

# BioPaddles®

Microbiology Simplified!

## Colony ID™

### Tutorial

The BioPaddles® Colony ID™ App allows the user to presumptively identify microbe colonies on LaMotte BioPaddles® by comparing them to a library of over 250 images including side views and top views at the colony and cell level. The images include those of microbes in five microhabitats (air, soil, water, surface, and food) on 8 paddle agar types.

Images of microbe colonies on the BioPaddle® can be captured with the iPad camera, or imported, for a side by side comparison to a reference library of more than 30+ standard microbe colony images at the genus level. Further identification to the species level can be made by consulting the Microbe Fact Sheets. A report of the findings, including a full color image, can be prepared and distributed directly by email.

Resource materials include sampling and enumeration procedures, BioPaddles® Technical Documents for 9 paddles, 35 Microbe Fact Sheets, procedures for common microbiological techniques such as calculating CFU and serial dilution, Microbe Microhabitats, Microbe Morphology, Fungi and Bacteria Microanatomy, Microbe Growth Examples and Identification Guides.

### BioPaddles Colony ID APP Features

1

#### IMAGE CAPTURE

After incubation, the image of the colony growth can be captured by the camera on an iPad for inclusion in the library of microbe images.



2

#### IDENTIFICATION

Presumptive identification of the colonies can be performed by comparing a captured image, or the colony growth itself, to standard images.



3

#### REPORT

A report can be created and emailed directly from the app.



4

#### RESOURCES

Resource materials aid in the culturing, identification and reporting process.



# 1

## CAPTURE IMAGE/MANAGE ALBUMS



In educational settings, it is recommended that the vials are not opened and that the paddles are not removed from the vial to be photographed. To obtain the best quality image, use a jig to hold the vial and iPad steady. Any movement or vibration of the vial or iPad may cause the image to be blurry. Adjust overhead lighting to minimize the glare on the plastic vial. Lighting from the side will enhance surface characteristics.



Use good laboratory practices when handling incubated BioPaddles and dispose of BioPaddles properly. (See Resources in Information).

If Image Capture is not wanted skip to **2 IDENTIFICATION**.

### CAPTURE IMAGE

1. Tap  on the top left-hand side of the screen to go to the **camera function**.
2. Position the device so that the **home button** is located on the **left**.
3. Tap  on the left or right edge of the screen to **capture** the image.

NOTE: Move the camera or vial to adjust the size of the image so that the area of interest will fill the outline on the screen. The image file cannot be cropped later.

4. Tap **Save Image** to save the image.
4. **Name** the new image. Tap Save.

NOTE: Images will be saved to the end of Camera Roll. Name images so that they can easily be located and retrieved.


### MANAGE ALBUMS

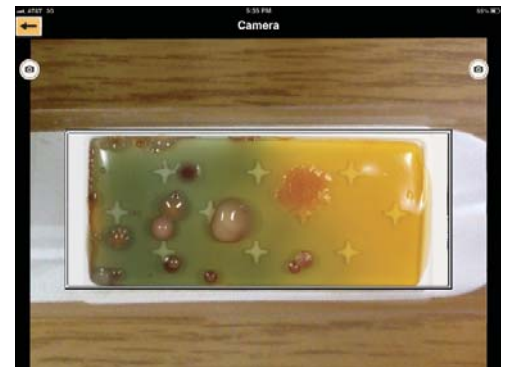
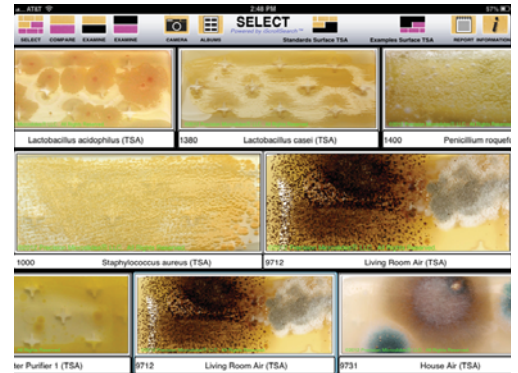
5. Tap  to go to **2 IDENTIFICATION**.

OR

Tap  to return to camera.


OR

Tap  to add the image to an album, create an album, or go to an existing album.





6. In Albums, tap images to select.

Tap **New Album** or  to **add selected images** to a new album. Name the new album. Tap Save to save the album.

OR

Tap **Existing Album** to **add selected images** to an existing album. Tap the name of the existing album.

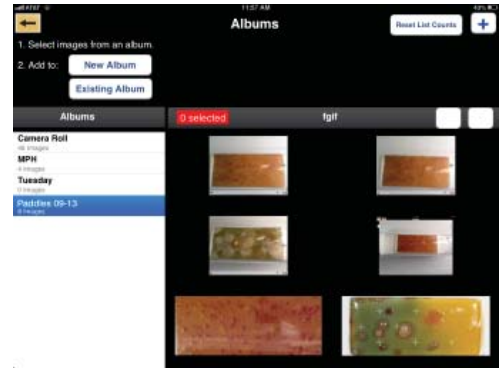
NOTES:

Tap Reset List Counts to update the image count for the album.

The image remains in Camera Roll and has been added to an album.

Camera Roll is a data base of all images. Removing an image from Camera Roll will remove the image from all albums.

To delete images from albums or camera roll, go to the Photos app.



7. Tap  and  to return to **SELECT**.

# 2

## IDENTIFICATION


### SELECT IMAGES

Two images will be selected and displayed in the center left and center right locations for comparison and identification. Choices include:

**Standard** images of a single microbe from a known culture in a specific habitat on a selected agar

**Example** images of single or multiple microbes from a specific habitat on a selected agar from every day settings

**Albums** images from existing albums

1. Tap  on the top right-hand side of the screen to open the selection box for the top/left images.

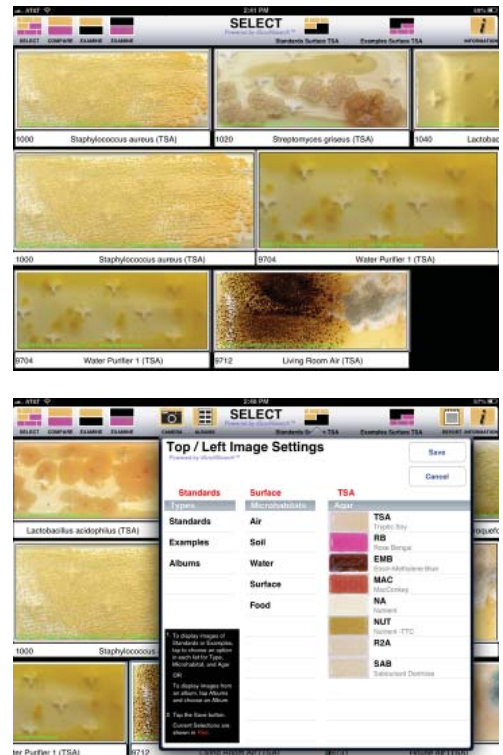
2. Follow the instructions in the selection box to **choose the set of microbe images** for the Type, Microhabitat and Agar combination that will be shown on the **top** scroll bar. Tap **SAVE**.

NOTE: Only those microorganisms that will grow on the selected agar and microhabitat will be displayed. INHIBITED following a microorganism name indicates that growth will be minimal to non-existent for that agar/microhabitat.


Or

Tap **Albums** to open a list of **existing albums**. Tap the name of the album to open that album. Tap **SAVE**. The images in the album will be shown in the **top** scroll bar. Scroll the row to view the images.

3. Tap an image to move it to the **left-hand center** location.




NOTE: Images that are imported to the Report will be taken from this location (left-hand center location). If planning to prepare a report with an image, select that image now.

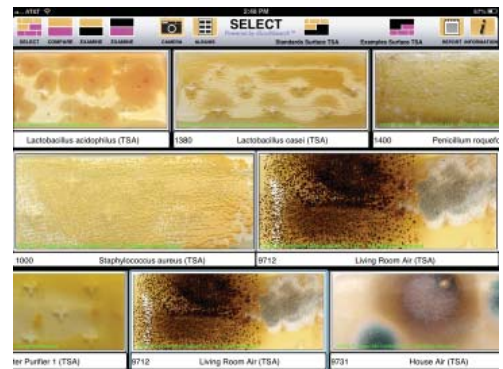
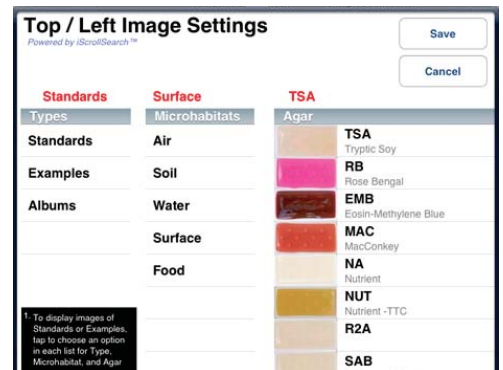
- Tap  on the top right-hand side of the screen to open the selection box for the bottom/right images.
- Follow the instructions in the selection box to **choose the set of microbe images** for the Type, Microhabitat and Agar combination that will be shown on the **bottom** scroll bar. Tap SAVE.

NOTE: Only those microorganisms that will grow on the selected agar and microhabitat will be displayed. INHIBITED following a microorganism name indicates that growth will be minimal to non-existent for that agar/microhabitat.

Or

Tap **Albums** to open a list of **existing albums**. Tap the name of the album to open that album. Tap SAVE. The images in the album will be shown in the **bottom** scroll bar. Scroll the row to view the images.

- Tap an image to move it to the **right-hand center** location.
- Pinch or unpinch images in the center row to zoom out or in.
- Tap  to **compare** the center left and center right selections.





## COMPARE THE TWO SAMPLES

- Tap  **COLONY**,  **CELL** or  **SIDEVIEW**, to view **alternative images** of the **top** microbe.

NOTE: Sideview of the colony may be on a different agar than was chosen.

- Tap  **COLONY**,  **CELL** or  **SIDEVIEW** to view **alternative images** of the **bottom** microbe.








- Pinch or unpinch images to zoom out or in.

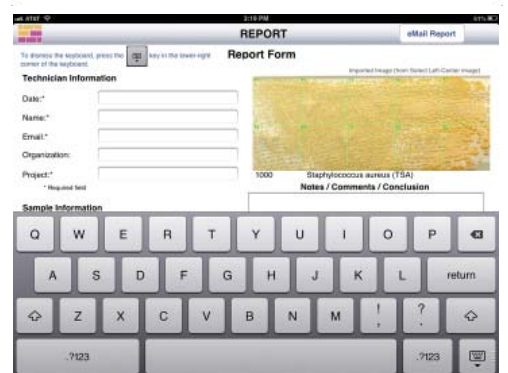
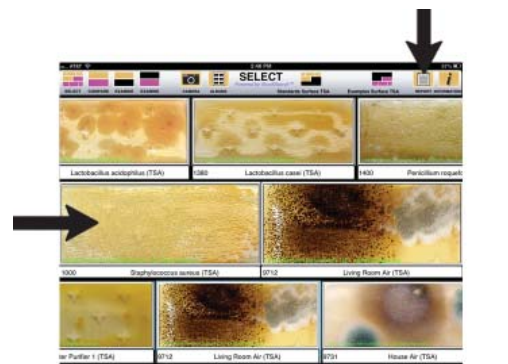
- Tap  or  to **examine** the top or bottom microbe.






## EXAMINE THE SELECTED SAMPLES



1. Tap  to overlay a **grid pattern** on the image to facilitate colony counting and provide reference points for reporting colony size and location. Tap  again to remove the grid.
2. Tap  for instructions on how to determine the Total Colony Count. Scroll to view the entire document.
3. Tap  to access the **Microbe Fact Sheet** for the chosen microbe. Scroll to view the entire document.
4. Tap  to view an image of the microbe at the **colony level**.
5. Tap  to view an image of the microbe at the **cell level**.
6. Pinch or unpinch images to zoom out or in.
7. Tap  to return to **SELECT**.



# 3


## REPORT

1. Tap  on the top right-hand side of the SELECT screen to create a **report**.

The left-hand center image will imported to the report. If the desired image is not in this location, return to . Tap  and select the image from standards, examples, an album or Camera Roll.


2. Fill in the **Technical Information, Sample Information and Notes/Comments/Conclusion sections**


NOTE: The report will be emailed to the E-mail address as a PDF file and cannot be saved within the app. Fields with \* must be filled. The report cannot be emailed if the fields with a \* are not filled. To edit, the report must be emailed and then the email can be edited.

3. Tap  to return to **SELECT**.

# 4

## INFORMATION

1. Tap  to go to **INFORMATION**.

1. Tap  to go to **RESOURCES**.

### Instructions

- BioPaddles® Instruction Card
- BioPaddles® Enumeration
- BioPaddles® Sampling Procedures
- BioPaddles® Preparing Dilute Solutions
- BioPaddles® Storage and Disposal
- BioPaddles® Glossary
- BioPaddles® Water Quality
- Material Safety Data Sheets

### Microbe Microhabitats

### BioPaddles® Tech Documents

### Microbe Fact Sheets

### Microbe Physical Characteristics

- Microbe Morphology
- Fungi Microanatomy
- Bacteria Microanatomy
- Microbe Exclusionary Chart

### Microbe Growth Examples

### BioPaddles® Info

### BioPaddles® Brochures

### Other LaMotte Products

### About BioPaddles® Colony ID

- About BioPaddles® Colony ID
- Terms and Conditions of Use

