



Intended Use:

StudFinder™ AmplifyRP XRT is a rapid DNA amplification and detection platform designed for field-based or laboratory testing of *Cannabis* samples for gender determination. This kit includes lyophilized reaction pellets containing the necessary reagents to amplify male *Cannabis* DNA at a single operating temperature (65 °C).

- SPECIFICITY:** Detects male *Cannabis* DNA. Does not detect female *Cannabis* DNA.
SENSITIVITY: 1 fg/μL purified DNA. See validation report for more details.
PROBE LABEL: FAM (Agdia has optimized this kit for use with the AmpliFire® manufactured by Agdia, Inc. Contact us for information on use with other instruments.)

Kit Storage:

All kit components should be stored refrigerated (2 - 8 °C).

Before use, allow all kit components to warm to room temperature (18 - 30 °C) for 20 to 30 minutes.

Contents of Kit:

- Reaction pellets
- 100 μL Pellet Diluent 2 (PD2) Tubes
- AMP1 extraction buffer
- 1.5 mL microcentrifuge tubes

Not Included but Required:

- AmpliFire Isothermal Fluorometer [AFR 60400](#) (or equivalent)
- Pipettes (5 μL & 25 μL)

NOTE: AmplifyRP is a very sensitive molecular assay. Do not re-use disposable kit components. It is recommended that latex gloves be worn when taking samples and performing assay. If wearing latex gloves, change them between samples and test runs. Sanitize work area and non-disposable equipment between runs with bleach solution that has a concentration of at least 600 ppm (1:10 of household bleach solution).

Prior to setting up reactions, turn on the AmpliFire (or an alternative isothermal instrument) so that it is ready to accept reactions. It should be pre-heated to the recommended 65 °C before inserting reactions and setup to run on the FAM channel.

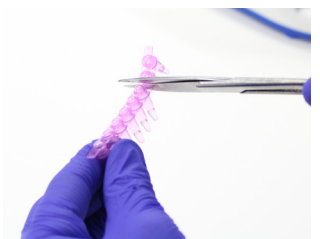
Sample Preparation - Plant Tissue

1. Place a small leaf sample (approx. 1 cm²) into a 1.5 mL microcentrifuge tube, using the tube cap to clip off the end of a leaf.

**NOTE:* Either a cotyledon or true leaf may be sampled.



3. Remove one colored PD2 filled tube for each sample being tested. Individual tubes may be cut from the strip of tubes using scissors. Be sure to label the caps with your sample identity. **Inspect the tube to ensure all liquid is at the bottom before use.**



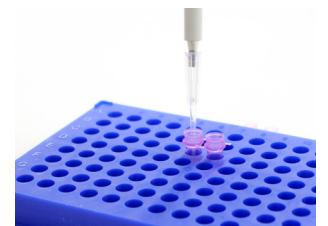
2. Add 5 drops of AMP1 extraction buffer to the leaf sample in the 1.5mL tube. Vortex and spin the leaf sample so that it is suspended and mostly submerged in the extraction buffer. (The majority of the sample needs to be in the buffer, if this cannot be achieved by centrifugation a toothpick or pipette tip may be used to push the sample into the buffer.) **Let rest for 10 minutes at room temperature.**

**NOTE:* This test was optimized using a 1:20 tissue to buffer ratio for sample extraction.



4. Transfer 5 μL of sample extract into the tube containing PD2 diluent and **mix well.**

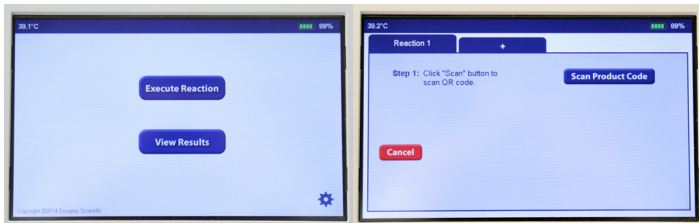
Your samples are now ready to be tested. Proceed to the Test Protocol on Page 2.



Click here to
 access your
 lot specific
 QR code

Test Protocol for Real-Time Detection In AmpliFire®

1. Press the “Execute Reaction” button on the AmpliFire®. Then press “Scan Product Code”.



2. Scan the barcode found by following the hyperlink on page 1. The barcode scanner is located on the left side of the AmpliFire.

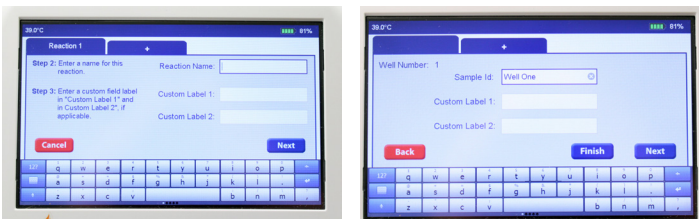
Note: Scanning works best when the barcode is held 3 - 4 inches from the scanner in an area with sufficient ambient light.

Once the AmpliFire has accepted the scan and displayed run method, click “Next”.

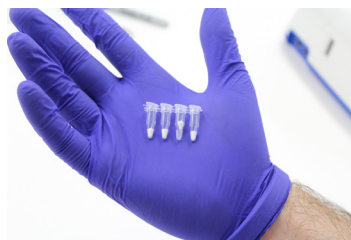


3. Follow on-screen prompts to name your reaction and individual sample IDs.

Sample IDs for individual wells are optional. If you prefer to use the default values, click “FINISH”.

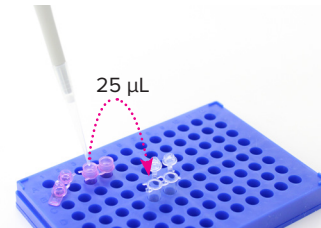


4. Remove a canister of reaction pellets from the white foil pouch labeled with the barcode. Then remove a strip of reaction pellets from the desiccated container. While securing the strip of pellets in a 200 µL PCR tube rack, cut the number of reaction pellets from the strip that are intended for use.



Reaction Pellets are light sensitive. Immediately place remaining reaction pellets back into the desiccated tube and then insert the desiccant tube into the foil pouch to protect from light.

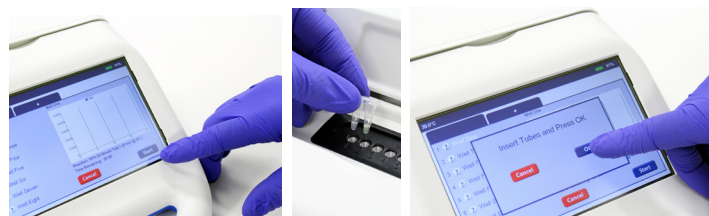
5. Transfer 25 µL from the colored tube containing your sample extract into the reaction pellet (clear tube).



Tightly recap the reaction tube. Mix well and centrifuge. If you cannot vortex the reaction, mix by gently flicking the side of the tube. If you do not have a centrifuge available, you may manually shake the liquid to the bottom of the reaction tube.

IMPORTANT: DO NOT TRANSFER MORE THAN THE PRESCRIBED 25 µL DURING THIS STEP! IMMEDIATELY PROCEED TO THE NEXT STEP ONCE THE REACTION HAS BEEN REHYDRATED.

6. Press “Start” on the AmpliFire. Immediately follow the prompts to add your reactions, press “OK”, and put the lid down.



7. After 20 minutes of total run time the instrument will beep, indicating the test is complete. The test results will be visible next to the well designation on the screen, and should be interpreted as follows:

(+) = Positive for male DNA (-) = male DNA not detected
(!) = Invalid



Limitations

The following is a description of factors that could limit test performance or interfere with proper test results.

Reaction Volume: Care should be taken to ensure the volume used to rehydrate the reaction is within +/- 10 % of the prescribed 25 µL mentioned in step 5 of the Test Protocol. Deviating outside this tolerance may result in test failure.

Sample Extraction: Do not macerate the tissue in the 1.5 mL centrifuge tube. Macerating the tissue can cause false positives. Once the sample has been cut from the leaf, add the extraction buffer immediately. Delaying the addition of extraction buffer will cause false negatives.

Inhibition: Thoroughly wash any root sample with water prior to extracting. Dirt or other media can inhibit the reaction.

Addition of sample extract to reaction pellet: It is important to add only the prescribed amount of sample extract to the pellet diluent 2 tubes. Adding too much extract may cause test failure.

Storage: Test results may be weak or the test may fail if the storage instructions are not followed properly. The lyophilized test components must be sealed with desiccant when not in use to prevent moisture degradation, which may affect test results. Do not store pellets at temperatures greater than 42 °C, even for short periods of time, as this may cause test failure.

Questions or Technical Support:

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