

# MX3 Application Guide - Mining & Constructions

## Why measure hydration on-site?



Avoid heat strain  
*identify dehydration to prevent incidents & down time*



Promote productivity  
*by preventing dehydration induced physical & mental fatigue*



Prevent injuries  
*by avoiding poor judgement & slowed reaction time*



Comply with regulations  
*Safework Australia Code of Practice & OSHA National Emphasis Program on heat stress*

## Get an actionable result within 10-20 seconds



## What certification does MX3 have?



FDA Registered



CE Certified












FCC Compliant



RCM Certified

## How many measurements and when?

|                                       | <b>Low Risk</b><br>(e.g. site with moderate ambient conditions)                   | <b>Medium Risk</b><br>(e.g. remote sites with high ambient temperature)           | <b>High Risk</b><br>(e.g. exploration or underground with high thermal exposure)    |
|---------------------------------------|---|---|---|
| Pre-start / toolbox meeting           |  |  |  |
| End of rest break                     |   | <i>Recommended for high risk individuals</i>                                      |  |
| End of meal break                     | <i>Recommended for high risk individuals</i>                                      |  |  |
| End of rest break                     |   | <i>Recommended for high risk individuals</i>                                      |  |
| End of shift                          | <i>Recommended for high risk individuals</i>                                      |  |  |
| Additional spot test / follow up test | <i>Recommended for high risk individuals</i>                                      | <i>Recommended for high risk individuals</i>                                      | <i>Recommended for high risk individuals</i>  |

## How many MX3 systems do I need?

| Number of HTS | Number of people | Testing time |
|---------------|------------------|--------------|
| 1             | 1-15             | 5-10 mins    |
| 2             | 15-30            |              |
| 3             | 30-60            |              |
| 5             | 60-100           |              |
| 10            | 100-200          |              |

## How many test strips do I need & how much does it cost?

| How many test strips do I need?  |      |           |       | How many test strips do I need<br><i>example</i> |      |                              |                            |
|----------------------------------|------|-----------|-------|--|------|------------------------------|----------------------------|
| # of people                      | Week | Fortnight | Month | # of people                                      | Week | Fortnight                    | Month                      |
| 10                               | 70   | 140       | 300   | 10   | 70   | 140                          | 300                        |
| 20                               | 140  | 280       | 600   | 20   | 140  | 280                          | 600                        |
| 50                               | 350  | 700       | 1500  | 50   | 350  | 700                          | 1500                       |
| 100                              | 700  | 1400      | 3000  | 100  | 700  | 1400                         | 3000                       |
| <i>*Multiply</i>                 |      |           |       | <i>*Multiply</i>                                 |      |                              |                            |
| # of shifts per day              |      |           |       | # of shifts per day                              |      | 2 shifts                     |                            |
| # of tests per shift             |      |           |       | # of tests per shift                             |      | 3 tests per shift            |                            |
| # test strips required           |      |           |       | # test strips required                           |      | 700*2*3<br><b>= 4200</b>     | 1500*2*3<br><b>= 9000</b>  |
| Total cost (\$0.68 / test)       |      |           |       | Total cost (\$0.68 / test)                       |      | 4620*0.68<br><b>= \$2856</b> | 9900*0.68<br>= \$6120      |
| Volume discount (please enquire) |      |           |       | Volume discount (please enquire)                 |      |                              | -5% @ 10k<br><b>\$5814</b> |

## Hydration categories & suggested actions

| Hydration category*   | Suggested action  |
|-----------------------|---|
| Hydrated              | Maintain water consumption  |
| Mildly dehydrated     | Increase water consumption  |
| Moderately dehydrated | Cease heavy work, move to cool areas and consume water until hydrated. Monitor signs and symptoms of dehydration. |
| Severely dehydrated   | Cease work, move to cool areas and consume water until hydrated. Seek medical advice.                             |

\* MX3 hydration categories are guidelines only and may vary depending on the individual.

Hydration categories are not intended to be used as medical advice

The suggested actions listed above are examples of general use in a low risk environment, and should be adjusted based on site-specific risk assessment and medical advice.

## Maintenance of MX3

- Wipe down the unit with an alcohol wipe before & after each measurement session (e.g. at the start and end of the pre-start meeting)
- If used in extreme environments (e.g. extreme heat or dust), consider the MX3 READY servicing every 12 months to replace hardware that is prone to wear and tear.

## Safe handling & disposal

- Dispose of the test strips using the eject button to minimise handling and potential cross contamination of bodily fluid (saliva).
- (optional) latex gloves use while operating the MX3 system

## Specific knowledge & skills required to operate MX3

None, MX3 can be operated by any employee on-site. Training resources are available on the MX3 website as well as in the MX3 mobile App,

## Additional Information and Supporting Resources

- [MX3 Introduction slides](#)
- [MX3 training videos](#)
- Online [heat stress risk assessment tool](#) (based on AIOH guidelines)
- [Occupational heat stress resources](#)