OP).

Is 36 or 38 ATP used in cellular respiration? Explanation for Correct option: The citric acid cycle produces 36 ATP molecules. So, in aerobic respiration, a total of 38 molecules of ATP are created, with 2 ATP molecules formed outside the mitochondria.

Why do cells require glucose? The body breaks down most carbohydrates from the foods we eat and converts them to a type of sugar called glucose. Glucose is the main source of fuel for our cells. When the body doesn't need to use the glucose for energy, it stores it in the liver and muscles.

How is glucose changed during glycolysis? During glycolysis, glucose ultimately breaks down into pyruvate and energy; a total of 2 ATP is derived in the process ($\text{Glucose} + 2 \text{ NAD}^+ + 2 \text{ ADP} + 2 \text{ Pi} \rightarrow 2 \text{ Pyruvate} + 2 \text{ NADH} + 2 \text{ H}^+ + 2 \text{ ATP} + 2 \text{ H}_2\text{O}$). The hydroxyl groups allow for phosphorylation. The specific form of glucose used in glycolysis is glucose 6-phosphate.

What are the two pathways that might follow glycolysis? Glycolysis, which is the first step in all types of cellular respiration is anaerobic and does not require oxygen. If oxygen is present, the pathway will continue on to the Krebs cycle and oxidative phosphorylation. However, if oxygen is not present, some organisms can undergo fermentation to continually produce ATP.

How are electrons transferred from glucose to oxygen? In cellular respiration, electrons from glucose move gradually through the electron transport chain towards oxygen, passing to lower and lower energy states and releasing energy at each step. The goal of cellular respiration is to capture this energy in the form of ATP.

Where does glycolysis occur? Glycolysis occurs in the cytoplasm where one 6 carbon molecule of glucose is oxidized to generate two 3 carbon molecules of pyruvate. The fate of pyruvate depends on the presence or absence of mitochondria and oxygen in the cells.

Does photosynthesis release energy? Through photosynthesis, certain organisms convert solar energy (sunlight) into chemical energy, which is then used to build carbohydrate molecules. The energy used to hold these molecules together is released when an organism breaks down food. Cells then use this energy to perform work, such as cellular respiration.

What is glycolysis in cellular respiration? What is Glycolysis? Glycolysis is the process in which glucose is broken down to produce energy. It produces two molecules of pyruvate, ATP, NADH and water. The process takes place in the cytoplasm of a cell and does not require oxygen. It occurs in both aerobic and anaerobic organisms.

What is the short note of respiration? What is respiration? Respiration is the chemical process by which organic compounds release energy. The compounds change into different ones by exergonic reactions. The hydrolysis of adenosine triphosphate (ATP) to adenosine diphosphate (ADP) and phosphoric acid (Pi) releases energy (it is an exergonic reaction).

How exchange of gases takes place in leaves? Leaves of plants have tiny pores called stomata, which is used for the exchange of gases. The oxygen, taken in

through stomata is used by the cells in the leaves to break down glucose into carbon dioxide and water. Similarly, roots of plants take in air from the air spaces present between the soil particles.

What is the main source of energy for cellular respiration? The primary fuel for cellular respiration is a molecule of glucose, which is used to make energy. In the cellular world, energy is a charged molecule with three phosphate groups called adenosine triphosphate (ATP).

What is the short answer of respiration? Respiration is the process in which the cells of an organism obtain energy by combining oxygen and glucose, resulting in the release of carbon dioxide, water, and ATP (energy). Was this answer helpful?

What is the definition of cellular respiration Class 9? Cellular respiration is the process by which cells derive energy from glucose. The chemical reaction for cellular respiration involves glucose and oxygen as inputs, and produces carbon dioxide, water, and energy (ATP) as outputs.

Why is respiration important? Respiration is important because it produces energy that is necessary for the functioning of the body. It provides oxygen to the cells and expels toxic carbon dioxide. When oxygen reaches the cells, this oxygen breakdown glucose which is present in digested food, and releases energy.

What is a short note on cellular respiration in humans? Cellular respiration is the process by which cells derive energy from glucose. The chemical reaction for cellular respiration involves glucose and oxygen as inputs, and produces carbon dioxide, water, and energy (ATP) as outputs.

What are the short notes on respiration in organisms? Respiration is a metabolic process that occurs in all organisms. It is a biochemical process that occurs within the cells of organisms. In this process, the energy (ATP-Adenosine triphosphate) is produced by the breakdown of glucose which is further used by cells to perform various functions.

What is cellular respiration in plants notes? Cellular respiration is the process by which food materials are broken down inside the cell to generate energy for ATP synthesis. Breaking down complex molecules takes place to produce energy in the

cytoplasm and in the mitochondria.

What is respiratory system notes in detail? The respiratory system takes up oxygen from the air we breathe and expels the unwanted carbon dioxide. The main organ of the respiratory system is the lungs. Other respiratory organs include the nose, the trachea and the breathing muscles (the diaphragm and the intercostal muscles).

What is cellular respiration pdf? Cellular respiration is a complex biochemical process that takes place within the cells of living organisms, converting organic molecules, typically glucose, into energy in the form of adenosine triphosphate (ATP). This process occurs in multiple stages and involves various cellular structures, enzymes, and molecules.

What is respiration class 9? Respiration is the biochemical process in which the cells of an organism obtain energy by combining oxygen and glucose, resulting in the release of carbon dioxide, water, and ATP (the currency of energy in cells).

What is the process of cellular respiration? Cellular respiration is a metabolic pathway that breaks down glucose and produces ATP. The stages of cellular respiration include glycolysis, pyruvate oxidation, the citric acid or Krebs cycle, and oxidative phosphorylation.

What is the function of the respiration short note? The main function of your respiratory system is to pull in oxygen for your body's cells and get rid of carbon dioxide, a waste product. You do this by breathing in and out and through gas exchange between the small air sacs of your lungs (alveoli) and the blood vessels running nearby.

What are the Class 7 notes for respiration in plants? Respiration in Plants: Plants breathe through pores called stomata, which allow gaseous exchange via diffusion. Lenticels are apertures in stems that allow gaseous exchange via diffusion. Stomatal pores in roots allow for the gaseous exchange of oxygen dissolved in soil water.

What is the process of the respiration? The lungs and respiratory system allow us to breathe. They bring oxygen into our bodies (called inspiration, or inhalation) and send carbon dioxide out (called expiration, or exhalation). This exchange of oxygen

and carbon dioxide is called respiration.

What is the respiration of plants short notes? Plants do require oxygen to respire, the process in return gives out carbon dioxide. Unlike humans and animals, plants do not possess any specialized structures for exchange of gases, however, they do possess stomata (found in leaves) and lenticels (found in stems) actively involved in the gaseous exchange.

Why do roots need oxygen? The amount of oxygen available to root cells matters for healthy plant growth rate and crop yield. Without a lot of oxygen available to them, root cells are limited in the amount of sugar they can burn and how much water and nutrients are absorbed.

What is the summary of respiration? respiration, Process of taking in air for oxygen and releasing it to dispose of carbon dioxide. The amount of air inhaled and exhaled in an average human breath (tidal volume) is about one-eighth the amount that can be inhaled after exhaling as much as possible (vital capacity).

What is breathing and respiration short notes? Breathing is the process of exchanging atmospheric oxygen with carbon dioxide which is produced by the cells. The process of oxidation of complex food molecules into simpler molecules within the living cells of an organism is called respiration. The term 'Respiration' was coined by Dutrochet.

What is the physiology of respiration short notes? Physiological respiration is the process by which oxygen is brought into the body and carbon dioxide is expelled from the body. The respiratory system is crucial for gas exchange, and nearly all organisms require oxygen to live (aside from rare exceptions, such as anaerobic bacteria).

What are the 7 main parts of the respiratory system?

How to draw a manga step by step?

How to make anime for beginners step by step?

How to draw anime and manga for beginner artists?

How can I start manga?

Is drawing manga hard? It's cartoony. ' But once you start trying to do it, you realize it really is hard. There's this careful balance with the facial features that you have to pay attention to — if you don't nail it, the whole thing falls apart.”

Can I make my own manga? If you want to make your own manga and maybe be a professional mangaka, the start can be a bit daunting. But don't be discouraged—with a bit of planning you can create your own unique storyline with all of your own cool characters!

Can I turn myself into anime? With an anime photo editor app like YouCam Perfect, you can try different anime character styles and give yourself an anime face with your own snaps. The anime app's AI Selfie can instantly turn you into anime characters in manga, cartoon, and artsy styles.

How to draw Kakashi?

How to draw Tanjiro?

How to draw gojo satoru step by step?

How to make a human face?

How to make an anime body?

What is manga for kids?

What is anime short for? The word anime is a shortened form of the Japanese word anim?shon, which means "animation." While anime has its roots in Japan, it has since spread to other countries, and today, anime can be found in many different languages, including English.

Is it manga or manga?

Is making anime easy? Making an anime is no simple task. It's an entire process of building and illustrating a world, finding motivations, weaving stories – this is a major undertaking! However, it's also a great exercise in creativity. If you're passionate about anime, you'll probably really enjoy making your own.

Are manga artists self taught? Most manga artists study at an art college or manga school or take on an apprenticeship with another artist before entering the industry as a primary creator. More rarely a manga artist breaks into the industry directly, without previously being an assistant.

Is drawing manga a job? A mangaka is defined by their art. How skillfully manga artists draw characters and scenes determines much of their career. To be competitive in the industry, mangaka need strong artistic skills such as drawing and painting. Mangaka are often trained artists who study art theory and practice.

Can I make a manga if I'm not Japanese? Can I become a manga artist even if I'm not living in Japan? Yes, you can. For one, you can self-publish manga, and you can even earn a living doing it.

Is there a manga creator app? Don't miss out!! What is JUMP PAINT? It's the ultimate app for creating manga and illustrations -- a collaboration between MediBang Paint (12 million downloads) and Weekly Shonen Jump.

Can you use AI to make manga? Yes, there are several AI services that can transform your photo into an anime character. Tools like the AI manga filter on Stockimg.ai or popular apps with anime filters can convert your images into anime style effectively.

Does TikTok have an anime filter? Here's how to do the anime filter on TikTok: Open the TikTok app. Tap the '+' button at the bottom of the screen to start recording a new video. You can also upload pre-recorded videos from your phone's gallery.

How to make anime for free?

Can a single man make anime? Almost certainly. You would have to be good at animation, it might take as much as a year. But don't worry, if you put in the work, it can happen.

Who is Kakashi's girlfriend? Hanare | Narutopedia | Fandom.

How did Kakashi kiss? When Kakashi and Hanare stop to look at the clouds after taking a walk, Naruto, Sasuke, and Sakura, who were eavesdropping on the

conversation, fell out of a tree, causing Kakashi to fall on top of Hanare, making them accidentally kiss.

What is Kakashi's daughter's name? Narrita hatake is the daughter of kakashi hatake a girl with a unbreakable will and a spirit of fire, she is a strong and powerful girl with many secrets and many goals one of them is to be seen for who she is not to be seen as just the kid of kakashi.

Is Tanjiro 13 years old? In the first chapter and episode of Demon Slayer, Tanjiro Kamado was seen as a 13-year-old. His birthday falls on July 14, and by the end of chapter 204 in the manga, he is 16. Despite losing his family in a massacre caused by a demon, Tanjiro is known for being kind, gentle, and friendly with everyone.

Did Tanjiro have a crush? Yes. But Demon Slayer introduced Tanjiro's main love interest briefly, and she doesn't really return until the end of the season, when she is fighting against him. His love interest that develops as the story goes on is Kanao Tsuyuri and their romance is quite adorable.

Is Tanjiro a female? The editor commented about Tanjiro, "[He] is a type of male main character that you don't see much. He's so kind. He has Nezuko, so he's coming from this position where he can't just say all demons are absolute evil.

How do manga artists start? Most manga artists study at an art college or manga school or take on an apprenticeship with another artist before entering the industry as a primary creator. More rarely a manga artist breaks into the industry directly, without previously being an assistant.

Can I learn to draw manga? Yes, anyone can learn to draw manga if they want to. People with drawing talent can quickly learn to draw manga. Don't worry if you don't have any talent or foundation in drawing. As long as you master the basic skills and spend time practicing, everyone can draw manga well.

How to make a manga without knowing how to draw? Of course, you can still make manga comics using digital stickers without an iPad or Apple pencil. You can do it on Samsung Notes with a pen, or any app really that allows you to insert an image, crop, resize, and move it around. Here's a video of how I make a manga in my journal using GoodNotes.

How to draw a manga layout?

Can non-Japanese make manga? Can I become a manga artist even if I'm not living in Japan? Yes, you can. For one, you can self-publish manga, and you can even earn a living doing it. However, you'll probably have more luck if you're living in Japan.

Do manga artists get paid? As of Aug 16, 2024, the average hourly pay for a Manga Artist in the United States is \$24.65 an hour. While ZipRecruiter is seeing hourly wages as high as \$40.38 and as low as \$9.13, the majority of Manga Artist wages currently range between \$17.55 (25th percentile) to \$27.88 (75th percentile) across the United States.

How do manga artists ink? In general, dip pens and black ink are used for drawing manga lines. Light black and other colors are not used. In addition, a variety of tools are used depending on the situation, such as brush pens for filling in large areas and glossy finishes, technical drawing pens for frame lines and backgrounds, and so on.

Can I draw manga if I'm not Japanese? Creating a manga depends on how well your art is, how much can you capture the audience with your art and what story you are telling. All these points don't require you to be Japanese. If you're good at what you do, it doesn't matter what nationality you belong to.

Can drawing anime be a job? An anime animator is a professional who creates a specific genre of Japanese cartoons. They create drawings by hand and use computer software to turn them into digital animations.

How to make anime for beginners? First, you have to be able to break things down into two things: Proportions and shapes. Once you understand how the artists of each anime utilize proportions and shapes, you'll have a much easier time mimicking or learning from the style. Let's take Ash Ketchum vs Eren Yeager for Example.

Do they draw manga by hand? Many professional comic artists use both styles to complete their work, such as inking by hand but finishing up by digital. It all depends on the person.

How to draw a body in manga? Start by drawing tubes extending from the bottom of the torso on either side of the center guide line. Once the upper legs are 1 ½ heads tall, draw circles in the tubes to represent the knee joints. Continue drawing the lower legs so they're the same length as the upper legs before adding circles for the ankle joints.

Can you draw manga with a pencil? If you are working on your manga drawings with pencil or felt-tip pens, we recommend 120g/m² or 180g/m² paper. For sketches, 80 g/m² paper (this is common printer paper) is more than sufficient. You can also use transparent tracing paper, which is very useful for tracing.

How to draw perfect manga? To draw manga, start with a basic outline of the head. Use sharp, zig-zag shapes for the hair, and large, expressive eyes. Draw a small nose and mouth, keeping the focus of the face on the eyes. For the rest of the body, start with the basic outline of torso, legs, and arms.

How to start your own manga?

How to shade like manga?

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