

PRACTICAL INFORMATION RELATED TO BEDSIDE ACETAMINOPHEN TESTING

- This is a *qualitative detection* test which provides a result within 10-15 minutes for evaluation of acetaminophen overdose. It does not give a quantitative result.
- Any blue coloration in the T box is a positive result. (the intensity of the blue is not important)
- The cutoff for a positive ZAPTox[™] Acetaminophen Test is 200umol/L (30 ug/ml). This would be a toxic dose at greater than or equal to13 hours post ingestion.
- With the low cutoff value, any test that is positive between 4 hours and 13 hours would require further evaluation in a hospital setting to provide quantitative results that can be applied to the Rumack Mathew Acetominophen nomogram.
- A <u>negative test</u> between 4 hours and 13 hours post ingestion will accurately rule out toxicity.

INDICATIONS AND CONDITIONS TO PERFORM THE TEST

- medical prescription is required before performing this test.
- The test should NOT be performed prior to 4 hours post ingestion.
- evaluation of possible acetaminophen ingestion with a known time of ingestion.
- Extreme caution should be used in interpretation of the results in a patient with chronic acetaminophen use or ingestion of long acting acetaminophen formulations. Consultation with Poison Control is recommended.

PROCEDURE

- 1. Obtain an adequate serum sample and apply to the Zaptox acetaminophen kit. (appendix 1)
- 2. A serum sample for quantitative assessment of acetaminophen level should always be performed and sent to the lab at the same time as the rapid test.
- 3. The QA sheet attached should be filled out for all tests performed (annex 3)

INTERPRETATION OF RESULTS BY PHYSICIAN ONLY (appendix 2 + 4)

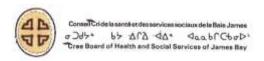
between 4 – 13 hours * - Positive test: transfer patient for further evaluation,

treat based on MD recommendations.

Negative test : can rule out acetaminophen toxicity.

Between 13 – 24 hours - Positive test: start treatment, transfer patient for further evaluation Negative test : transfer patient for further evaluation

*Note: a positive qualitative test between 4-13 hours does not absolutely mean the patient has a toxic serum level, but further quantitative testing is needed. Immediate treatment with NAC in patients with a strong history of exposure and long delay to transfer is at the discretion of the MD on call.





ANNEXE 1 :

MÉTHODE DE SOINS

Test : Qualitative assessment of acetaminophen serum level: serum blood test

Technique de soins

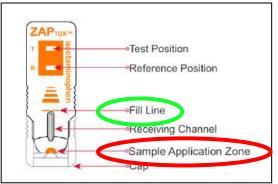
STORAGE The ZAPTox[™] Acetaminophen Test is stable unopened at 2°C - 8°C until the expiry date.

MATERIAL NEEDED

- Appropriate sample collection container and equipment for obtaining serum
- Sample transfer device (dropper/pipette)
- Timer

SAMPLE COLLECTION & HANDLING

For serum tests, obtain blood by venipuncture. In an appropriate container, collect blood and centrifuge to obtain serum.



PROCEDURE

1.Allow the ZAPToxTM Acetaminophen Test to

come to room temperature (>18 C).

2. Remove the ZAPToxTM Acetaminophen Test from the foil pouch and discard the desiccant and packaging.

3. Apply the sample to the ZAPToxTM Acetaminophen Test Sample Application Zone (bottom of cartridge) using a liquid transfer device (dropper or pipette)(not supplied) until the sample reaches the Fill Line (40-45µL).

Do \underline{not} apply the serum to the T (test) or the R (reference) boxes.

4. Start the timer.

5. After 10 minutes, observe the appearance of blue colouration at the Test position (**T**). The Reference position (**R**) indicates the original colour. See Interpretation of Results. Do not interpret the results of the test after 15 minutes.

INTERPRETATION OF RESULTS

Notes:

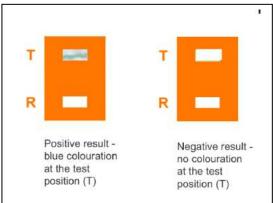
• The intensity of a positive test signal will vary depending on the concentration of acetaminophen present in the sample. However, the quantitative value of acetaminophen cannot be determined by this qualitative test.

• The colour intensity of the test signal will increase slowly with time as a result of sample evaporation. Therefore, do not read the test after 15 minutes.

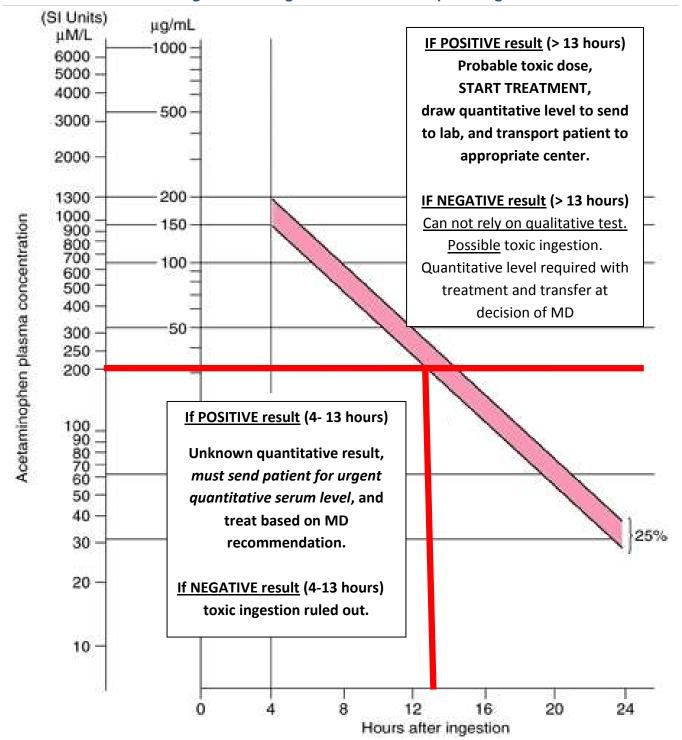
•see appendix 4: photo of positive test at different concentrations

EXPECTED RESULTS

A blue colour at the test position was designed to be visible when a sample containing an acetaminophen concentration at or above 200 μ M (30 μ g/mL) is analyzed by the test.



ANNEX 2



Rumack-Matthew nomogram for single acute acetaminophen ingestions.



Annex 3: Quality Assurance for CHB clinic quantitative acetaminophen testing

Community: ______Period number: _____

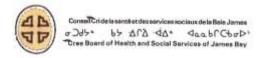
Date:

NOTE: A serum sample should be sent to the lab in chisasibi or chibougamou

any time a qualitative acetaminophen test is performed. (See Annex 2)

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Please send to Nathalie Laflamme/Laboratoire/TCR/Reg18/SSSS at end of each period



Annex 4

Image of positive ZAPTox Acetaminophen test.

Please note that at the lower concentration of 200umol/L, the T (test) slot <u>is faintly blue</u> compared to the R (reference) slot, yet this is still considered a positive test.

If there is any doubt about the intensity of the blue, it is important to assume it is a positive test, and treat accordingly.

