



Aquarium CO₂ Calculator

User Manual



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Why this app?

Carbon dioxide (CO₂) is vital for aquarium plant growth, as it fuels photosynthesis, converting CO₂, water, and light into oxygen and glucose. Adequate CO₂ ensures vibrant plants, supporting a healthy aquatic ecosystem by producing oxygen for fish and regulating pH levels. The Aquarium CO₂ Calculator simplifies CO₂ adjustments with a user-friendly interface. It calculates optimal CO₂ concentration, providing precise dosing recommendations to avoid harming fish. Unlike slow drop checkers, the calculator offers immediate feedback, reducing guesswork and enabling precise adjustments. Regularly monitor CO₂ levels and livestock behavior, adjust CO₂ gradually, and consider species-specific needs for optimal results.

Does it replace a drop checker?

While drop checkers respond slowly, Aquarium CO₂ Calculator is not intended to replace them. Therefore, it's always best to use one in your tank to confirm the calculated CO₂ level.



How to setup Aquarium CO₂ Calculator?

Please enter your tank volume, desired CO₂ level, lighting duration, and CO₂ canister volume. System efficiency depends on diffuser quality, reactor efficiency, and water circulation. Once you become more familiar with your system, you can adjust the efficiency setting from the default 50% to better match your aquarium setup. Then click Calculate Now.

The screenshot shows a web application titled "Aquarium CO2 Calculator". The interface is dark-themed with a blue gradient background. It features several input fields for user data, a prominent "Calculate Now" button, and a results section at the bottom.

AQUARIUM CO2 CALCULATOR

Tank Volume: 240 Liters

Target CO2 (ppm): 20

CO2 Injection Hours per Day: 8

CO2 System Capacity (grams): 500

System Efficiency (%): 60

Calculate Now

Results:

CO2 in water:	4.80 g
BPS:	0.93
Daily usage:	4.00 g
Duration:	125.0 days

The app then displays the amount of CO₂ dissolved in your water, the required bubbles per second, the daily gas consumption, and the estimated duration of your CO₂ cylinder.

How much CO₂ is required?

In standard planted tanks, a concentration of 20 ppm is typical. For accelerated plant growth, a concentration of 25 ppm is commonly used. Higher levels may be applied in experimental tanks; however, this can pose risks to fish and other aquatic life, potentially reducing their lifespan. Therefore, it is recommended to activate CO₂ 1 to 2 hours before the main lights turn on and to switch it off one hour prior to the main lights turning off.

Warning!

The Aquarium CO₂ Calculator serves as a tool to assist in the initial setup of CO₂ levels in your tank. However, due to variations in tank conditions and CO₂ diffusion efficiency, it is essential to regularly measure and monitor CO₂ levels during the setup process. Changes in tank parameters, such as water flow, can significantly affect CO₂ concentration. Therefore, it is crucial to use a drop checker with functional indicator fluid to accurately assess CO₂ levels. Excessive CO₂ can be harmful or fatal to aquatic life within a short time frame. We disclaim any responsibility for adverse outcomes resulting from improper CO₂ management. Please use the calculated values as a starting guideline and make adjustments gradually without attempting to accelerate the process.

Helpdesk

You are welcome to contact us with any questions; however, we are unable to provide assistance with setting up your tank.

<https://www.enlightenment.school/contact.html>

Or

info@enlightenment.school

