

Why These Parameters Work Better:

1. **Gaussian Blur (3, 3):**

I used `cv.GaussianBlur` with a **(3, 3) kernel** to reduce light noise while preserving image details. A small kernel ensures minimal blurring, maintaining edge sharpness. The **sigma value (0)** lets OpenCV automatically compute the standard deviation, resulting in balanced noise reduction without affecting the clarity. This is ideal for images where detail preservation is essential.

2. **Adaptive Thresholding:**

The adaptive Gaussian thresholding method was applied with a **block size of 11** and a constant **C = 3**. This allows local thresholding, making it effective for handling uneven lighting. It ensures precise segmentation between the berry and the background, preserving important details and adjusting the threshold dynamically based on surrounding pixels.