interscience

THE APPLI'NEWS

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NEW Scan AI ! Part 1/2

Two new products

Two new products have been added to the Scan Auto range: The **Scan 3000 AI** and **the Scan 5000 AI**. The main difference between these two Scans is their size. The Scan 5000 AI is the same size as the Scan 4000. Its size makes it possible to use both large and square dishes. While the Scan 3000 AI is closer in size to the Scan 1200. In the long term, the Scan 4000 will be discontinued to make way for the Scan 5000 AI.



New software

The launch of the new Scan AI models is accompanied by the release of new software featuring a more modern look and, more importantly, new features. In a second phase, this new software will be compatible with older Scan models (without AI-based parameters).

New tab: Classification

The options for color selection¹ and exclusion², size classification³, and colony count limitation⁴ are now grouped together in a new tab called "**Classification**".

This tab also includes shapebased classification for certain media, such as the Al Symphony medium in Al mode, which can distinguish between yeasts and molds.



What's the difference between a classic parameter and an Al-based parameter?

With a **classic parameter**, the Scan detects colonies by analyzing the **contrast** between the colony and the medium. Depending on the selected medium, it knows whether to look for light or dark colonies, and how strong the contrast should be. An additional condition can be added, such **as color detection (or exclusion**).

Al-based parameters work differently. Each parameter is based on a pre-trained model. This model is trained using a large annotated image database, allowing it to learn what the target colonies look like. Once the model is trained, it is integrated in the software and runs offline, without requiring external communication. It no longer evolves after deployment, unless there is an update. Instead of measuring contrast, the Scan compares patterns in the captured image with examples from its internal dataset. Based on this comparison, it determines what is a colony and what isn't. This approach significantly reduces false positives caused by artifacts on the plate, handwritten markings¹, labels², bubbles³, or plate edges⁴.

Couleurs à détecter

Couleurs à exclure :

Limitation de la taille des colonies (en mm)

0,00

Max.: 50.00



As a result, Al mode does not require modification of the counting zone nor addition of exclusion zones. However, since the model is static once deployed for the customer, it is not possible to add new detection requests (e.g., detecting an additional color) unless that capability was included during training. To add a classification element, a new model training is required.

TBX_N

TBX_P





The training was done to recognize the two types of colonies based on their color. Now that the training is complete, the classification tools can no longer be modified—they appear grayed out.

🗌 Limitati	on du nombre de colonies	
Min. :		Max. :
30	\leq Total des UFC \leq	300
15	\leq UFC caractéristiques \leq	150