



Advanced ATP Test System  
**Guided Test Procedure**

*swipe to proceed...*






# Guided Test Procedure

This is an interactive, guided, Step-By-Step instruction manual that will guide you through the use of the MiBX **FuelIX ATP-Express** Aviation Series microbial fuel-test system

*Are you ready to begin ?*



Swipe Left or Right to step Forward or Backwards through the procedure.  
*(you can also use the navigation arrows and/or simply click the image if you only need to move forward)*

To return to the main Product Resource page, click the button below, or use the  'Back' button on your browser.



# SECTION-1

## Introducing the ATP-Express Test System.



### Sample-Collection Tube Module (x3)

These modules contain all of the components that are needed to collect, and process a fuel or fuel/water sample.

Three complete modules are included – one for Left & Right wing-tank, and a third that can be used if a test needs to be repeated, or water is present in the fuel and will be tested separately.



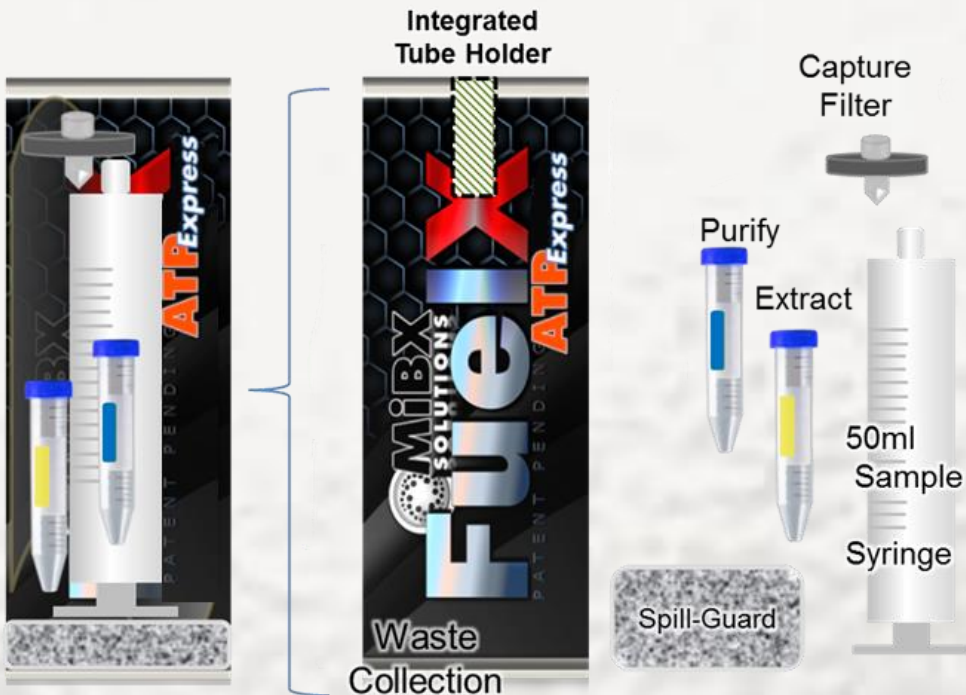
### Sample Express-Mail Pack

This module contains everything that you need to record, package, and return-mail your Sample-Specimens to the laboratory of your choice, or simply to the MiBX Laboratory by default, for complete ATP Analysis.



# SECTION-1.1

## ATP-Express Sample Collection Detail



# ATP Express

## Sample-Collection Tube Module

Each module contains all of the components that you need to collect, and process a fuel sample, including:

- ✓ 50ml/60ml Fuel Sample Collection Syringe
- ✓ Microbe Capture Filter
- ✓ Microbe Purification Fluid: **PureX**
- ✓ Microbe Extract & Suspend Fluid: **RegenX**

The Tube itself is part of the test-system and is designed to be used can be used as a workstation, as well as an integrated liquid waste capture device, and solid waste container for proper disposal.

If you are going into the field to collect a sample, you only need to bring these Tube Modules with you. The ATP-Express Pack can then be prepared for return-shipment later at a convenient location.



# SECTION-1.2

## ATP-Express Pack Content Detail

### Return Shipping Box & Pre-Paid Label



Specimen Cups

Quick-Start Instructions



### Lab Analysis Form

A laboratory analysis request form for FuelX ATP Express. It includes sections for Client Information, Service Provider Information, and Test Sample Information. The form has fields for Client Name, Address/Location, Contact Name, Service Provider Name, Site Contact Name, Technician Name, and Test Site Name/Identifier. It also has fields for Device Under-Test ID, Sample #1 ID, Sample #2 ID, Sample #3 ID, Time, and Date for each sample. There is a section for Special Notes, Observations, or Instructions. At the bottom, there are three specimen labels attached to the form, each with fields for Client, Facility ID, and Specimen ID.

Specimen Labels

# ATP Express

## Sample Express-Mail Pack

This module contains all of the components that you need in order to package and ship up to three specimen samples:

- ✓ Specimen Capture-Cup
- ✓ Tamper-Seal Specimen Cup Labels
- ✓ Laboratory Analysis Information Form
- ✓ Return Shipping Box & Pre-Paid Label
- ✓ Printed Quick-Start Instruction Booklet



# SECTION-2



## SAMPLE COLLECTION PROCEDURE



# SECTION-2

## The Sample Collection & Processing

### **The Procedure Summary:**

*Here is what we are going to do...*

- (2.0) **UnPack** the FuelX Tube Components
- (2.1) **Collect** a Fuel Sample from the Aircraft
- (2.2) **Capture** all Microbes from the Fuel Sample
- (2.3) **Purify & Dry** the Captured Microbes
- (2.4) **Extract & Suspend** the Captured Microbes
- (2.5) **Label, Pack & Ship** the Samples
- (2.6) **Cleanup** Workspace & Component Disposal
- (2.7) **Getting Laboratory Analysis Results**



# SECTION-2

## Unpack the FuelX Tube Module

**1. Remove** the plastic Top-Cap from the FuelX Tube Module, and take out the contents.

**NOTE: DO NOT Remove the metal Bottom-Cap, or the carbon-foam discs from inside the tube.**



**2. Replace the plastic Top-Cap**

**3. Ready to Proceed!**





# SECTION-2.1

## Collect a Fuel Sample



- 1.** Using the proper tools and procedures as specified by your aircraft manufacturer, access each fuel sump port and collect a separate sample of at least **500 ml from each sump port.**



Collect this sample into a clean container that is suitable and compatible with your fuel-type, and large enough to allow mixing below without spilling fuel.

- 2.** Swirl the fuel sample to gently, but thoroughly mix it.



# SECTION-2.1

## Collect a Fuel Sample

**1.** Transfer **50 ml** of fuel from your collection container to the Sample Syringe. To do this, **there are two options:**

### Option-A: POUR

**A.1**

Take the Sample Syringe from the FuelX Tube Module, and **fully remove the syringe-plunger**. **IMPORTANT: NEVER remove the syringe-plunger while the Capture-Filter is attached!**

**A.2**

Now, take the Capture-Filter and screw it firmly onto the Sample-Syringe

**A.3**

Carefully pour **50ml** of fuel from the collection container directly into the Sample Syringe.

**50ml**

Take your time, and measure accurately using the markings on the Sample Syringe barrel.

### Option-B: DRAW

**B.1**

Take the Sample Syringe from the FuelX Tube Module, (**without the Capture Filter attached**) and with the plunger fully inserted, place it into the fuel sample about mid-way below the fuel surface level.

**B.2**

With the Syringe tip submerged in the fuel sample, slowly pull-up on the Syringe plunger until you have drawn **50ml** of fuel into the Syringe barrel.

**B.3**

Now, take the Capture-Filter and screw it firmly onto the Sample-Syringe

... **OR** ...

**50ml**

# SECTION-2.2

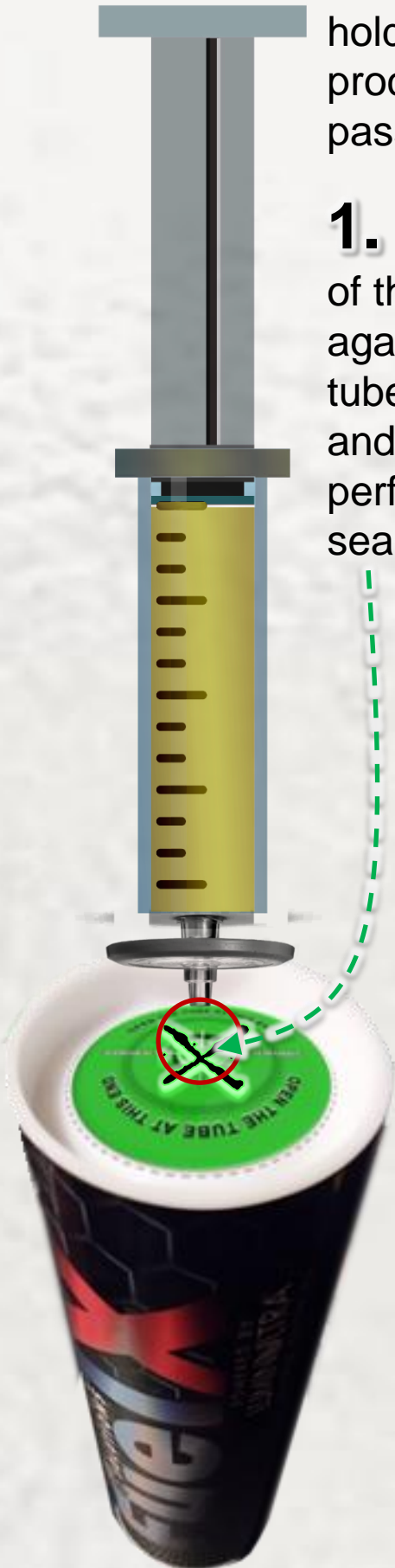
## Capture Microbes from the Fuel

The FuelX tube is designed to help you hold the Capture Filter during the test procedure, and also to safely catch all pass-through fluids.

**1.** Place the exit tip of the Capture Filter against the FuelX tube top-cap center and push down to perforate the green seal-decal.

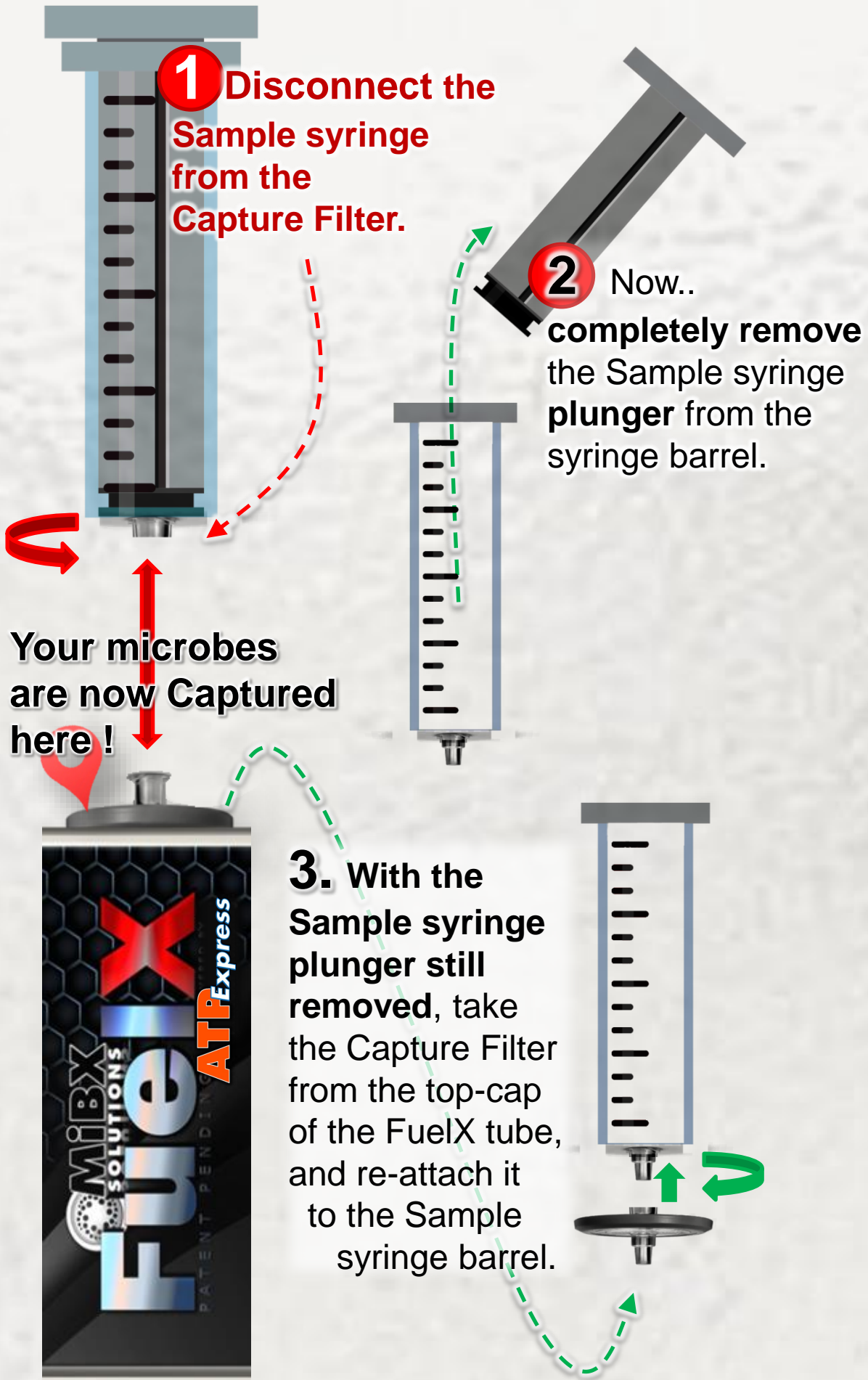
**2.** Firmly press down on the Sample syringe plunger until you have pushed the entire 50ml of fuel through the Capture Filter.

**Any contamination that was in the fuel will now be Captured in this filter.**



# SECTION-2.2.1

Reset for the Next Step: **PURIFY**

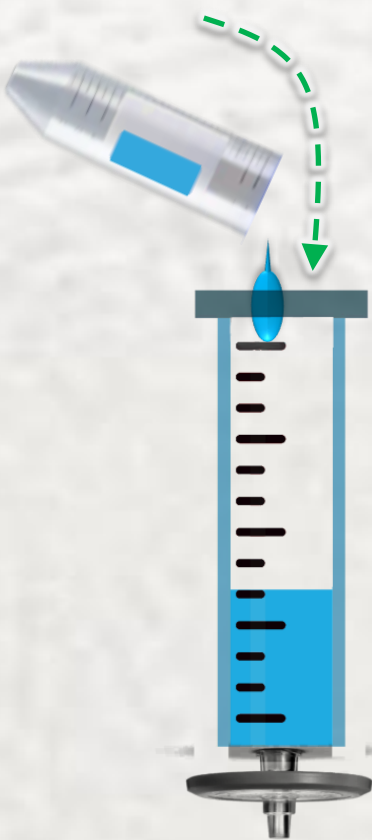


# SECTION-2.3

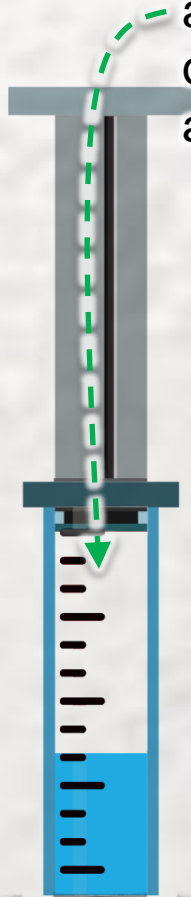
## PURIFY & DRY the Captured Microbes

**1.** With the Sample Syringe plunger **still removed** (from previous step), locate the **blue-label PureX** purification fluid from the FuelX tube components.

Uncap it, and pour the **entire contents** into the syringe barrel.



**2.** Now, Insert the Sample Syringe plunger, and position the assembly on top of the FuelX tube as before, and....

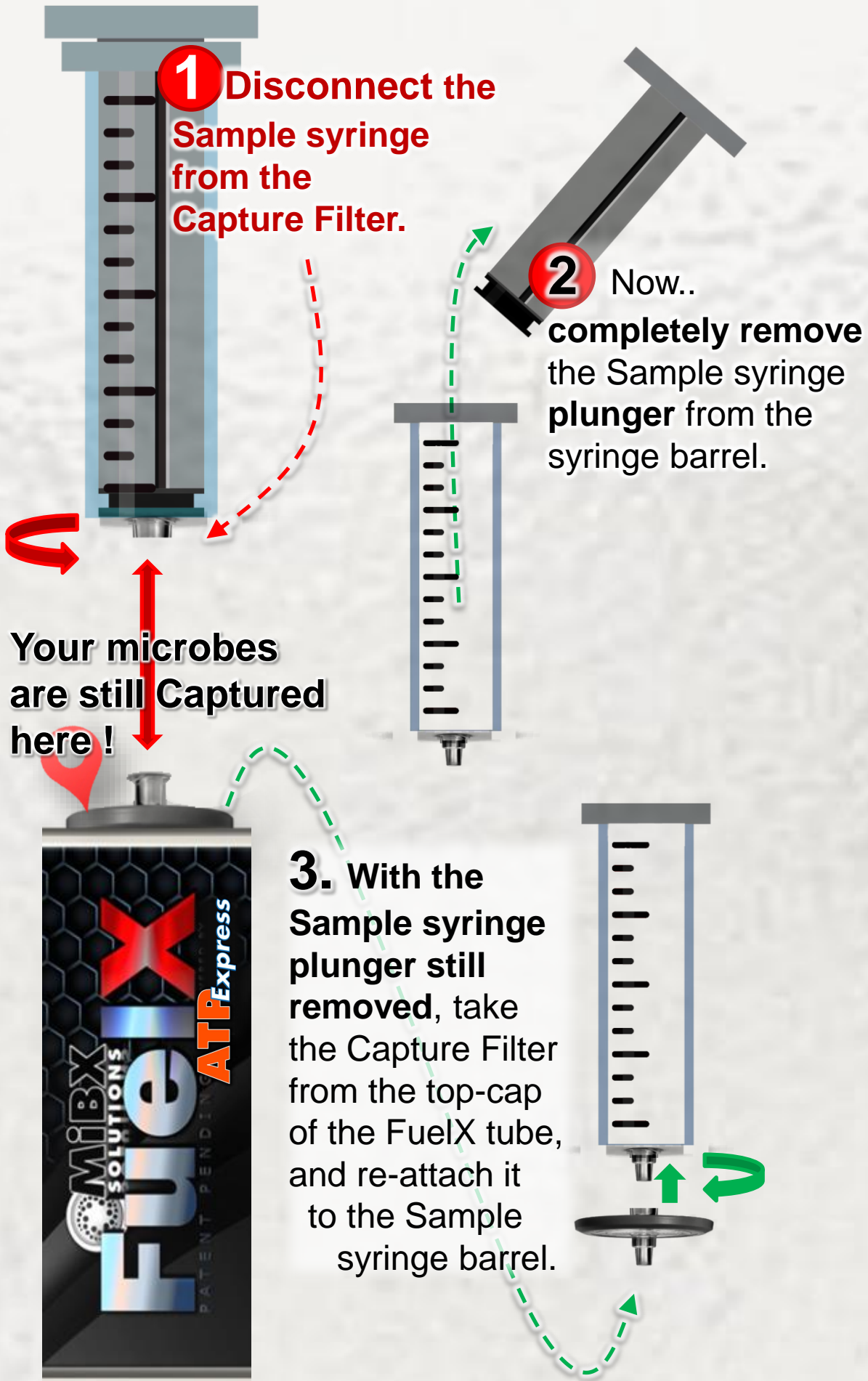


**3.** Push the **entire contents including all air**, through the Capture Filter, and into the FuelX tube.



# SECTION-2.3.1

Reset for the Next Step: **EXTRACT**



# SECTION-2.4

## Prep: **Extract & Suspend** the Microbes

1. Remove one Sample Cup from the Express Pack return shipping box, and unscrew its cap.

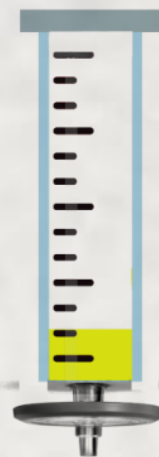
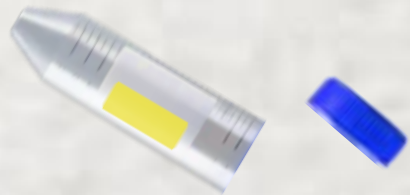
*Tip: Keep this cap close by.  
We need it to reseal the Sample Cup.*



2. Locate the **yellow label RegenX** Extraction & Suspension fluid vial from the FuelX tube components.

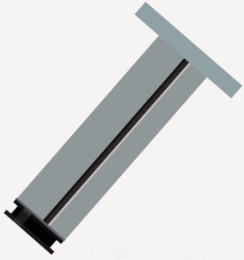


3. With the Sample Syringe plunger **still removed** (from previous step), and the Capture filter re-attached, un-cap the **RegenX** and pour the **entire contents** into the syringe.

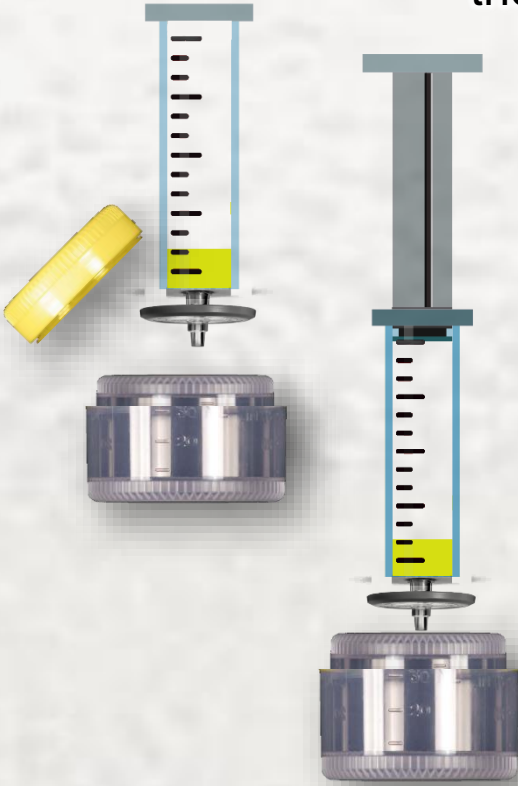


# SECTION-2.4.1

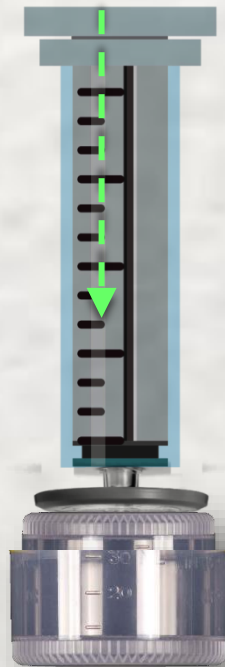
## Go! **Extract & Suspend** the Microbes



**1.** While holding the Sample Syringe and Capture Filter assembly above the Sample Cup, carefully Re-Insert the Sample Syringe plunger



**2.** Push the **entire contents including all air** of the Sample Syringe including the air through the capture Filter and into the Sample Cup



**3.** Replace the lid on the Sample Cup and make sure that it is screwed closed tightly



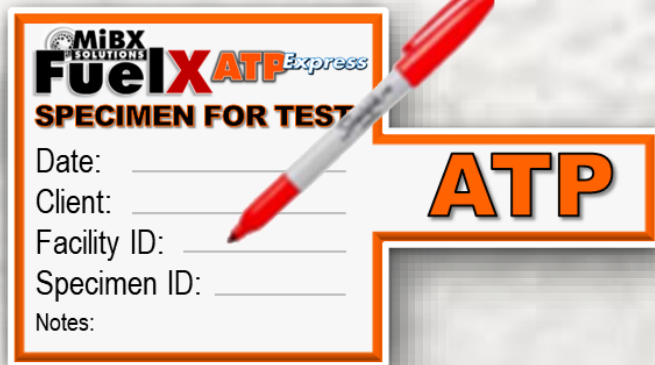


# SECTION-2.5

## Label & Pack the Microbe Samples

The Extracted & Suspended microbes are now safely in the Sample Cup and ready for Regeneration at the Analysis Lab !

1. Complete one of the included "Specimen For Test" sample labels for each Sample, and adhere it to its Sample Cup.



MiBX SOLUTIONS  
**FuelX** ATP Express  
SPECIMEN FOR TEST

Date: \_\_\_\_\_  
Client: \_\_\_\_\_  
Facility ID: \_\_\_\_\_  
Specimen ID: \_\_\_\_\_  
Notes: \_\_\_\_\_

**ATP**



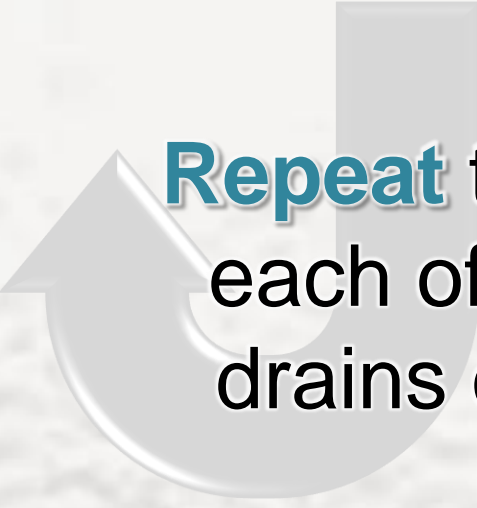
2. Label each sample so that you can easily identify them from each other, and also know where the fuel samples originally came from.

3. Complete the Sample Collection procedure for your remaining fuel samples, and place each one in the Express-Mail Pack for return shipment. Up to 3 Sample Cups can be shipped in a single Express-Mail Pack box.

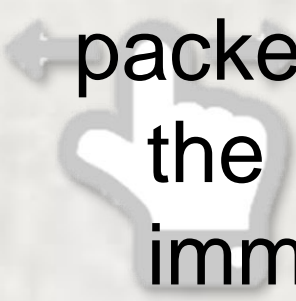


# Congratulations!

Sample Collection & Processing  
is now complete!



**Repeat** the procedure for  
each of the Fuel-Sump  
drains on your aircraft.



**OR...** If you have all of  
your samples prepared and  
packed, you can now drop-off  
the Express-Mail Pack for  
immediate shipping to the  
laboratory for ATP analysis.



# SECTION-2.6

## Clean-Up the Workspace & Disposables



Whether using the FuelX tube for waste containment, or not...Always dispose of any liquid & solid waste in a responsible manner, and in compliance with environmental regulations and company requirements.





Advanced ATP  
**SAMPLE ANALYSIS  
RESULTS**



# SECTION-2.7

## Getting the Laboratory Analysis Results

# ATP Express

Your  
Preferred  
Laboratory



Your laboratory ATP Analysis results will be made available to you through our encrypted & secured web-based **Private Client Portal**.

This Client Portal can be configured as needed in order that you can receive test results & reports in specific formats, and to specific Team members.

Your **MiBX Solutions Representative** will provide detailed information & training to setup and access your Private Client Portal.



# END of GUIDE

*Thank you for using FuelX!*



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<https://MiBXSolutions.com>