



## Cut your lead times with NIR-CI analysis of lyophilized products

### Laboratory lyocake inspection

Freeze-drying or lyophilization is a process used to dehydrate and hence improve the conservation of a wide range of materials, including pharmaceuticals and biopharmaceuticals. R&D laboratories generally work on lyophilization of small quantities of the product (small vials or 96-well plates).

### Goals

To reduce the time-to-market, we propose an inspection instrument capable quickly and non-destructively assessing the critical attributes of your lyophilized products.

The combination of digital imaging and optical spectroscopy enables you to collect and process together all the spectral and spatial information provided by the image.

The detector moves beneath the lyophilized product, thus giving information about the pharmaceutical ingredients, the residual humidity and the homogeneity of the product.



### CA INDATECH's NIR-CI solution: HyperReal

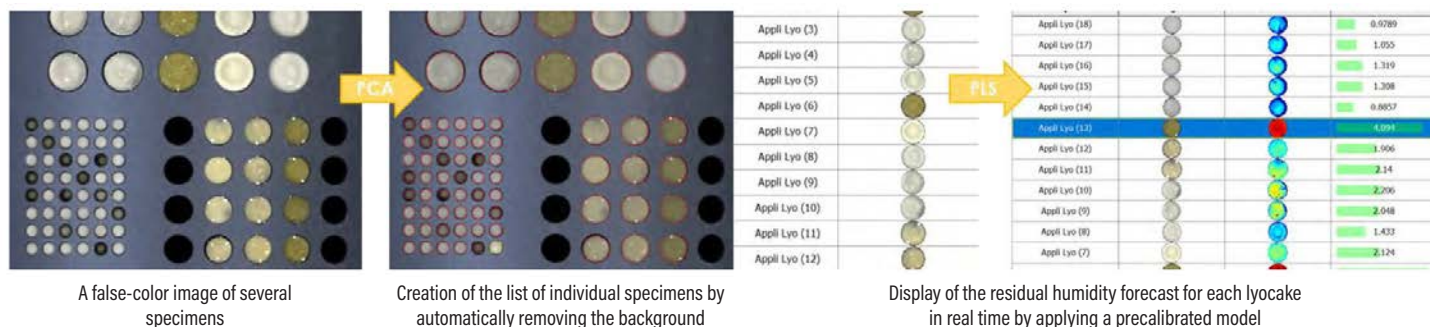
CA INDATECH proposes a unique inspection solution capable of quickly testing a wide variety of lyophilized products via non-contact measurements from below the sample.

HyperReal's technology is the ideal tool for quick, non-destructive testing of lyophilized products. It can be used to:

- Assess the residual humidity content of lyophilized products
- Identify the active pharmaceutical ingredients
- Detect any physical defects in the lyocake, such as cracks or melt
- Check the homogeneity of your lyophilized products

## Example of an industrial application: high-throughput screening of freeze-dried formulations

96 wells filled with a lyophilized product are inspected to determine their residual humidity content. Usually, the R&D department of a pharmaceutical company has to perform Karl Fischer titrations on each well, which takes several weeks. With HypeReal, the result and the report on all 96 wells are ready in just 2 minutes. As well as the residual humidity of each well, you also detect other quality-related data such as the presence of cracks or lyocake shrinkage thanks to the images obtained. In this way, the HypeReal can significantly reduce the time needed for analysis, while offering extra information and simplifying the operator's job.



### Avantages de l'HypeReal

- Accurate inspection and preservation of the specimen (no-contact analysis without toxic reagents)
- A rugged instrument offering excellent repeatability, thus avoiding the need for adjustments
- Customized plates dedicated to the specific specimens with integrated references (different flask sizes)
- Easy-to-use interface for acquiring data, building models and generating reports
- Shorter analysis time ensuring a significant return on investment



Our teams at INDATECH will be delighted to answer your questions by telephone:

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