

Anilox LVM User Manual

Application: Anilox LVM

Platform: iOS

Audience: Operators, supervisors, service technicians, and administrators

Document status: Draft for App Store review and field validation

1. Overview

Anilox LVM is an iOS application for anilox inspection, liquid volume measurement, geometry review, cleanliness documentation, inventory tracking, and report export.

The app supports three main measurement workflows:

1. LVM Analysis

Calculates liquid volume from captured drop samples.

2. Wi-Fi Microscope Inspection

Uses an external Wi-Fi microscope for image capture, measurement, and documentation.

3. iPhone Microscope Inspection

Uses the iPhone camera for image capture, measurement, and documentation.

The app also includes:

- Local inventory database
- PDF reports
- Combined inspection reports
- Calibration tools
- User authentication
- Audit log
- Local backup package export
- Multilingual interface
- Honeycomb grid-assisted microscope inspection
- Vision-assisted LVM contour detection on supported devices

2. Basic Concepts

2.1 Anilox

An anilox roll or sleeve carries cells that transfer a controlled amount of ink, coating, varnish, adhesive, or other liquid. Typical attributes include:

- **Anilox ID:** unique roll or sleeve identifier
- **Screen:** line count, shown as LPI or LPC
- **Nominal volume:** expected volume, shown as BCM or cm³/m²
- **Maker:** manufacturer
- **Customer / machine / notes:** optional tracking data

2.2 LVM

LVM means **Liquid Volume Measurement**. The app estimates cell volume using a known drop size and the measured spread area.

Simplified formula used by the simulator tool:

$$\text{Volume} = \text{drop size} \times 10 \div \text{measured area}$$

The app stores each sample independently, including:

- Captured image
- Measured area
- Drop size
- Calculated volume
- Deviation from nominal volume

2.3 Geometry and Cleanliness

The Wi-Fi microscope and iPhone camera workflows document physical surface condition and cleaning stages. These workflows can capture images and generate inspection reports, including geometry and cleanliness evidence.

3. Minimum Conditions and Limits

3.1 Device Requirements

Recommended minimum:

- iPhone supported by the current iOS deployment target
- Working camera permission
- Photo library permission when saving or loading images
- Basic internet access for login and cloud-backed authentication
- Wi-Fi connection when using the external Wi-Fi microscope

Vision-assisted LVM requires a compatible iPhone running iOS 17 or later. The traditional chromakey workflow remains available on the supported devices and is recommended for stains that are already well defined by the chromakey mask.

3.2 Measurement Conditions

For reliable results:

- Use a calibrated lens or camera mode.
- Keep the device stable during capture.
- Avoid glare, shadows, reflections, and uneven lighting.
- Use the correct drop size in μL .
- Use the correct nominal volume and screen units.
- Perform multiple samples when possible.
- Review warning indicators before reporting.

3.3 Practical Limits

The app highlights divergence but does not automatically discard measurements. This is intentional because a divergent sample may indicate either:

- Operator error
- Incorrect nominal data
- Incorrect drop size
- Uneven real wear on the anilox
- Surface contamination or cleaning variation
- True process variation

The operator remains responsible for reviewing the physical context.

3.4 Units

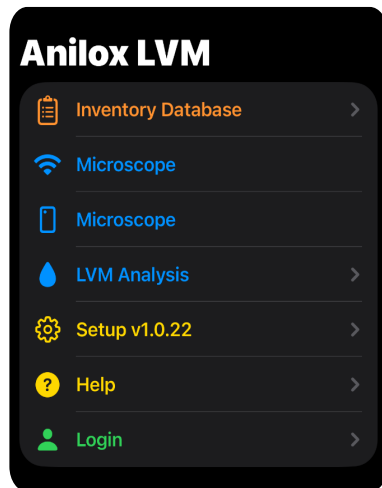
The app can work with the following unit groups:

Parameter	Available units	Notes
Volume	BCM, cm^3/m^2	User selectable in Setup
Area	in^2 , cm^2	User selectable in Setup
Screen	LPI, LPC	User selectable in Setup
Calibration	$\mu\text{m}/\text{px}$	Lens/camera dependent
Drop size	μL	Integer value

4. Main Navigation

The main menu provides access to the app modules:

Menu item	Purpose
Inventory Database	Create, edit, inspect, and report anilox records
Wi-Fi Microscope	Start a standalone Wi-Fi microscope inspection
iPhone Microscope	Start a standalone iPhone camera inspection
LVM Analysis	Start a standalone liquid volume measurement
Setup	App settings, units, calibration, backup, audit log
Login	Authentication, user status, account actions



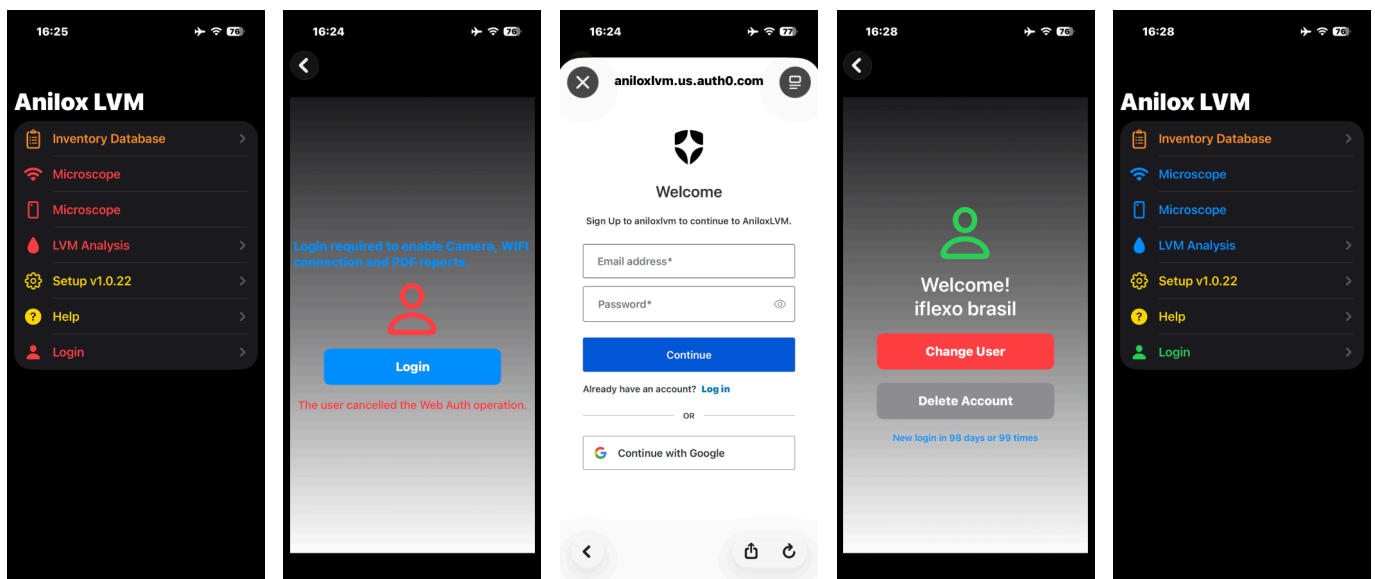
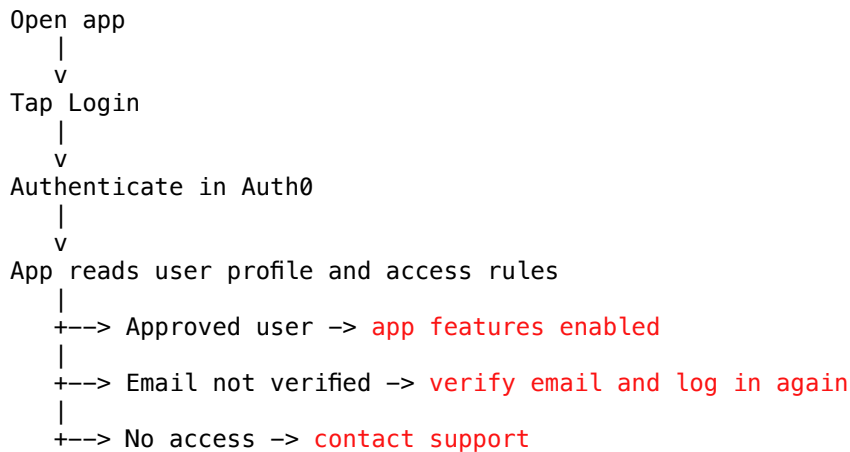
5. Login and User Access

5.1 Login Purpose

Login enables authenticated features such as:

- Cloud-backed user validation
- BLE or protected feature access where applicable
- PDF reports
- Session management
- Account deletion request

5.2 Login Flow



5.3 Session Limits

Depending on administrator configuration, a user may have limits such as:

- Maximum number of restored sessions
- Maximum number of days before fresh login is required
- Access level or feature level

The Login screen can show remaining login allowance, for example:

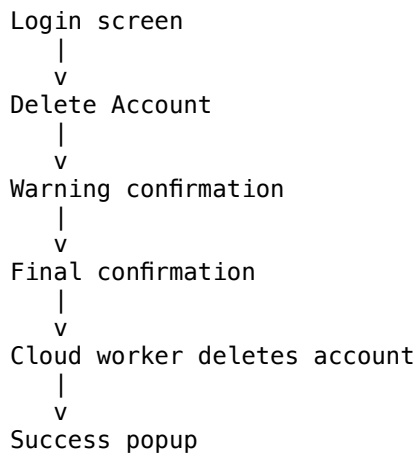
New login in X days or Y times

5.4 Demo User

A demo-status user may be able to open the app, but some functions may not be available.

5.5 Delete Account

The Delete Account action sends a protected request to the cloud worker. If successful, the app displays a confirmation that the account was deleted.



Important: account deletion is permanent.

6. Setup

The Setup screen controls application behavior, units, calibration, language, audit, and backup.

[Insert screenshot: Setup screen]

6.1 Appearance Settings

Setting	Purpose
Dark Mode	Controls visual style where supported
Touch Tracking	Displays touch interaction feedback
Additional Info	Company or operator-related text used in reports
Mask Overlay Opacity	Controls mask visibility in analysis overlays

6.2 Measurement Calibration

Setting	Purpose
Enable Volume Correction	Applies configured volume correction
Edit Calibration Data	Opens calibration curve data
Restore Factory Lens Defaults	Restores default calibrated lens factors

6.3 Units Settings

Setting	Choices
Volume	BCM or cm ³ /m ²
Area	in ² or cm ²
Screen	LPI or LPC

6.4 Capture Settings

Setting	Purpose
OCR Auto Flash	Enables flash during inventory ID scanning
Angle Vector Length	Controls auxiliary angle vector display
Preview Crosshair	Shows the optional camera-preview crosshair

Voice-trigger capture is no longer an operator feature. Capture is controlled directly from the microscope and LVM screens.

6.5 Audit

The audit section tracks operational events such as backup actions and other relevant app events.

Typical actions:

- View Audit Log
- Clear audit log
- Configure backup reminder days
- Run Backup Now

6.6 Inspection Delta Ranges

Delta ranges define how sample deviations are colored:

- Acceptable range: low deviation
- Review range: moderate deviation
- Warning range: high deviation

The app uses these thresholds to color samples and trend charts.

6.7 Language Settings

The app supports language selection from Setup. The interface updates dynamically for localized texts.

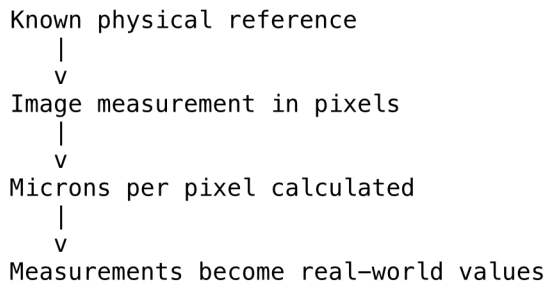
Supported languages:

- English
- Portuguese
- Spanish

7. Calibration

Calibration defines the relationship between image pixels and real-world units.

7.1 Calibration Principle



7.2 Calibration Types

The app may use different calibration sets for:

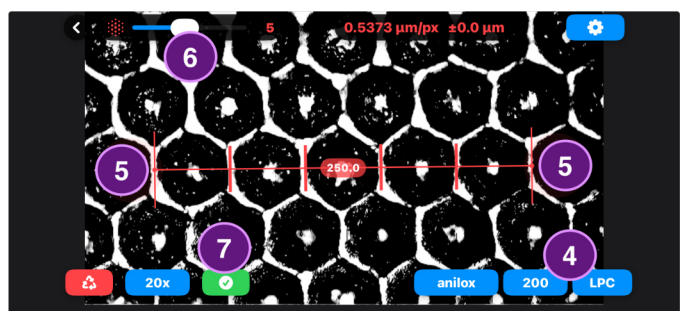
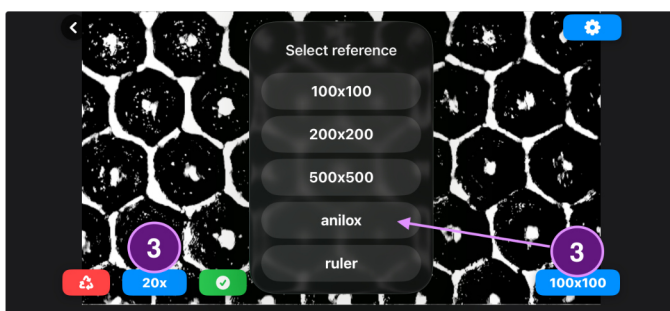
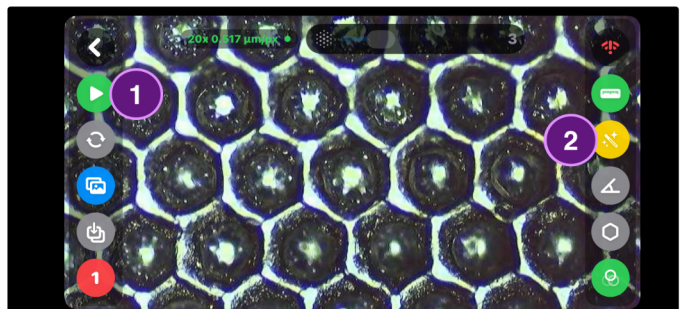
- Wi-Fi microscope lenses
- iPhone camera modes
- Different optical magnifications
- Different zoom values where applicable

7.3 Manual Calibration

Manual calibration uses two selected points across a known reference distance.

Workflow:

- [1] Take a photo of a known, reliable cylinder, focusing on the walls.
- ↓
- [2] Open calibration view
- ↓
- [3] Select lens / camera mode
- ↓
- [4] Confirm the anilox screen and unit.
- ↓
- [5] Tap two reference points
- ↓
- [6] Enter the number of cells.
- ↓
- [7] Save calibration factor

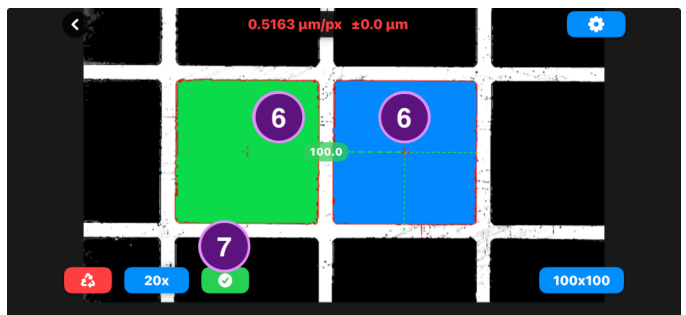
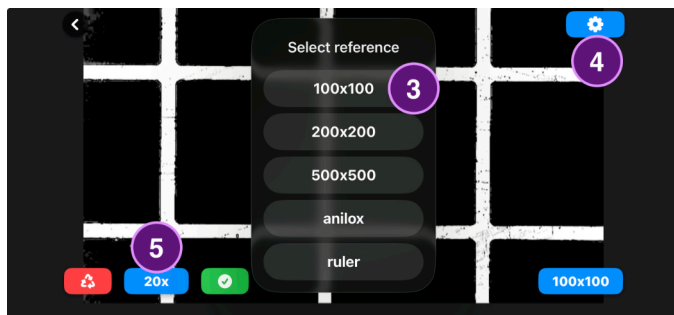
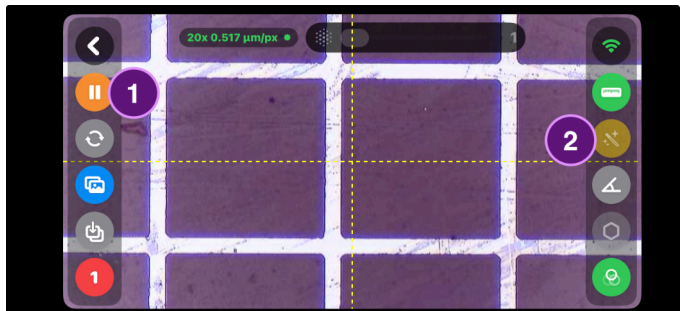


7.4 Automatic Calibration

Automatic calibration uses image analysis to detect a reference pattern when available.

Workflow:

- [1] Take a photo of a known, reliable Graticule, center two squares on the screen
 - ↓
- [2] Open calibration view
 - ↓
- [3] Select the available graticule size (100, 200, or 500 microns).
 - ↓
- [4] Adjust tolerance if needed
 - ↓
- [5] Select lens / camera mode
 - ↓
- [6] Start automatic detection, tapping one square at a time
 - ↓
- [7] Accept or adjust

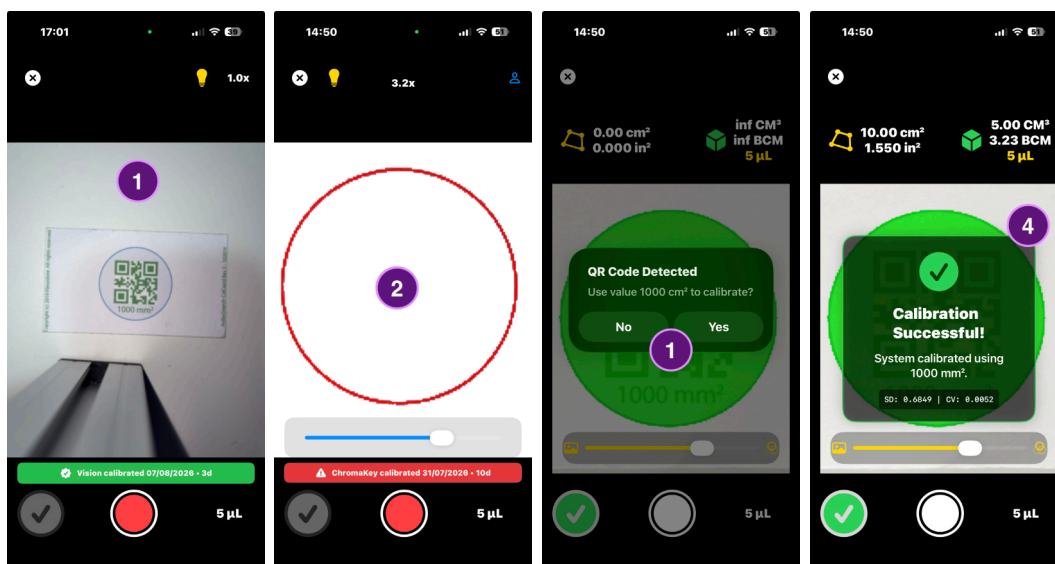


7.5 QR Calibration Prompt

When a calibration QR value is detected, the app can ask whether to use the detected value for calibration.

Workflow:

- [1] Using the height control base, position a calibration card and start the preview
|
v
- [2] Zoom in, make sure the circle's outline is defined
|
v
- [3] The app will detect that it is a calibrator;
check if a green mask has fully formed within the circle.
If so, authorize the calibration.
|
v
- [4] This is the feedback; there is no need to save anything
—just keep taking your measurements.

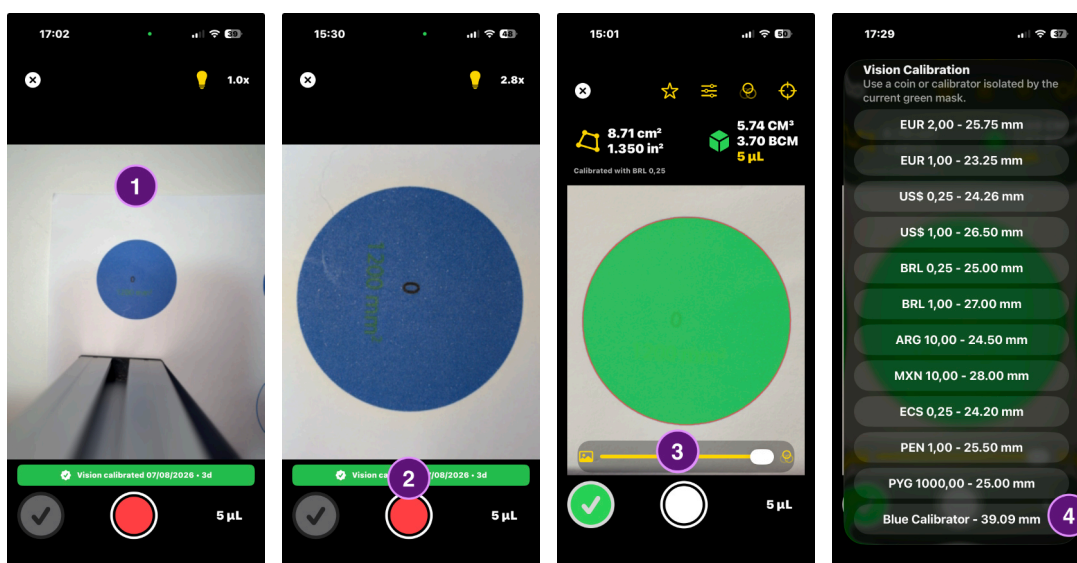
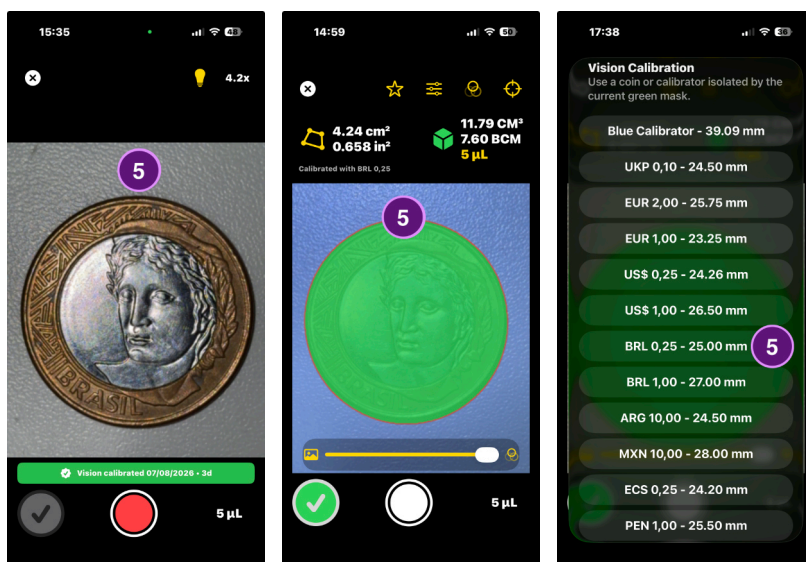


7.5 IA Calibration Prompt

Using a calibration card (blue circle), take a photo and indicate this to the app. If you don't have a blue circle, you can use a coin. Take a photo of the coin and indicate the value to the app.

Workflow:

- [1] As in the previous mode, Using the height control base, position a calibration card (Blue circle) and start the preview
 - ↓
- [2] Zoom in and take the photo
 - ↓
- [3] Check the outer outline in red and the area mask in green (slider)
 - ↓
- [4] Select 'Blue Calibrator', You don't need to save anything; you can keep working
 - ↓
- [5] If you don't have a blue gauge, you can use a coin, provided it is on the list.



8. Inventory Database

The Inventory Database stores anilox records and inspection history.

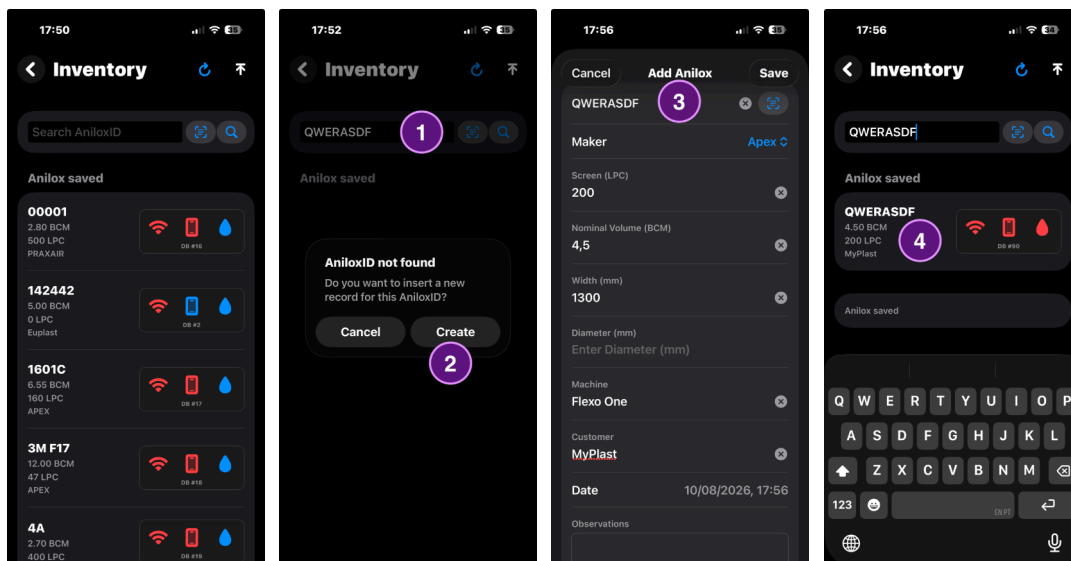
8.1 Main Record Data

A record can include:

- Anilox ID
- Maker
- Screen
- Nominal volume
- Machine
- Customer
- Observations
- Linked LVM inspections
- Linked photo inspections

8.2 Creating a Record

- [1] Enter an aniloxID and search
↓
- [2] Agree to create a record
↓
- [3] Fill in the details, maker, screen, volume, notes etc; Save
↓
- [4] Record ready to collect data

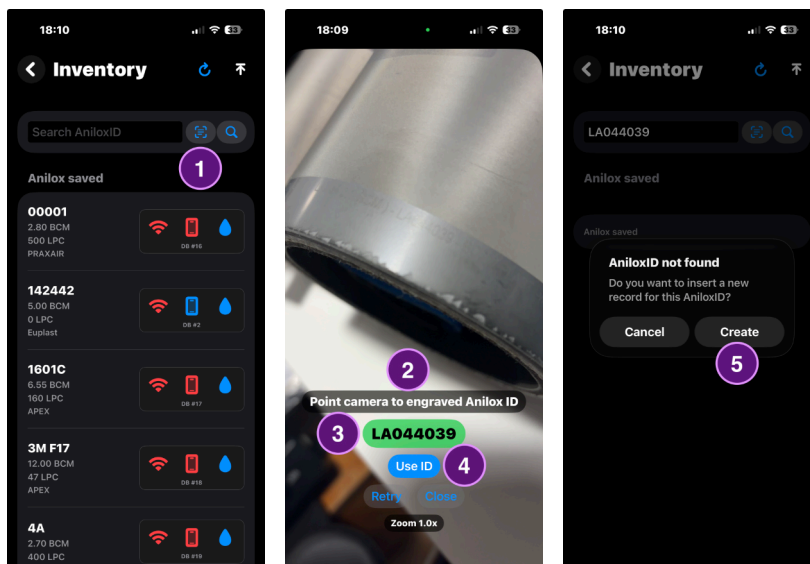


8.3 Searching or Scanning Anilox ID

The scanner reads engraved IDs using the iPhone camera.

Workflow:

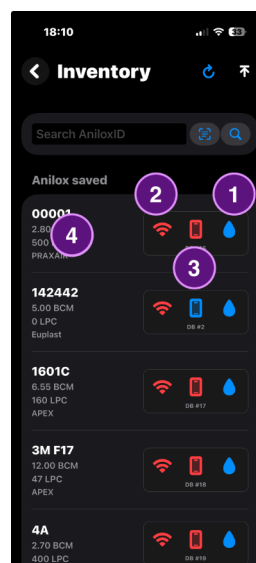
- [1] Tap scanner icon
- ↓
- [2] Point camera to engraved Anilox ID
- ↓
- [3] Review detected ID
- ↓
- [4] Use ID
- ↓
- [5] Use ID



8.4 Inventory Detail

From an inventory record, the operator can open:

- LVM measurement [1]
- Wi-Fi microscope inspection [2]
- iPhone camera inspection [3]
- Existing inspection reports [4]
- Combined inspection report [4]



9. Simple LVM Reading

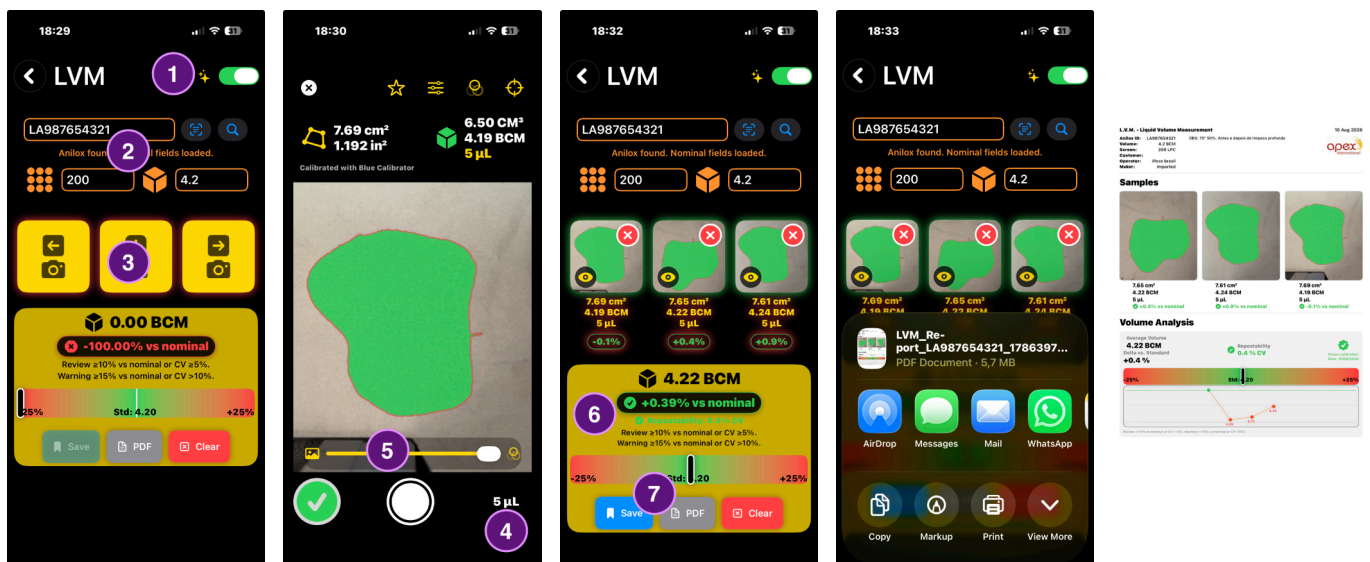
9.1 Purpose

The LVM workflow measures liquid volume using up to three sample slots.

[Insert screenshot: Volume Measure screen]

9.2 Recommended Simple Workflow

- [1] Open LVM Analysis, with iOS 17 or later, you can use AI features
 - ↓
- [2] Enter Anilox ID / screen / nominal volume
 - ↓
- [3] Tap one of the photo slots
 - ↓
- [4] Set drop size
 - ↓
- [5] Capture sample 1
 - ↓
- Capture sample 2 (It's not mandatory, but it improves the result)
 - ↓
- Capture sample 3 (It's not mandatory, but it improves the result)
 - ↓
- [6] Review average volume and warnings
 - ↓
- [7] Save or export PDF



9.3 Sample Slots

Each sample slot stores:

- Image
- Area
- Volume
- Drop size
- Percent difference from nominal
- Warning color when needed

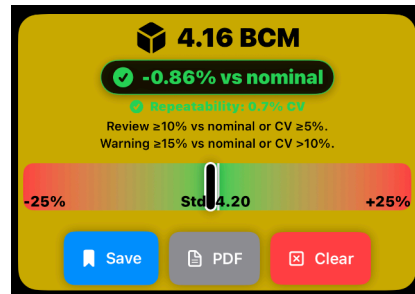


The app does not lock drop size across slots. Each slot keeps its own drop size. This prevents incorrect reverse calculations if the operator changes drop size between samples.

9.4 Analysis Panel

The analysis panel displays:

- Average volume
- Difference from nominal
- Repeatability / CV
- Review or warning messages
- Gauge from -25% to +25%



9.5 Reading Example

Example values:

Sample	Area	Drop	Volume	Result
S1	10.09 cm²	5 µL	3.20 BCM	High
S2	10.09 cm²	4 µL	2.56 BCM	OK
S3	10.08 cm²	4 µL	2.56 BCM	OK

If nominal volume is 2.60 BCM, the first sample may be flagged as divergent. The operator should review the captured image and decide whether it indicates measurement error or true anilox condition.

9.6 Saving and Exporting

Actions:

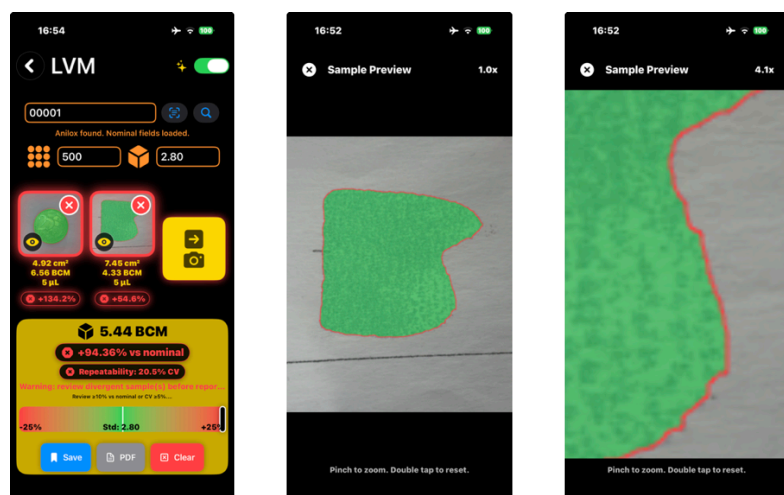
Button	Purpose
Save	Save LVM inspection to database
PDF	Export individual LVM report
Clear	Clear current sample slots

9.7 Vision-Assisted LVM

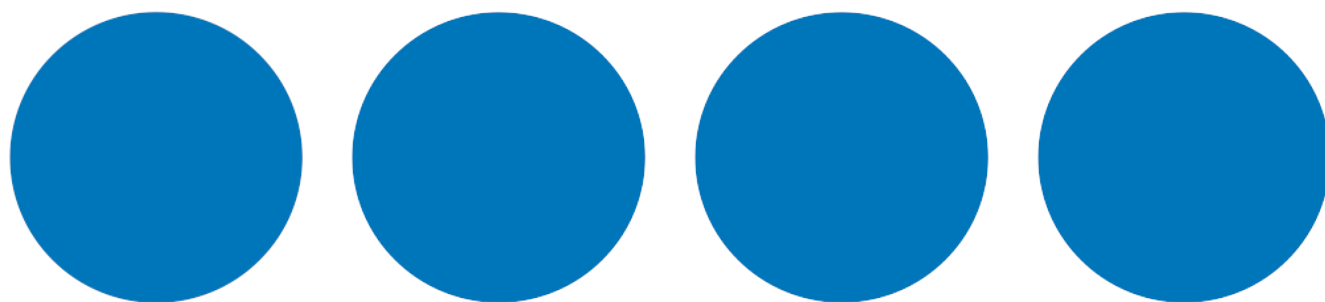
On supported iPhone models, LVM can use **Vision** to identify the stain contour automatically. Vision shows a red contour and a green mask used by the area and volume calculation. Use mask contraction only to exclude a clearly visible fringe or peripheral artefact.

Vision and chromakey remain separate workflows. Each uses its own calibration status: when Vision is active, the app shows the Vision calibration date; when chromakey is active, it shows the chromakey calibration date. Check Vision calibration monthly and whenever the optical or capture setup changes.

Before saving, use the sample preview to check the detected contour and mask. Pinch to zoom and double-tap to reset the preview.



For the recommended Vision calibration workflow, print the supplied blue reference card at **100% / 1:1 scale** on 120 g paper or heavier. Do not reduce the printed size. Place the card flat, use even light, capture it in Vision mode, and accept the calibration only when the green mask isolates the reference cleanly. A validated physical reference is always preferred; the reference examples included with the kit can also help the operator make a quick field check.



Blue Calibrator
39.01 mm diameter

10. Wi-Fi Microscope Workflow

10.1 Purpose

The Wi-Fi microscope workflow uses an external microscope for image capture and measurement.

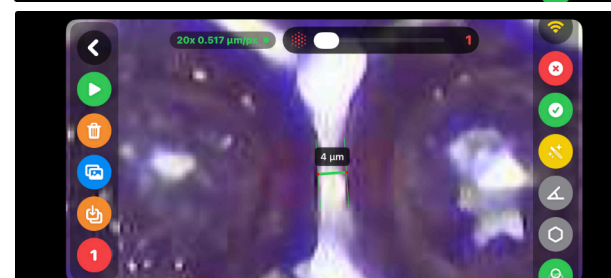
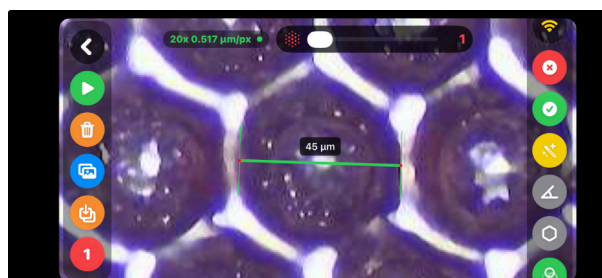
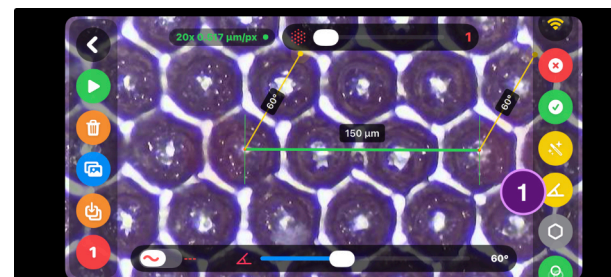
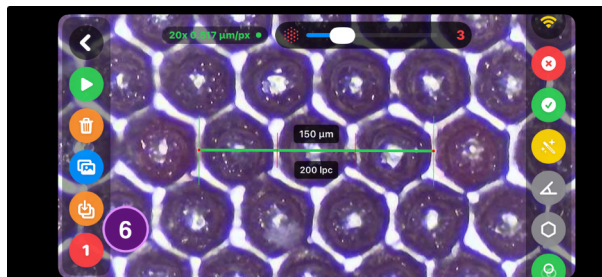
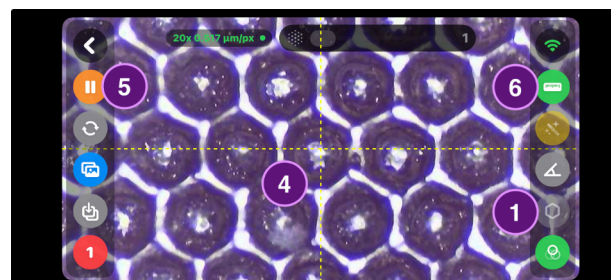
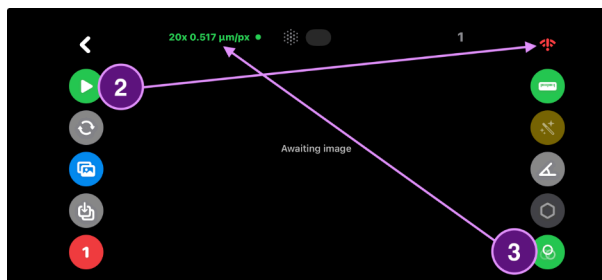
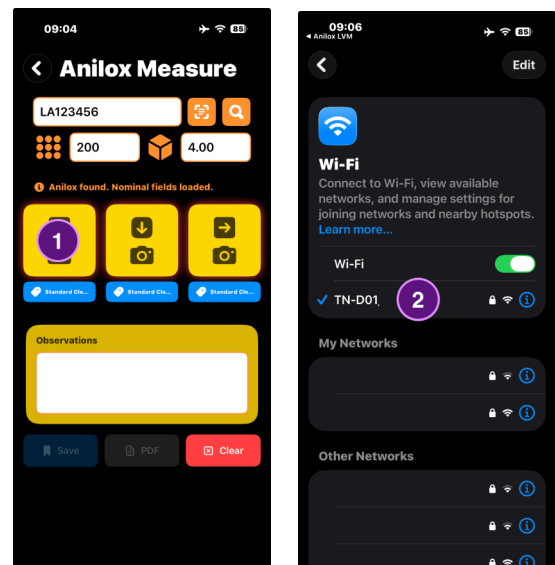
10.2 Connection Conditions

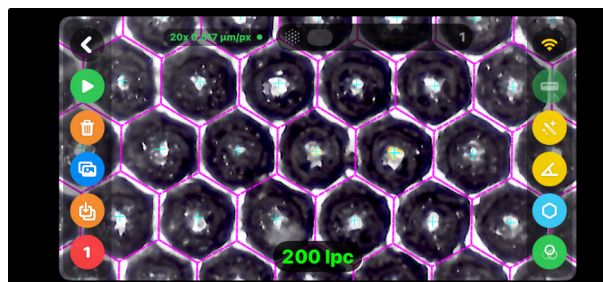
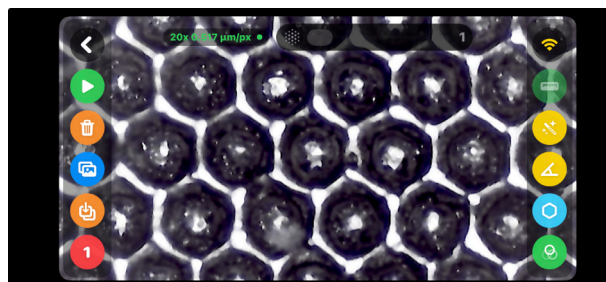
Before using this mode:

- Connect the iPhone to the microscope Wi-Fi network.
- Confirm the microscope stream is available.
- Ensure lighting and focus are stable.
- Use the correct calibrated lens.

10.3 Workflow

- [1] Open Wi-Fi Microscope
- ↓
- [2] Connect to microscope stream, check the WI-FI
- ↓
- [3] Select lens / verify calibration
- ↓
- [4] Focus the surface, walls or bottom
- ↓
- [5] Pause to capture image
- ↓
- [6] Measure and choose the slot to save
- ↓
- Return to inspection flow or export report





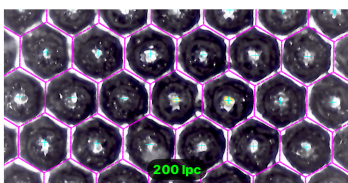
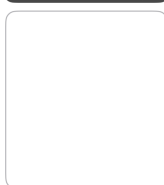
L.V.M. - Geometry & Cleanliness Evaluation

11 Aug 2026

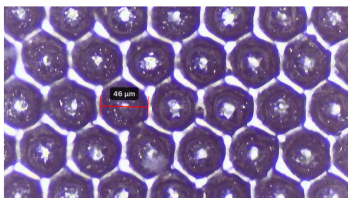
Anilox ID: LA123456
 Volume: 4.00
 Screen: 200
 Customer: Euplast
 Operator: iflexo brasil
 Maker: Apex



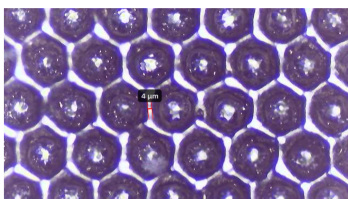
Standard Cleaning



Standard Cleaning



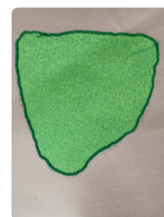
Standard Cleaning



L.V.M. - Geometry & Cleanliness Evaluation

11 Aug 2026

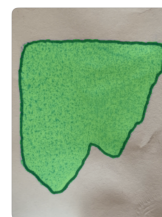
Anilox ID: LA123456 Any
 Volume: 4.00 bcm
 Screen: 200 lpc
 Customer: Euplast
 Operator: iflexo brasil
 Maker: Apex



7.34 cm²
 4.39 BCM
 5 µL
 ✓ +9.9% vs nominal



7.72 cm²
 4.18 BCM
 5 µL
 ✓ +4.4% vs nominal



7.61 cm²
 4.24 BCM
 5 µL
 ✓ +6.0% vs nominal

Volume Analysis

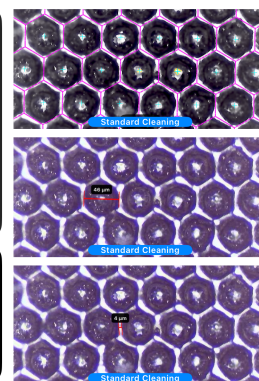
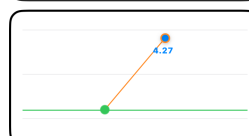
Average Volume
4.27 BCM
 Delta vs. Standard
+6.8 %



LVM calibration
 Date: 10/06/2026

-25% Std: 4.00 +25%

✓ Repeatability: 2.1% CV



10.4 Saved Images

The app saves images into the dedicated **Anilox LVM** album. Technical metadata can be embedded into the image to reconstruct measurement context later.

Metadata may include:

- Lens
- Unit
- Microns per pixel
- Measurements
- Calibration context

10.5 Opening Saved Images

The Wi-Fi icon in the microscope view can open saved images from the Anilox LVM album. When metadata exists, the app restores the measurement context.

11. iPhone Camera Workflow

11.1 Purpose

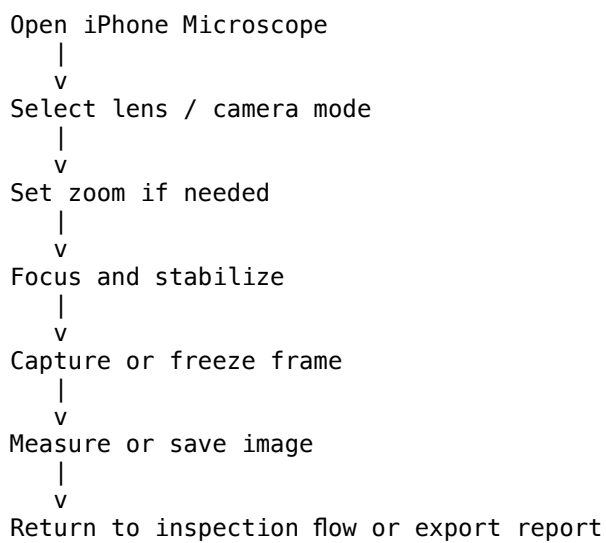
The iPhone camera workflow uses the device camera instead of the external Wi-Fi microscope.

11.2 Conditions

For reliable results:

- Hold the iPhone stable.
- Use consistent distance and lighting.
- Avoid motion blur.
- Use the appropriate camera calibration.
- Consider zoom as part of the calibration context.

11.3 Workflow (The images are the same as those from the Wi-Fi stream.)



11.4 Calibration Difference

Wi-Fi microscope and iPhone camera calibration are separate. Do not assume a calibration factor from one system applies to the other.

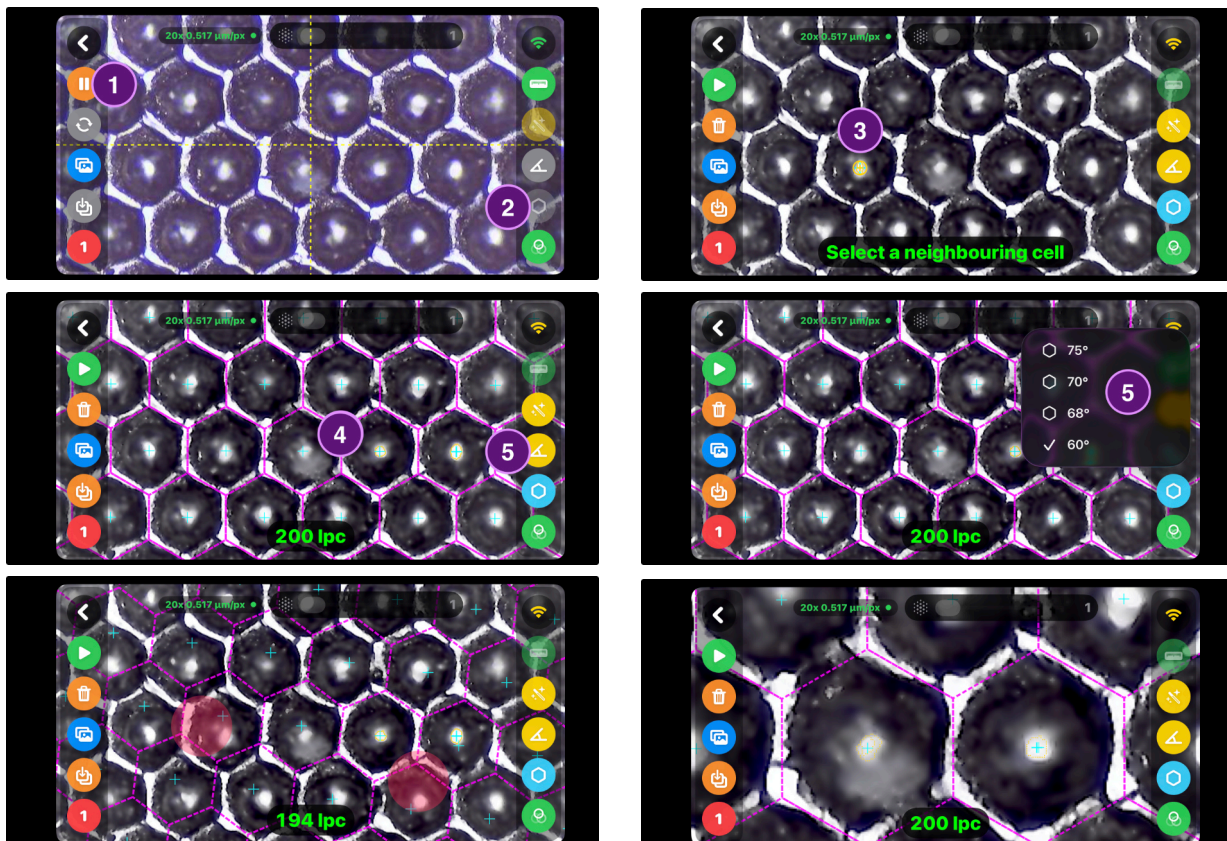
11.5 Honeycomb Grid Inspection

Honeycomb is a grid-assisted geometry tool available after an image has been paused in either microscope mode.

1. Focus the cell walls, pause the image, and tap the Honeycomb button.
2. The app applies a noise-reduced analysis view. The original image remains available when Honeycomb is turned off.
3. Tap the centroid area of one cell, then tap a neighbouring cell. The first selected cell remains highlighted as feedback.
4. After the second accepted selection, the app aligns a virtual grid and displays the calculated screen at the bottom of the image.
5. Choose the 60°, 68°, 70°, or 75° stacking geometry. Drag, pinch, or rotate the grid to refine the fit.
6. Save the slot when the grid and feedback represent the desired record.
7. As a bonus, you can rotate, stretch the grid, or zoom in for more detail

The initial cell distance uses the individual collection screen when available, otherwise the inventory screen. If no screen is available, Honeycomb begins at 200 LPC as a quick-check default. The measured result is rounded to the nearest 10 LPC, reflecting the normal engraving increments. The displayed unit follows Setup (LPC or LPI).

While Honeycomb is active, ruler and auxiliary-angle measurement controls are unavailable to avoid conflicting gestures. Tapping the clear/recycle control clears the Honeycomb analysis; turning Honeycomb off restores the normal measurement controls.

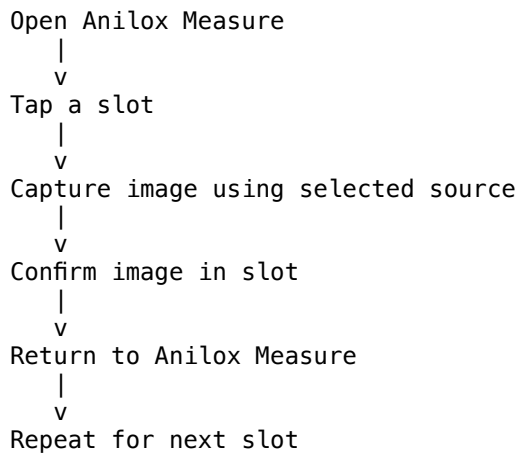


12. Fast Report / Anilox Measure

The Anilox Measure workflow combines image slots for practical inspection. It may be launched standalone or from an inventory record.

12.1 Slot-Based Capture

Typical flow:



12.2 From Inventory

When launched from an inventory record, the back navigation should return to the inventory context so the operator can continue with the same or next record.

13. Reports

13.1 Individual LVM Report

The individual LVM report includes:

- Company / user
- Date
- Roll ID
- Screen
- Standard volume
- Captured samples
- Area, volume, drop size per sample
- Percent difference from nominal
- Final analysis
- Repeatability
- Gauge
- Warnings or review text

13.2 Combined Inspection Report

The combined report is designed for a richer inspection package. It may include:

- Header information
- Anilox ID
- Customer
- Operator
- Maker
- Screen
- Nominal volume
- LVM sample photos
- Area / volume / drop / percent result per sample
- Volume analysis
- Cleaning or surface condition photos
- Trend chart
- Observations

The photo-comparison report can be generated in either of two modes:

- **Cleaning tags:** preserves the existing labels such as Standard Clean, Clean, or Dirty.
- **Standard versus Current:** lets the operator choose two or three saved photos of the same anilox, ordered by date. The report uses each photo date instead of the cleaning tag.

Saved microscope photos can also be opened from the inspection record for a visual review before reporting.

13.3 Warning Indicators

Reports can show:

- Green: acceptable range
- Orange: review suggested
- Red: warning or divergent sample

Warnings do not automatically invalidate a report. They indicate that the operator should review the condition before reporting.

13.4 Available reports

- Inspection of the anilox's cleanliness and/or physical condition
- Volumetric assessment with statistics
- A combination of the previous two, plus the initial vs. current state of the anilox.

L.V.M. - Geometry & Cleanliness Evaluation

11 Aug 2026

Anilox ID: LA123456

Volume: 4.30

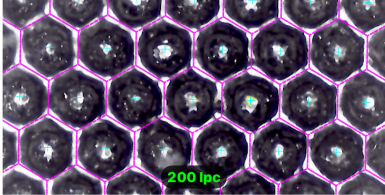
Screen: 200

Customer: Euplast

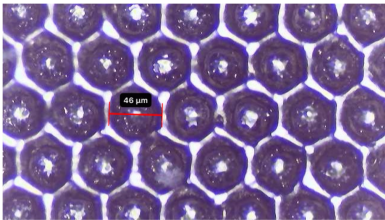
Operator: iflexo brasil

Maker: Apex

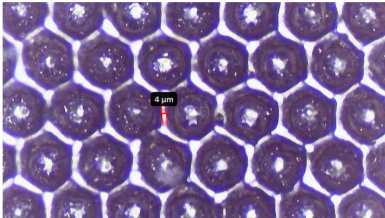
Standard Cleaning



Standard Cleaning



Standard Cleaning



L.V.M. - Liquid Volume Measurement

11 Aug 2026

Anilox ID: LA123456

Volume: 4.30 BCM

Screen: 200 LPC

Customer: Euplast

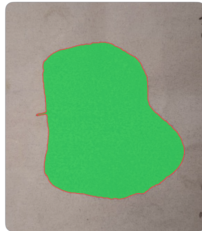
Operator: iflexo brasil

Maker: Apex

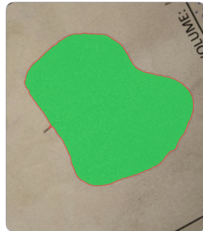
Samples



7.71 cm²
4.19 BCM
5 µL
-2.7% vs nominal



7.68 cm²
4.20 BCM
5 µL
-2.3% vs nominal



7.65 cm²
4.21 BCM
5 µL
-2.0% vs nominal

Volume Analysis

Average Volume
4.20 BCM
Delta vs. Standard
-2.3 %

Repeatability
0.3 % CV

Vision calibration
Date: 10/08/2026

-25%

Std: 4.30

+25%

4.27

4.20

4.20

Review >=10% vs nominal or CV >=5%. Warning >=15% vs nominal or CV >=10%.

L.V.M. - Geometry & Historical Photo Comparison

11 Aug 2026

Anilox ID: LA123456

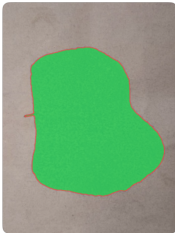
Volume: 4.30 bcm

Screen: 200 lpc

Customer: Euplast

Operator: iflexo brasil

Maker: Apex



7.68 cm²
4.20 BCM
5 µL
-2.3% vs nominal



7.71 cm²
4.19 BCM
5 µL
-2.7% vs nominal



7.65 cm²
4.21 BCM
5 µL
-2.0% vs nominal

Volume Analysis

Average Volume
4.20 BCM
Delta vs. Standard
-2.3 %

Repeatability: 0.3% CV

Vision calibration
Date: 10/08/2026

-25%

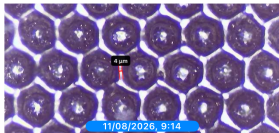
Std: 4.30

+25%

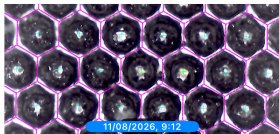
4.27

4.20

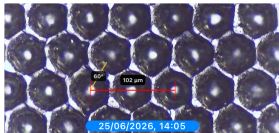
4.20



11/08/2026, 9:14



11/08/2026, 9:12



25/08/2026, 14:05

L.V.M. - Geometry & Cleanliness Evaluation

11 Aug 2026

Anilox ID: ZX1234

Volume: 9.00 bcm

Screen: 100 lpc

Customer: -

Operator: iflexo brasil

Maker: Apex

Vamos fazer bastante observações

- 1 linha

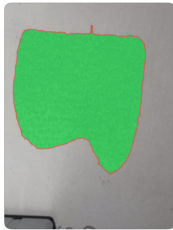
2 linha

3 linha

4 linha

5 linha

6 linha...



7.75 cm²
5.83 BCM
7 µL
-35.2% vs nominal



7.76 cm²
5.82 BCM
7 µL
-35.4% vs nominal



7.76 cm²
5.82 BCM
7 µL
-35.3% vs nominal

Volume Analysis

Average Volume
5.82 BCM
Delta vs. Standard
-35.3 %

Repeatability: 0.1% CV

Vision calibration
Date: 10/08/2026

-25%

Std: 9.00

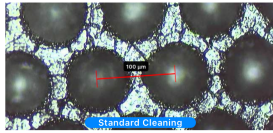
+25%

7.70

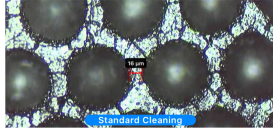
7.66

5.82

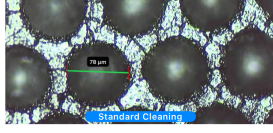
Warning: review divergent sample(s) before report...



Standard Cleaning



Standard Cleaning



Standard Cleaning

24

14. Backup and Audit

14.1 Backup Package

Backup Now creates a cold backup package for database and saved images.

Recommended use:

- Before app updates
- Before device replacement
- Before major field testing
- At routine intervals defined by the operator

14.1.1 Restore

The app can stage a full restore from a backup package or restore the local database only. A full restore returns the database, saved photos, metadata, calibrations, and operational setup. Close and reopen the app after the restore-ready message before beginning a new inspection.

14.1.2 AniloxSearch Import

Setup includes **Import AniloxSearch DB** for .sqlite3, .sqlite, and .db files from the legacy system. The importer brings nominal record data and eligible historical LVM readings into the local inventory. Duplicate anilox IDs are skipped, and imported historical readings do not include the original photos or masks. Review the import summary before continuing field work.

14.2 Backup Reminder

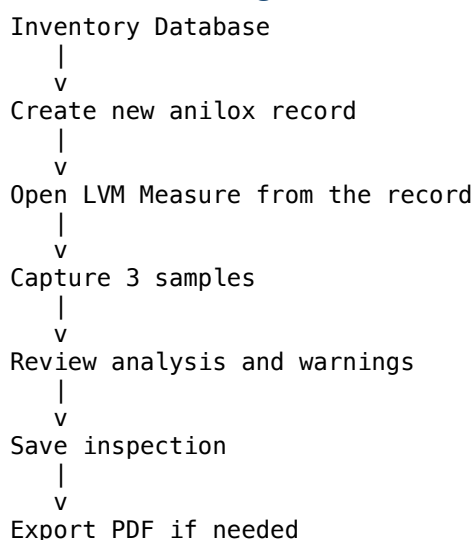
The app can remind the operator on selected weekdays.

14.3 Audit Log

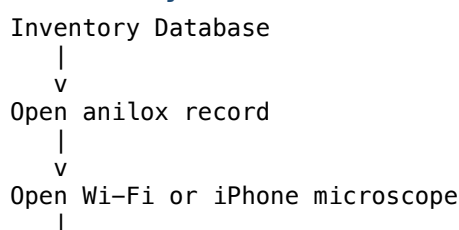
The audit log records selected operational events for traceability.

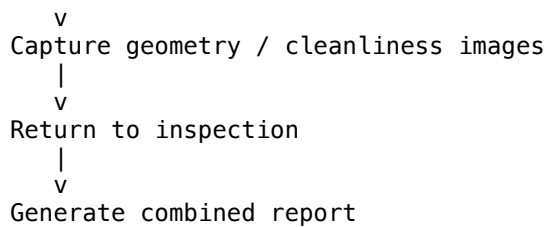
15. Recommended Workflows

15.1 New Anilox Registration and LVM Report

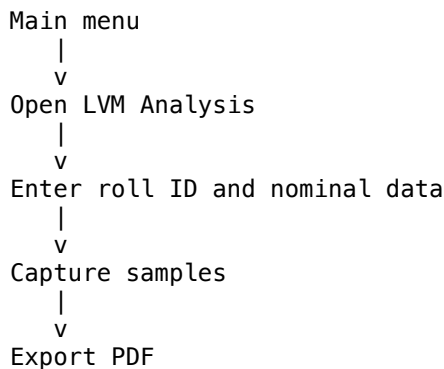


15.2 Geometry and Cleanliness Evaluation





15.3 Standalone Field Reading



16. Troubleshooting

Symptom	Possible cause	Action
Login required	User not authenticated	Open Login and authenticate
Email verification message	Email not verified	Verify email, then login again
No Wi-Fi microscope stream	Wrong Wi-Fi or unavailable stream	Check microscope network and power
Image is blurred	Motion or focus issue	Stabilize and refocus
Measurement seems wrong	Calibration or unit issue	Check lens, unit, and calibration
High CV warning	Divergent samples	Review sample images and repeat if needed
Nominal delta warning	Wrong nominal or real wear	Verify record data and anilox condition
Cannot save images	Photo permission denied	Allow Photos access in iOS Settings
No saved images found	Album empty or permission missing	Capture images or check Photos permission
Honeycomb does not align	Selection is not centred on two neighbouring cells, or image quality is low	Refocus, use even illumination, zoom if necessary, clear the analysis, then select a new neighbouring pair
Vision contour is incorrect	Stain edge is weak or a fringe is included	Review the red contour and green mask, contract the mask only when appropriate, or use chromakey

17. Operator Checklist

Before measuring:

- Confirm login status if reports or protected functions are needed.
- Confirm units in Setup.
- Confirm nominal volume and screen value.
- Confirm calibration and lens/camera mode.
- Confirm drop size.
- Confirm lighting and focus.

Before reporting:

- Review all sample images.
- Review volume average.
- Review repeatability / CV.

- Review delta from nominal.
- Check orange or red indicators.
- Add observations when needed.
- Save inspection before closing if it must remain in the database.

18. Revision History

Version	Date	Notes
Draft 1	18 June 2026	Initial user manual draft
TestFlight build 22	6 August 2026	Honeycomb grid, Vision LVM workflow, calibration status split, report comparison, logo, and report-header updates

