

Exp@sure

Pyrene (HOP-G)

1-Hydroxypyrene Glucuronide
Lateral Flow Testing System

Information for Use

1-Hydroxypyrene Glucuronide Lateral Flow Testing System

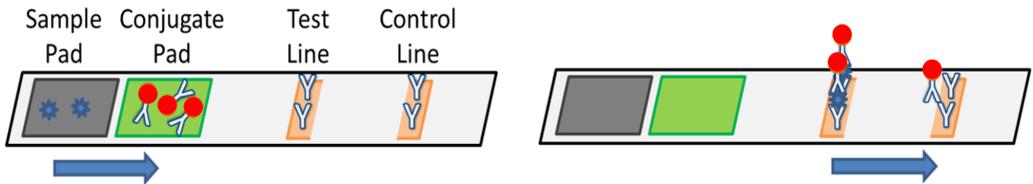
Description:

Lateral flow test kit for the detection of 1-hydroxypyrene glucuronide (HOP-G) in urine samples and subsequent test line quantification using the Exposure mobile phone application.

Pyrene is a polycyclic aromatic hydrocarbon (PAH) commonly formed during the incomplete combustion of organic matter. When pyrene enters the body it is metabolised to form 1-hydroxypyrene (1-HOP) and subsequently HOP-G for urinary secretion. HOP-G is therefore an important biomarker for human exposure to airborne PAH pollutants.

Note: This test is a semi-quantitative measure of a persons exposure to environmental PAH pollutants and should not be used to effect a medical diagnosis or treatment. The test should be used as a pre-screen for central lab testing.

Lateral Flow Test Principal:

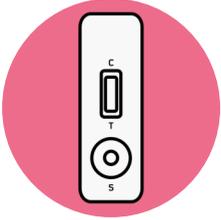


A primary antibody to HOP-G is conjugated to gold nanoparticles and stored in the conjugate pad. A second antibody, with specificity to the primary antibody+HOP-G complex is immobilised on the test line. Urine samples containing HOP-G are applied to the sample pad and move through the test by capillary action. As the sample moves through the test, the HOP-G in the sample complexes with the conjugated primary antibody and forms a 'sandwich' with the immobilised second antibody. This concentrates the gold nanoparticles on the test line, forming a red line.

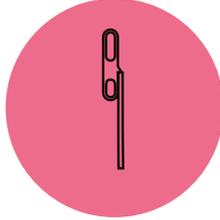
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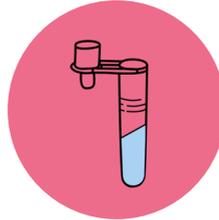
Kit Contents:



Test Cassette



Single-use 40 µL
Pipette



Dropper Bottle Pre-filled
with 1560 µL Buffer



Mobile Phone and
'Light-box'

Test Procedure:

1



Aspirate the sample by squeezing the upper bulb, submerging into the sample and releasing the bulb. Ensure some sample transfers to the lower bulb, for accurate volume transfer.

2



Dispense the sample into the dropper bottle by squeezing the upper bulb on the pipette.

3



Insert the lid of the dropper bottle and mix thoroughly by inverting the bottle multiple times.

4



Apply 3 drops of sample to the sample port of the test cassette. Squeeze the bottle gently for controlled application.

5



Allow the test to run for 60 mins. If multiple tests are to be run, repeat steps 1 to 4 now. Allow at least a 30 second interval between tests for reading using the app.

6



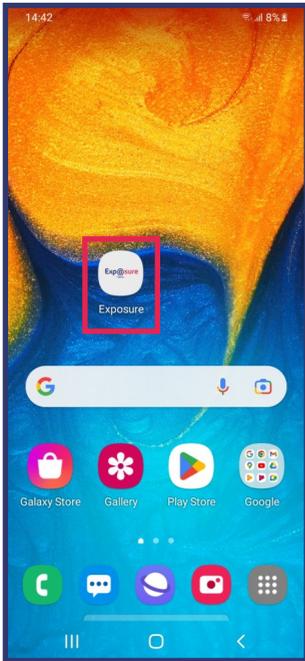
After 60 mins, read the cassette using the mobile phone application and 'Light-Box'. See next page for app walkthrough.

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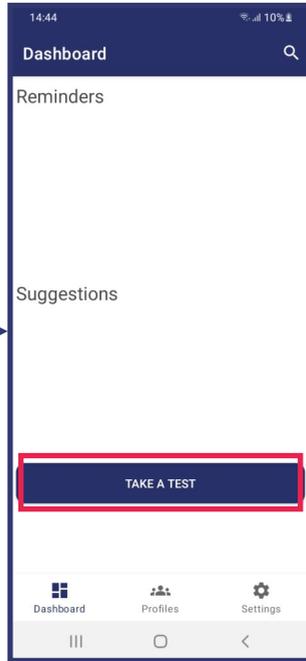
Using the Exposure mobile application:

Once the testing procedure has been completed and the cassette is ready to be read, turn on the phone using the power button on the right hand side of the phone.



1

Open the Exposure application from the phone's home screen.



2

The app will open to the main dashboard. From here you can read your test by clicking the 'TAKE A TEST' button.



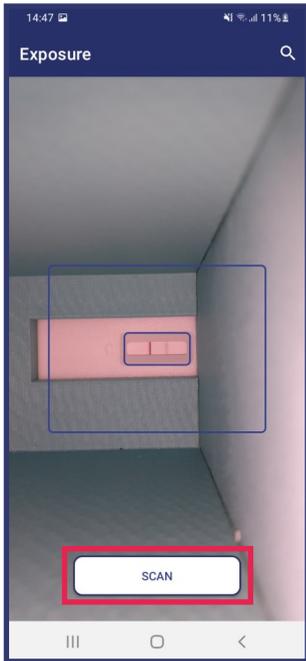
3

Next, choose the Employee to be tested from the dropdown list. Then, click 'DONE'.

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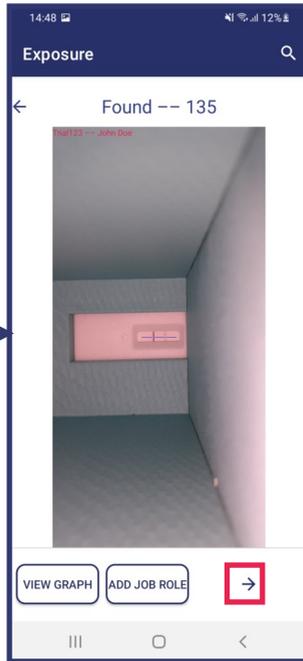
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Using the Exposure mobile application (cont.):



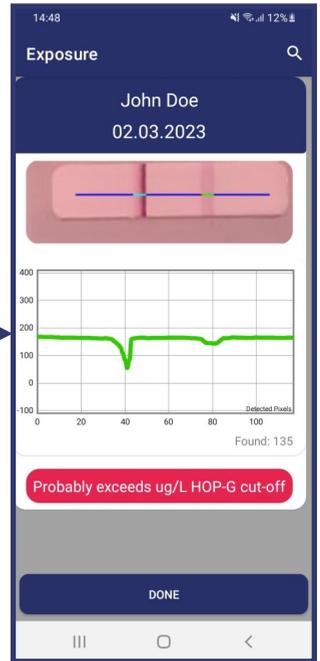
4

The test capture screen will open. Insert the test cassette into the slot on the right side of the 'Light-box'. Ensure the test window of the cassette is aligned with the small blue box. Then, click 'SCAN'.



5

The result screen will show the images captured. Click the arrow to proceed to the report screen.



6

The report screen shows a summary of the test including the 'Found' value representing an estimated quantification of the test line and also whether the test is above or below the HOP-G cut-off.

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