Qualitative Ethylene Glycol FasTox Test for Use on a Manual Spectrophotometer

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Each kit, Product Number C504-0C, contains all of the materials, including controls, needed to perform three patient tests. Store kit at 2 - 8° C (refrigerated).

C504-34 Ethylene Glycol Sample Diluent Reagent (3 x 4 mL) (dry powder to be reconstituted).

C504-33 Ethylene Glycol Activator Reagent (3 x 750 µL) (liquid ready for use).

C504-13 "Negative" Control (3 x 100 µL) (liquid, ready for use) at approximately 20 mg/dL (3.2 mmol/L).

C504-14 "Positive" Control (3 x 100 µL) (liquid, ready for use) at approximately 230 mg/dL (36.8 mmol/L).

Each vial of reagent and control is for ***a single use only***. Discard opened vials after use.

TO PERFORM THE TEST

Reconstitute Ethylene Glycol Sample Diluent Reagent vial with 4 mL of deionized water using a volumetric pipette. Wait until powder has visibly dissolved and solution is clear.

With a volumetric pipette, dispense 1.0 mL of this solution into each of three labeled cuvettes, for the negative control, positive control and patient sample.

Add 10 µL of "Negative" Control to one cuvette, 10 µL of "Positive" Control to the second cuvette and 10 µL of the Patient Sample to the third cuvette. Gently mix all cuvettes.

Read the INITIAL OD at 340 nm of each cuvette on a spectrophotometer and record in the chart below.

Add 0.15 mL (150 µL) of Ethylene Glycol Activator Reagent to each cuvette (at approximately 15 second intervals). Gently mix all cuvettes.

Incubate all cuvettes for 5 minutes at Room Temperature (or at 37°C; NB It is important to handle all cuvettes similarly.) Read the FINAL OD at 340 nm for each cuvette (using the same approximate 15 second intervals) and record in the chart below.

RECORD YOUR RESULTS:

Sample	INITIAL OD at 340 nm	FINAL OD at 340 nm	Difference in OD at 340 nm (Final OD minus Initial OD)
Negative Control			
Positive Control			
Patient Sample			

Results/Analysis

1. Is the difference in OD for the Patient Sample cuvette greater than the difference in OD for the "Negative" control cuvette? Circle one: YES NO
2. Is the difference in OD in the "Positive" control cuvette noticeably higher than the difference in OD for the "Negative" control? Circle one: YES NO
3. If BOTH answers are YES, then there is a strong likelihood that the patient HAS ingested some form of glycol. IF THIS IS THE CASE proceed to Step 5 below to determine if this glycol is likely to be ethylene glycol.
4. If the answer to Question #1 is NO and the answer to Question #2 is YES, then there is a strong likelihood that the patient has NOT ingested ethylene glycol.

5. If both answers are YES, leave the sample cuvette in the spectrophotometer and read this at 340 nm after a further 5 minutes. IF THE OD HAS INCREASED by > 5% during this time (and continues to increase after this time) there is a strong likelihood that the patient has ingested ETHYLENE GLYCOL.
6. If any other results are observed, please repeat the test.

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