

DIGITAL IMAGING METHODS AND SYSTEM FOR PROCESSING AGAR PLATE IMAGES FOR AUTOMATED DIAGNOSTICS

ABSTRACT

Today, the infection is diagnosed manually, examining the bacterial growth on agar plates. Nevertheless, the Classifiers are designed for automated diagnostics using agar plate images. Input images should be of good quality and consistent in terms of scale, placement, perspective and rotation for precise classification. The Present invention disclosed here is Digital Imaging Methods and System for Processing Agar Plate Images for Automated Diagnostics comprising of Identify and Mask the Agar Plate (101), Identify Compartment Edges (102), Identify Agar Plate Orientation (103), and Image Registration (104). The invention disclosed here investigates, whether a combination of image processing method can be used to match an input image to a predefined reference model. The invention was implemented to identify the key points required to record the input picture of the reference model. The key points found in the picture were the identification of the agar plate, its compartments and its rotation. The drawings illustrates that the recording of an image with the proper key points was sufficient to match the image of agar plates to a reference model, despite all scale, position, perspective or rotation variations. However, the accuracy was dependent on understanding the characteristics of the agar plate. Ultimately, invention proposes a method of converting images of agar plates on the basis of a predefined model instead of a reference image with image recording.

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DRAWINGS

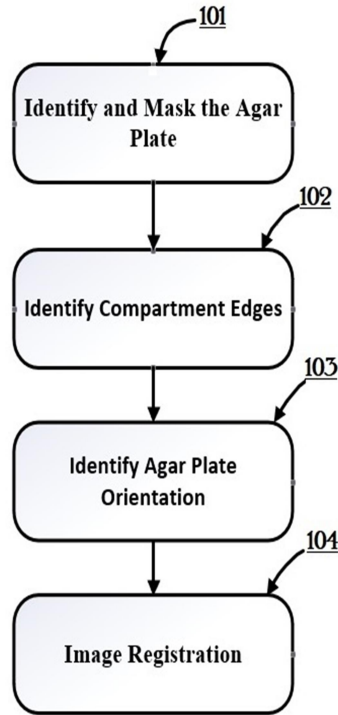


Figure 1: Digital Imaging Methods and System for Processing Agar Plate Images for Automated Diagnostics.

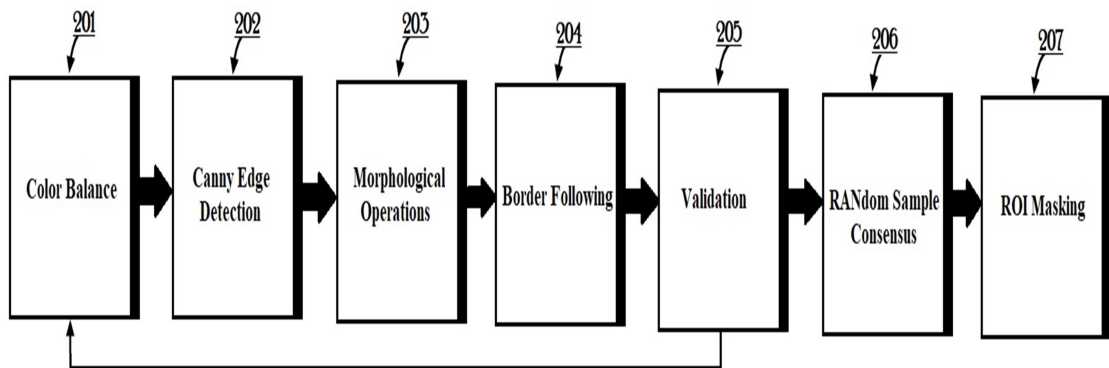


Figure 2: Workflow to Identify and Mask the Agar Plate.