MX3 HYDRATION TESTING SYSTEM (HYD-23)

USER MANUAL

MX3

Table of Contents

Welcome

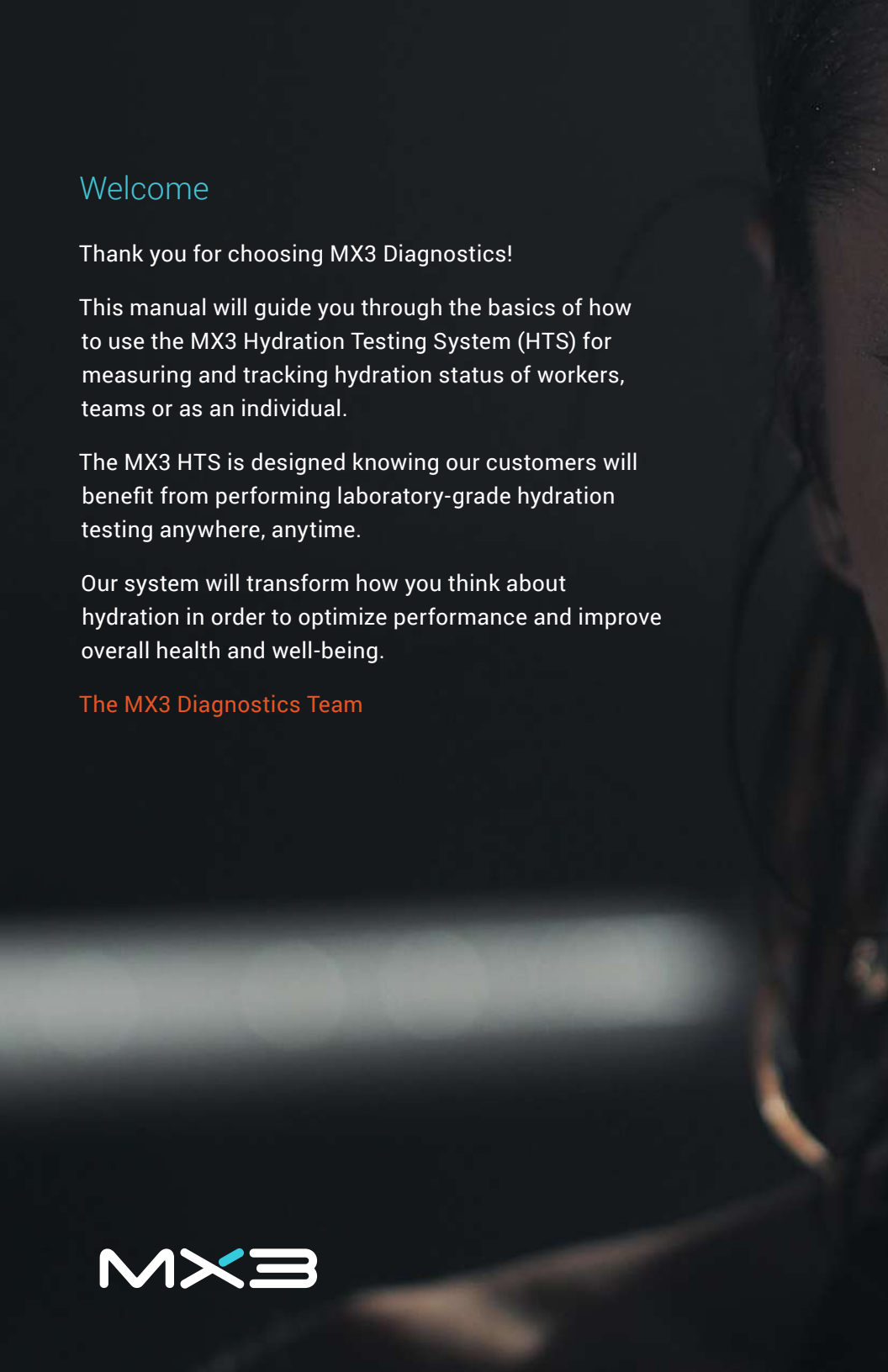
Thank you for choosing MX3 Diagnostics!

This manual will guide you through the basics of how to use the MX3 Hydration Testing System (HTS) for measuring and tracking hydration status of workers, teams or as an individual.

The MX3 HTS is designed knowing our customers will benefit from performing laboratory-grade hydration testing anywhere, anytime.

Our system will transform how you think about hydration in order to optimize performance and improve overall health and well-being.

The MX3 Diagnostics Team



Intended Use

The MX3 HTS allows you to easily measure a user's salivary osmolarity (SOSM) in seconds, anytime and anywhere, using a microliter of saliva. SOSM is a research-proven, non-invasive measure of hydration status and exercise-induced dehydration.

Hydration measurements are viewed in real time directly on the MX3 LAB or App and uploaded wirelessly to the MX3 Portal for a more detailed analysis. The MX3 App and Portal have been designed for use by professional teams and organizations of any size as well as individuals.

Continued use of the MX3 HTS will allow you to develop user-specific hydration strategies to optimize:

+ preparation
+ performance
+ recovery

The MX3 Hydration Testing System

The MX3 Hydration Testing System consists of six components:

1) MX3 LAB
2) MX3 Hydration Test Strips
3) MX3 Dispenser
4) MX3 App
5) Charging Cable
6) MX3 Portal (on personal device)

The MX3 LAB

The MX3 LAB is a powerful handheld device capable of laboratory-grade analysis. Simply insert a test strip, take a small saliva sample and get your actionable results in seconds.

This product complies with FCC Part 15.247 as a DTS device.

For further information see page 22.

The MX3 Hydration Test Strip

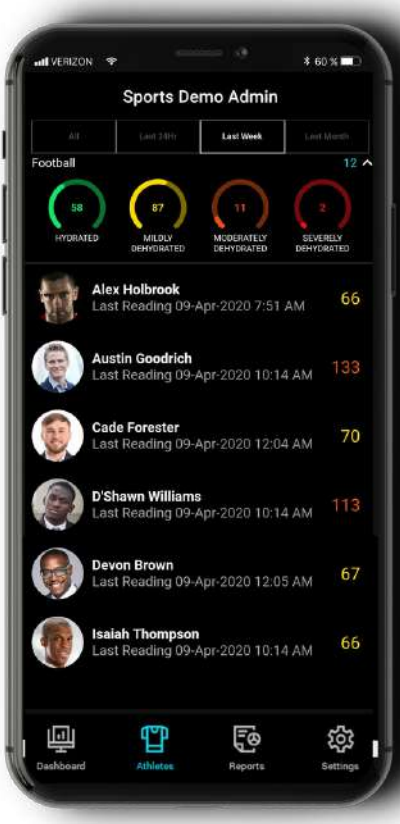
The MX3 Hydration Test Strip is a single-use biosensor that samples saliva to determine the salivary osmolarity (SOSM) and hydration status of a user.

The MX3 Test Strip Dispenser

The MX3 Test Strip Dispenser stores up to 45 sterilized test strips. It provides a clean, easy-to-use solution, minimizing potential contamination from manual handling.

The MX3 App

The MX3 App, available on iOS and Android, tracks and analyzes hydration measurements. The App displays customized information for supervisors, trainers or individuals, showing the most important information for each level of user.



The MX3 Portal

The MX3 Portal is a centralized database of all hydration measurements collected by an organization. The portal can be used to add and manage users, analyze measurement data and generate reports.

First-Time Setup

Before using the MX3 Hydration Testing System, you must download the MX3 App and register for an account.

Download the MX3 App

Download the MX3 App from the iOS App Store or Google Play Store.

Download on the App Store

GET IT ON Google Play

Account Registration

Register for an MX3 Account using the MX3 App. Select the account type (individual or Organization/Team) which best describes your intended use case.

Individual Account:

One user will be measured with the MX3 HTS

Team/Organization Account:

Multiple users will be measured with the MX3 HTS

Log in to the MX3 App

Log into the MX3 App using your email and password. The MX3 App can be used to create user accounts and make measurements.

For more information about using the MX3 App visit mx3diagnostics.com/resources

Log in to the MX3 Portal

portal.mx3diagnostics.com

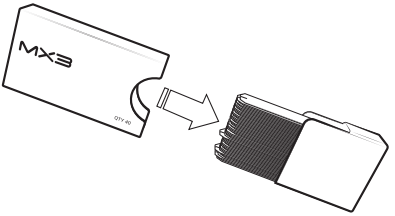
Log into the MX3 Portal using your email and password. The MX3 Portal can be used to create user accounts, structure your team or organization and analyze historical data.

For more information about using the MX3 Portal visit mx3diagnostics.com/resources

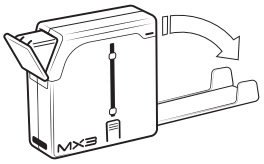
Loading the MX3 Dispenser

A video demonstrating how to load the MX3 Dispenser can be found at **mx3diagnostics.com/resources**

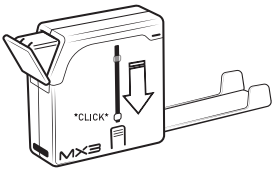
1. Open Test Strips
   Keep base tilted up to prevent strips from sliding out.



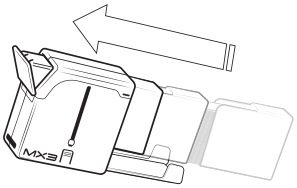
2. Open Dispenser



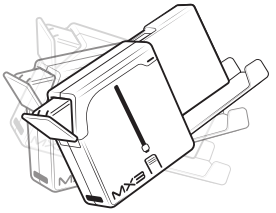
3. Push Down Spring Until It Locks



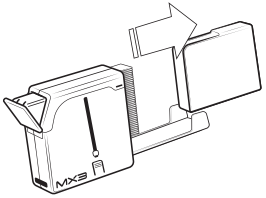
4. Insert Test Strips at Upward Angle



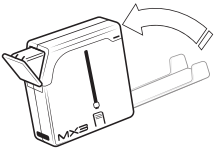
5. Tilt Dispenser Up, Allowing Test Strips to Slide into Dispenser



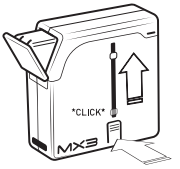
6. Remove Test Strip Holder



7. Close Dispenser



8. Push Tabs to Release Spring



Taking Measurements

1. Open the MX3 App

2. On the **Users Tab** tap on the icon or the **Take a Measurement** button on a **User Profile** page.

3. Follow the prompts in the MX3 App to pair with your MX3 LAB.

Turn LAB On

Enter App Mode

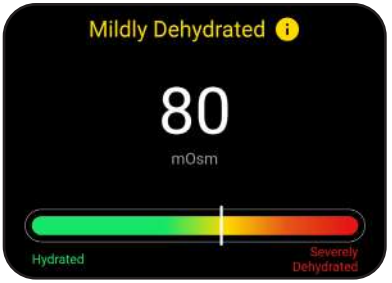
Pair With LAB

4. Follow the prompts in the MX3 App instructing you to insert a Hydration Test Strip and collect a saliva sample.
Before collecting a saliva sample swallow saliva in mouth and generate fresh saliva.* Tap the tip of the test strip against the saliva sample on a downward angle until a tone sounds.

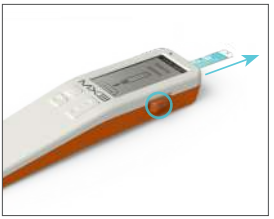
5. Wait for the sample to be analyzed. Do not remove the test strip. A second tone will sound once analysis is complete.

*See Page 17 (Sample Collection Tips)

6 A salivary osmolarity score and hydration classification will be displayed in the MX3 App. For information on how to interpret this measurement, click on the ⓘ icon.



7 Press the **Eject Button** to eject the test strip.



Local Measurements

The MX3 LAB may also be used in LOCAL mode to take measurements without using the App. LOCAL mode measurements are not recorded or stored in the App or the device itself, but allows readings to be made when a smartphone/tablet is unavailable. To take a measurement in LOCAL mode, turn on the MX3 LAB, scroll to highlight **LOCAL**, press **Select** and follow the process for taking a saliva sample. The reading will be displayed on the screen.

FAQs and Troubleshooting

For FAQs and Troubleshooting guides visit **mx3diagnostics.com/resources**

MX3 Hydration Testing System

The MX3 Hydration Testing System (HTS) classifies hydration status into four possible categories: hydrated, mildly dehydrated, moderately dehydrated and severely dehydrated, by measuring salivary osmolarity (SOSM). Initially this is based off populational hydration data from users of our system.

We recommend users use the baseline feature within the MX3 App to establish their personalized Optimal Hydration Zone (OHZ) *(see page 19)* corresponding to their fully hydrated state. By establishing a user's OHZ, the MX3 App then customizes hydration status classifications based on their unique hydration profile.

MX3 Recommendations for Hydration Tracking

MX3 technology combined with a hydration protocol will allow user's to assess hydration, prepare for physical exertion, perform at their best, and recover fully. Follow these recommendations to benefit most from MX3:

Assess

+ To maximize the use of the MX3 HTS, users should first establish their OHZ. Routine measurements will give each user deeper insight into their personal hydration fluctuations and highlight days when a user requires additional hydration.

Prepare

+ In preparation for physical exertion, we recommend users measure their SOSM the day before work or exercise (or at least 4 hours before training/work) to ensure they have enough time to hydrate if their SOSM score is higher than their OHZ.

+ Users who are consistently above their OHZ before work or training may be more susceptible to dehydration and therefore may require additional fluid intake during work or training. They should also be encouraged to increase their fluid intake outside of work or training to improve preparation and recovery.

Perform

+ After physical exertion, a user's SOSM score is likely to increase as they typically will not be able to offset all fluid losses that have occurred. When SOSM scores increase by more than 100% after work or exercise when compared to the OHZ or a pre-exertion measurement, fluid intake has been insufficient.

(continued on page 16)

+ When a user consistently increases their SOSM by more than 100% post-work or exercise, encourage the user to actively increase their fluid intake in subsequent sessions.

Recover

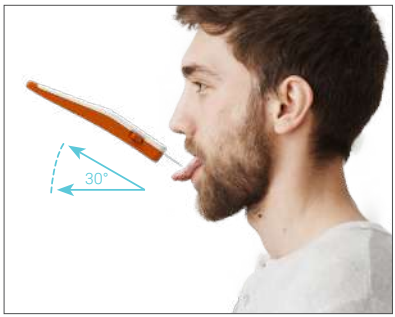
+ In the hour(s) and or days following work or exercise, users should rehydrate and monitor their SOSM.

+ Users should be re-tested periodically until their SOSM scores return to within or close to their OHZ/Pre-Work/Exercise score (± 15mOsm). Where a user regularly does not achieve full recovery of their SOSM several hours after training or by the following day, advise them to increase fluid rehydration during recovery.

- For users who consistently do not recover their SOSM in a reasonable amount of time, consider utilizing fluids for recovery that contain additional electrolytes and/or carbohydrates to boost speed of rehydration and recovery.

Sample Collection Tips

For a visual guide, see the instructional videos available at **mx3diagnostics.com/resources**



To optimize the accuracy of measurements taken with the MX3 System, we highly recommend the following:

+ Always have a user swallow all saliva and generate a fresh sample before each measurement.

+ Ensure a user did not eat or drink anything 5 minutes prior to taking a measurement.

+ Ensure a good amount of saliva is present on the user's tongue. The tongue should be noticeably wet. If insufficient saliva is present for the sample, ask the user to swallow and generate a fresh sample. Insufficient saliva can result in an error.

+ Always avoid bubbly areas of saliva when collecting a sample. Collection of bubbles can result in an error or less accurate reading.

+ Do not cover the top of the test strip with saliva or a tongue. It is important to ensure saliva or any part of the mouth does not cover the exit pore. The easiest way to ensure this is to sample with the LAB and test strip angled downwards.

+ Tapping on the saliva with the test strip will lead to a quicker measurement as it aids the uptake of saliva into the test strip.

+ If a saliva sample is too viscous, we recommend using the MX3 sample tray to collect saliva and taking a measurement from there. This will facilitate making the measurement. If still difficult, ask the user to drink a small amount of water, wait 5 minutes and remeasure.

Interpreting Measurements

In basic terms, SOSM values increase as dehydration increases, and they decrease as hydration status improves. Most users will exhibit a gradual increase in SOSM as they work or exercise.

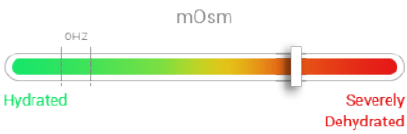
While comparison of SOSM measurements with population averages can provide an estimate of hydration status, every user's SOSM range and hydration response is unique. To provide the most accurate hydration analysis, SOSM measurements should be compared against an optimal hydration zone determined by **Baseline measurements** (see page 19).

The interpretation of measurements is dependent on the context in which they were taken.

+ When measuring **at rest or immediately before work or exercise**, a dehydrated measurement suggests a user is not regularly drinking enough fluid to be fully hydrated and should increase daily fluid intake.

+ If measuring immediately after work or exercise, a severely dehydrated score suggests that fluid intake during exercise has been insufficient to avoid significant dehydration. In this scenario, a user should continue to hydrate with fluids and monitor SOSM over a period of hours until their SOSM reading returns to within 15mOsm of an user's optimal hydration zone (OHZ).

+ When measuring in the hours following work or exercise, dehydrated readings suggest that additional fluid intake is required to recover from fluid losses. Fluid intake should continue (at a sensible rate) until SOSM measurements are within 15mOsm of a user's OHZ.



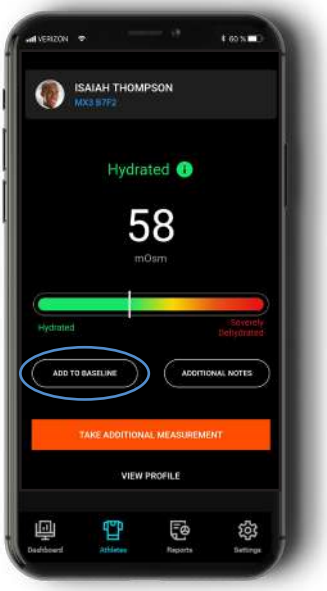
Baseline Measurements / Optimal Hydration Zone

The MX3 HTS initially classifies hydration status using populational data.

While comparison of SOSM measurements with population averages can provide an estimate of hydration status, every user's SOSM range and hydration response is unique. To provide the most accurate hydration analysis, SOSM measurements should be compared against an optimal hydration zone (OHZ) determined by carrying out Baseline measurements.

A user's OHZ is also displayed on the results bar after taking a hydration measurement. This allows a user to PREPARE for training or a game by targeting their personal OHZ or to RECOVER after the game by rehydrating and assessing hydration status until their SOSM returns to a value that is close to or within their OHZ.

To add a measurement to a user's baseline, click the ADD TO BASELINE Button on the measurement result page.
A minimum of 6 baseline measurements is needed to calculate an OHZ.



Prior to taking a baseline measurement, we recommend following a hydration protocol to ensure a user is well hydrated. A recommended example protocol can be found on page 20.

If following our suggested hydration protocol is not feasible, a trainer or supervisor may choose instead to define readings as baseline measures when they feel water consumption has been adequate to achieve a fully hydrated state.

Example Baseline Protocol

Day 1

+ **Consume 1 standard glass of water (250 ml) every hour from 9/10am to 5/6pm in addition to any water typically consumed during or after work/exercise.**
+ Limit alcohol consumption (1 standard drink) to avoid alcohol-related dehydration affecting baseline readings.

Day 2

+ **Consume 1 standard glass of water (250 ml) every 45mins from 9/10am to 5/6pm in addition to any water typically consumed during or after work/exercise.** We recommend conducting baseline measures on days where exercise is light to minimize exercise-related dehydration increasing baseline readings.
+ Avoid eating or drinking 15 minutes before taking a baseline measurement.
+ **Take 3 baseline readings at 12pm and 3 baseline readings at 5/6pm.**
+ We recommend not to consume any alcohol during day 2 to avoid alcohol-related dehydration effects.

Day 3+

+ For greater precision, repeat the process outlined on day 2 for additional days, up to 3 days total.

Warranty Information

The MX3 Hydration Testing System comes with a 1-year limited warranty against defects in materials and workmanship from the date of delivery. A 90-day extended warranty applies to repairs returned within the last 90 days of the warranty period. The rights outlined here are in addition to your statutory rights provided by Australian or US consumer law.

Eligible goods may be replaced with a new or refurbished equivalent or superior product (where applicable). Eligible goods may also be repaired with new or refurbished parts or refunded at MX3's discretion.

This warranty will not apply to:

+ Cosmetic damage due to regular use
+ Damage caused by unintended use
+ Damage caused by external causes
+ Damage caused by non-authorized disassembly, servicing or modification.

This warranty does not guarantee uninterrupted or error-free use. MX3 is not liable for any incidental damage resulting from defects (as limited by law).

To claim the warranty, you must contact MX3 support at support@mx3diagnostics.com within the warranty period with proof-of-purchase. If online support or in-person service is not available, you may be required to mail-in your Hydration Testing System for service. For such situations, MX3 will cover shipping to and from your location.

For Australian Customers: Our goods come with guarantees that cannot be excluded under the Australian Consumer Law. You are entitled to a replacement or refund for a major failure and compensation for any other reasonably foreseeable loss or damage. You are also entitled to have the goods repaired or replaced if the goods fail to be of acceptable quality and the failure does not amount to a major failure.

Warranty Obligor Information

Name: MX3 Diagnostics Inc.

Business Address:
MX3 Diagnostics, Inc.
2701 Stratford Drive
Austin, TX 78746

Email Address:
support@mx3diagnostics.com

FCC Compliance

This product complies with FCC part 15.247 as a DTS device. This Device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

(1)This device may not cause harmful interference, and

(2) This device must accept any interference received including interference that may cause undesired operation.

FCC RF Radiation Exposure Statement:

1. This Transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

2. This equipment complies with RF radiation exposure limits set forth for an uncontrolled environment.

3. The device has been evaluated to meet general RF exposure requirement. The device can be used in portable exposure condition without restriction.

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation.

This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications.

However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:
—Reorient or relocate the receiving antenna.
—Increase the separation between the equipment and receiver.
—Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
—Consult the dealer or an experienced radio/TV technician for help.

NOTE: THE GRANTEE IS NOT RESPONSIBLE FOR ANY CHANGES OR MODIFICATIONS NOT EXPRESSLY APPROVED BY THE PARTY RESPONSIBLE FOR COMPLIANCE. SUCH MODIFICATIONS COULD VOID THE USER'S AUTHORITY TO OPERATE THE EQUIPMENT.

To access the FCC information on the MX3 LAB, Select INFO on the main menu. The following information will be displayed:

MX3 LAB Technical Specifications

+ **Size** 8.4 x 1.8 x 1.0 in / 214 x 45 x 25 mm
+ **Weight** 5.6 oz / 160 g
+ FCC Compliance 15.107, 15.109 Class B
+ **Bluetooth** version 5.0
+ **Battery life** more than 1000 measurements when fully charged
+ **Battery type** Single Cell rechargeable, Li-Po, 3.7V, 1000mAh
+ **Charging port** USB-C

Medical Disclaimer

The MX3 hydration score or hydration category is not medical advice. If you, your workers or your athletes are experiencing headaches, dizziness, nausea or other symptoms of dehydration after exercise, please seek immediate medical attention.

Hydration categories and advice are based off population data and may vary from your personal hydration profile calculated from a user's OHZ.

Contact Us

For further questions about the MX3 System please contact us:

MX3 Diagnostics, Inc.
2701 Stratford Drive
Austin, TX 78746

MX3 Diagnostics Pty. Ltd.
Suite 43, 255 Drummond Street,
Carlton VIC 3053
Australia

For sales inquiries: sales@mx3diagnostics.com
For technical support: support@mx3diagnostics.com

Website: www.mx3diagnostics.com

mx3diagnostics.com