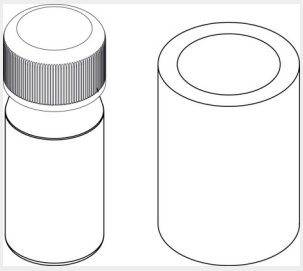
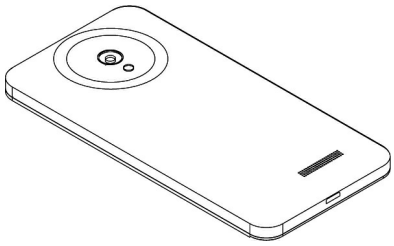
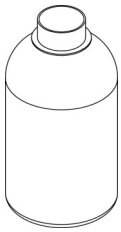
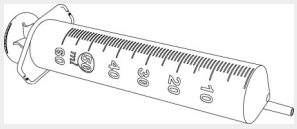
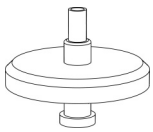
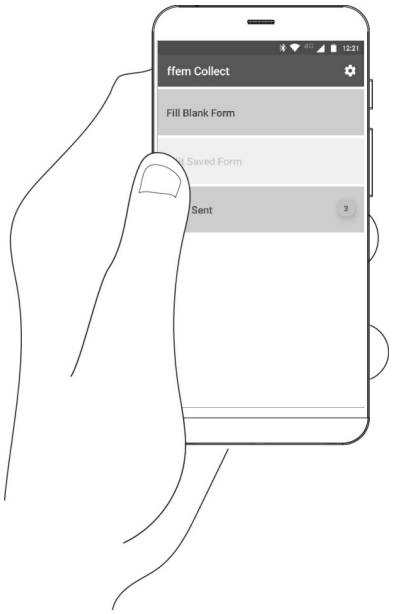
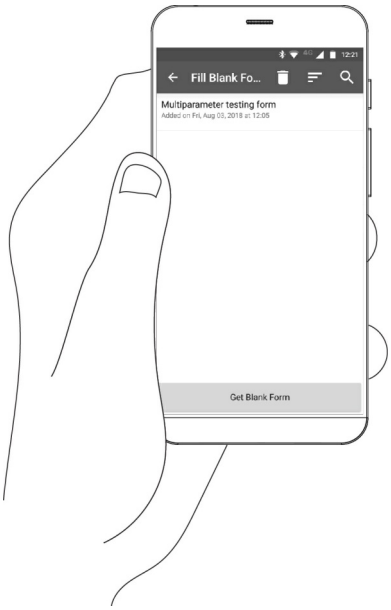
Things You Will Need

1	One tablet each of Nitrate Reagent A and B	
2	A Cuvette and pipe	
3	A smartphone with the ffem apps installed, and an alignment sticker	
4	A 10ml measuring tube	
5	A sample of water to test	
6	15 ml Syringe	
7	Syringe filter	
8	Distilled Water (in case of dilution)	

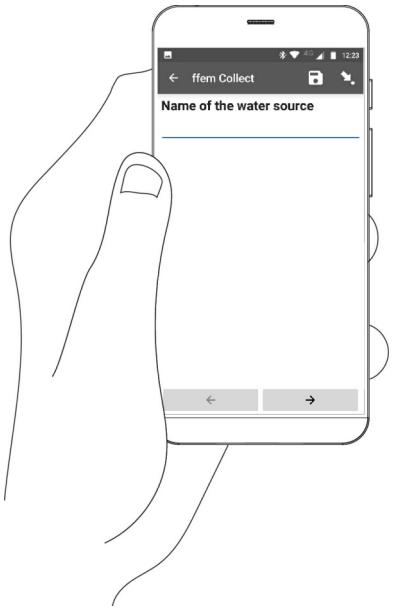
Steps

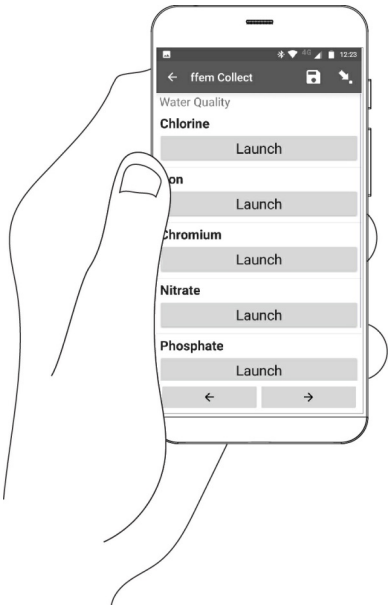
1. Open the ffem Collect app, and select "Fill Blank Form". Select the form you need to fill out.



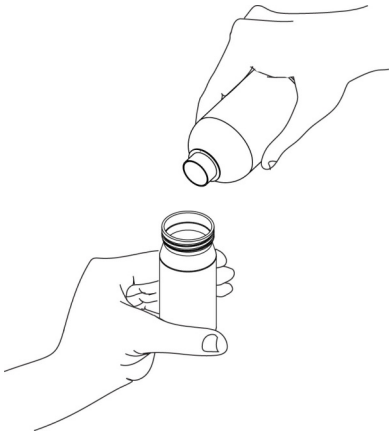


2. Answer all the questions in the form, swiping left to go to the next questions. When you reach the Soil quality questions, launch the test for Nitrate

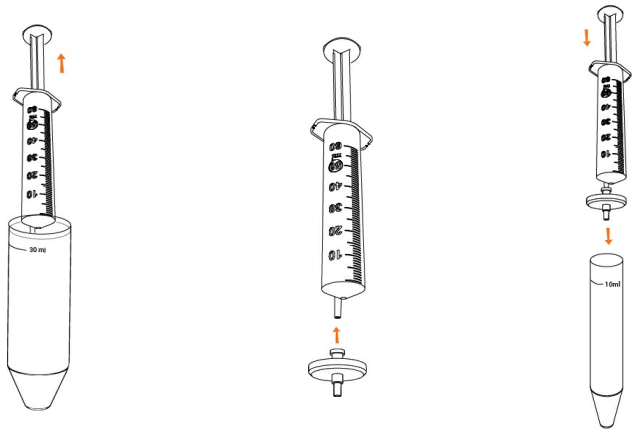




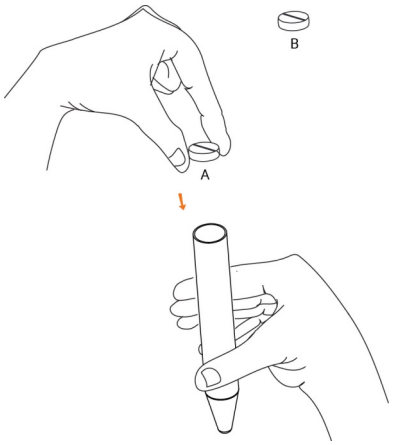
3. Rinse the empty cuvette and measuring tube twice with the sample to remove any traces of previous solutions.

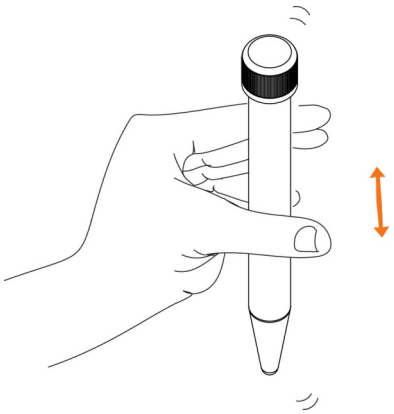


4. Using the syringe, draw out a little over 10 ml of the sample. Then, attach the syringe filter to the tip of the syringe and filter 10ml of the sample into the measuring tube.

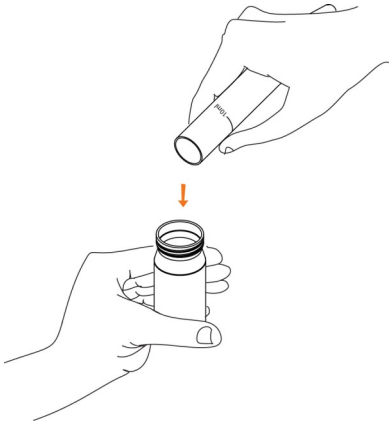


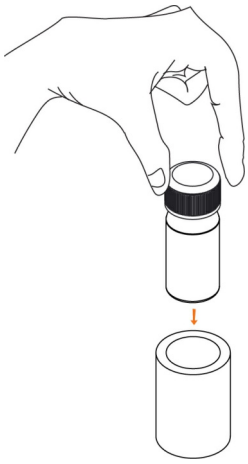
5. Add one tablet each of reagent A and B into the measuring tube. Close the lid and shake it to ensure proper mixing of the reagent and sample.



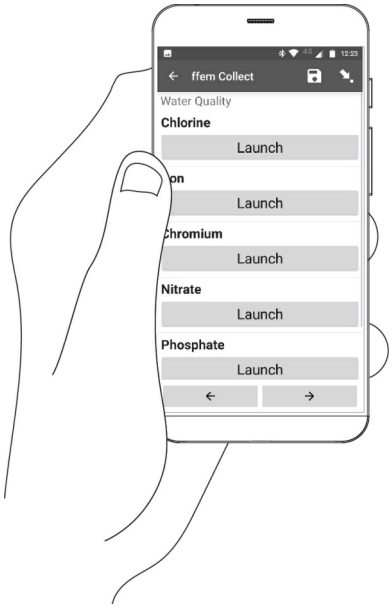


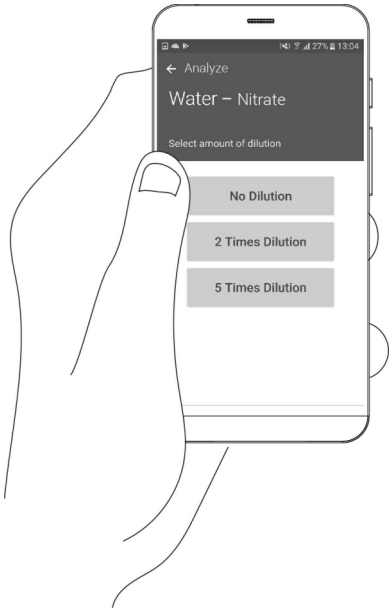
6. Pour the contents of the mixing tube into the provided cuvette. Close the lid and fit the cuvette into the pipe.



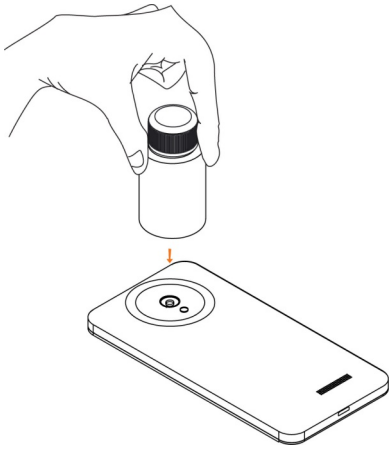


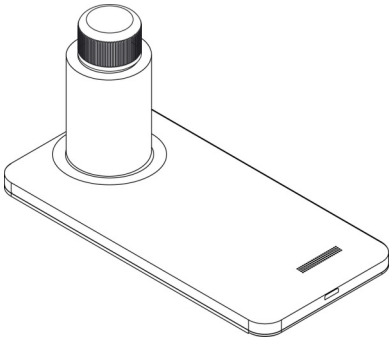
7. Launch the test on the app selecting "No Dilution" on the next screen.



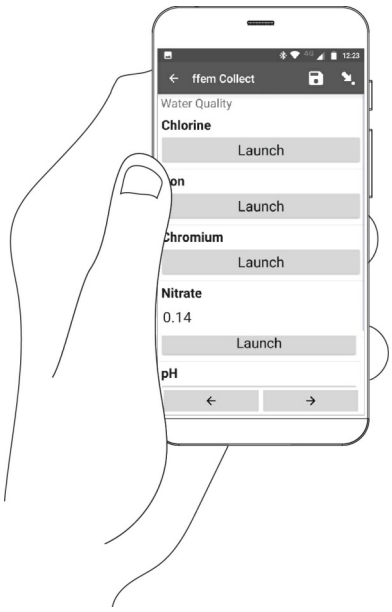


8. Place the phone face down, and use the sticker to help center the cuvette over the camera. Wait for 6 minutes for the test to complete - you will hear 6 beeps and a "Test Completion" sound.

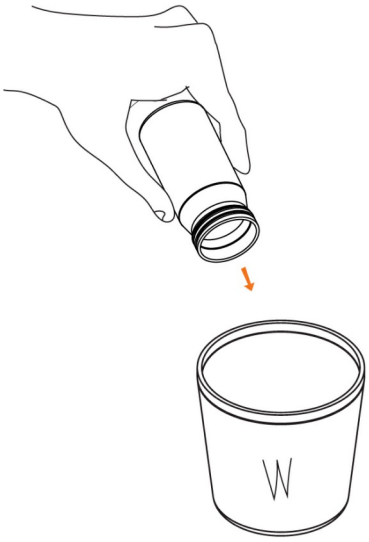




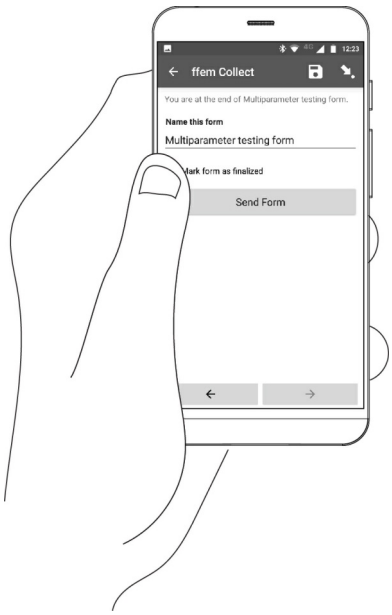
9. You should receive a contaminant concentration value in ppm. Tap Accept Result to return to the survey.



10. Empty the contents of the cuvette and rinse it once.



11. Complete the rest of the survey, and submit it once you have filled in all the forms.



High Range testing - Dilution

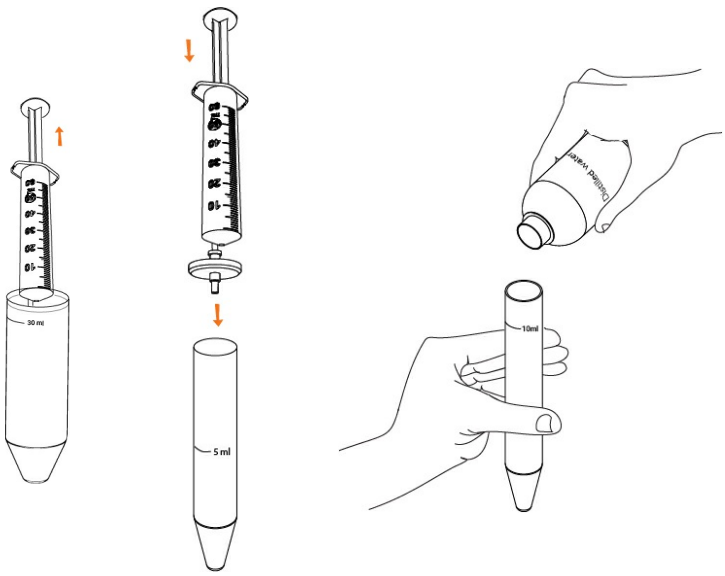
The default range of the phosphate test is from 0 - 100 mg/l. Occassionally you may encounter a sample with a nitrate content greater than this range, in which case the app will prompt you to conduct a dilution test.

A dilution test can extend the range of the test either by 2x or 5x, depending on which option you choose. The app takes care of the multiplication with the dilution factor, and returns a final result as per the type of dilution conducted. Note: Dilution does affect the accuracy, and care must be taken when measuring out the sample and distilled water.

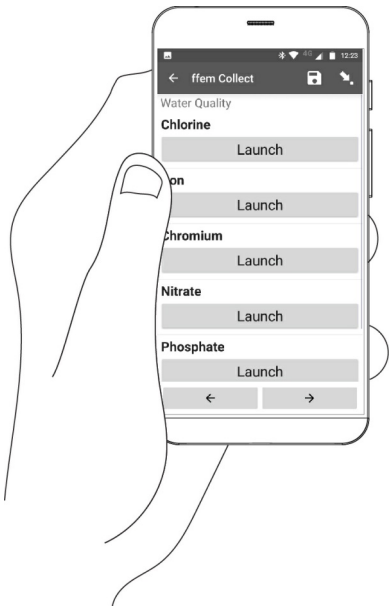
Follow all the steps as described in the test above, except for Step 4 and step 8. Replace step 4 and 8 with the appropriate step below, as per the dilution test you are conducting:

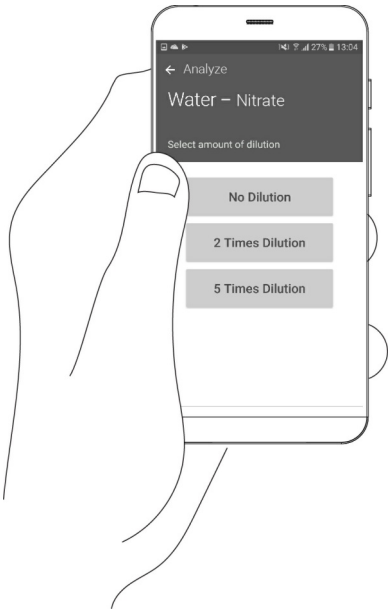
For 2X Dilution (Range 0 - 200 mg/l)

4. Using the syringe, draw out a little over 5 ml of the sample. Then, attach the syringe filter to the tip of the syringe and filter 5 ml of the sample into the measuring tube. Add 5 ml of distilled water to the same measuring tube, bringing up the total volume to 10 ml.



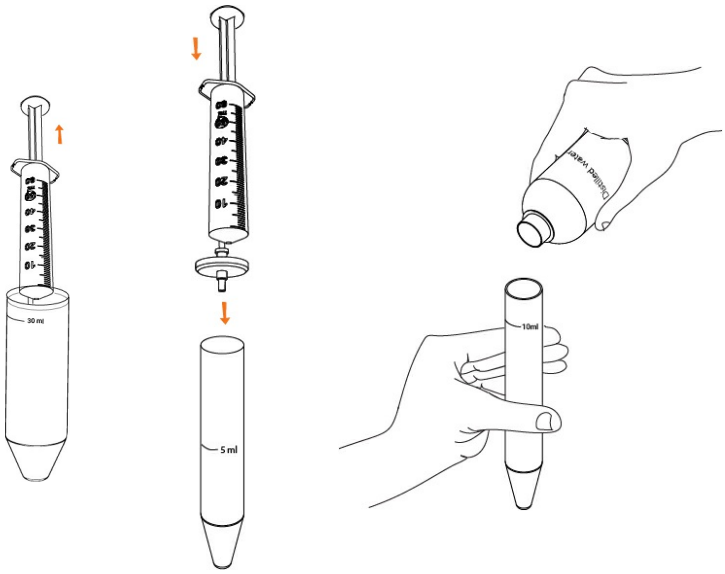
8. Launch the test on the app selecting "2 Times Dilution" on the next screen.





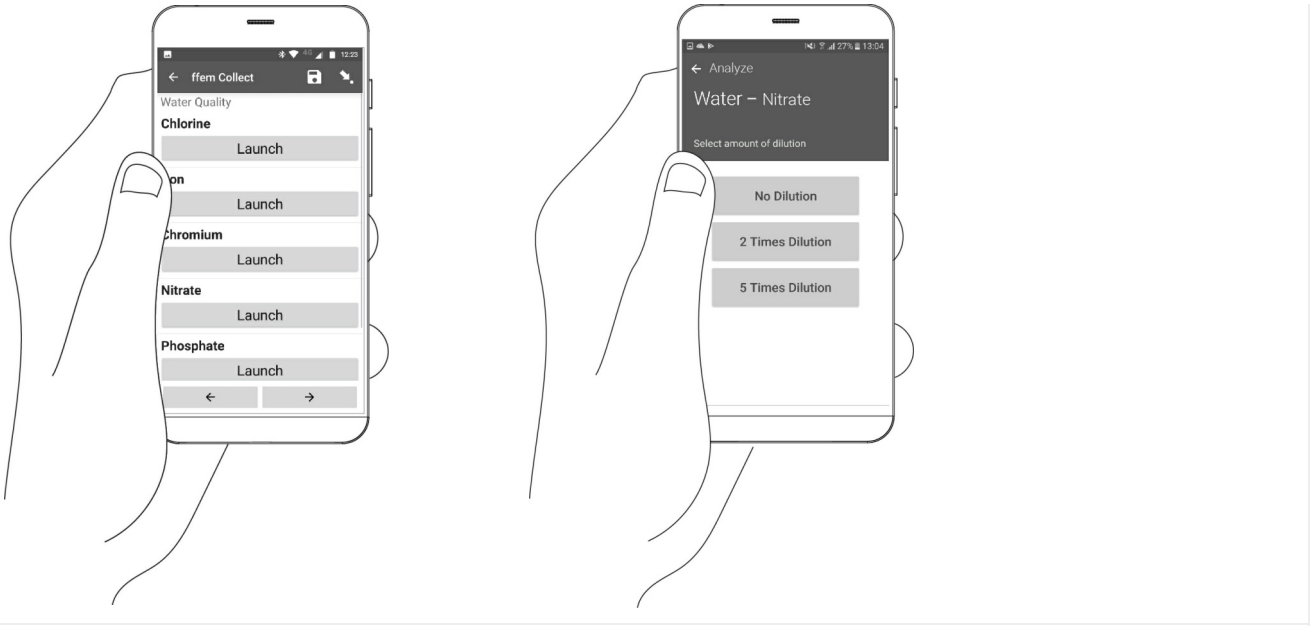
For 5X dilution (Range 0 - 500 mg/l)

4. Draw a little over 2 ml of the sample. Then, attach the syringe filter to the tip of the syringe and Filter 2 ml of the sample into the measuring tube. Add 8 ml of distilled water to the same measuring tube, bringing up the total volume to 10 ml



8. Launch the test on the app selecting "5 times dilution" on the next screen.

Nitrate


ffem Collect
Water Quality
Chlorine
Launch
on
Launch
Chromium
Launch
Nitrate
Launch
Phosphate
Launch
Analyze
Water – Nitrate
Select amount of dilution
No Dilution
2 Times Dilution
5 Times Dilution