



# INSTALAB 600<sup>®</sup> NEAR INFRARED REFLECTANCE ANALYZER

**No company has more experience designing and building near infrared (NIR) instruments than DICKEY-john**

**That experience is evident in the unique NIR technology of the Instalab 600 Series. This highly versatile instrument offers simple operation and unmatched reliability at a very affordable cost.**

## Performance and Reliability

Quality in design and construction of the Instalab 600 Series ensures the most reliable NIR results available. The rotating sample cup virtually eliminates the problems associated with sample non-homogeneity – studies indicate up to 3 times better than integrating sphere and other types of data collection technology. Reliability is further enhanced by a reference design that incorporates the entire optical system. An exclusive DICKEY-john feature, Optigain<sup>®</sup>, enables the user to adjust the gain for low-reflectance samples. Another exclusive, thermoelectrically cooled detectors, maximizes both sensitivity and dynamic range.

## Dependability

The Instalab 600 Series is designed and built for trouble-free operation in virtually any environment – from the lab to the production line. The optics chamber is completely sealed and thermally isolated. An integrated, computerized set-test mode continuously monitors instrument performance and pinpoints errors. Calibrations are stored in a non-volatile EEPROM system that doesn't rely on battery backup. Automatic self-test procedures verify correct operation after each sample.

## Flexibility

The unique sampling System makes the Instalab adaptable to nearly any solid or semi-solid substance. Replaceable filters allow the instrument to be adapted – easy and economically – for nearly any substance and any constituents, making the Instalab 600 Series ideally suited for both development work and for dedicated-instrument use. The replaceable filter feature also allows any change in filter configuration developed by a research scanning instrument to be easily implemented in satellite Instalabs for networking.

## Economy

The Instalab 600 Series is competitively priced in relation to other instruments – many of which it significantly outperforms.



## Main Features for Different Products

- **No Oilseeds (wheat, rice, barley...)**
  - Model IL 640: moisture, protein
  - Model IL 670 FM: moisture, protein, ash
  - Model IL 610: moisture, protein, fiber, starch, ash
- **Oilseeds (corn, sunflower, rapeseed, cotton...)**
  - Model IL 660: moisture, protein, starch, low content oil (< 40%)
  - Model IL 670: moisture, protein, high content oil (> 40%)
  - Model IL 610 FG: moisture, protein, oil, starch, fiber, ash
- **Meat and Dairy**
  - Model IL 610 MC: meat, cheese, milky semi-liquids, mayonnaise...



**DICKEY-john<sup>®</sup>**  
CORPORATION

*Revolutionizing Electronics*

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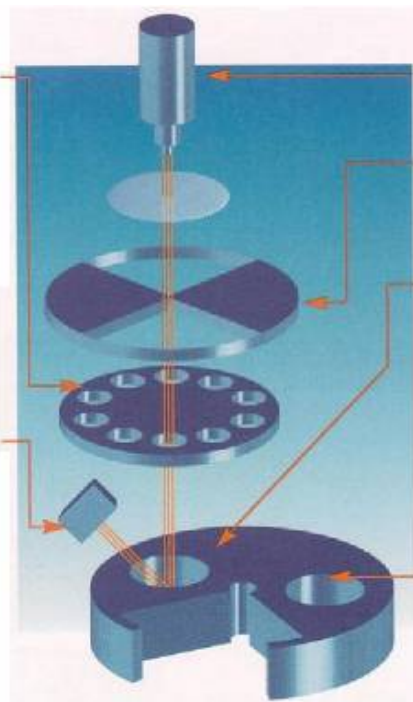


## High Resolution Filters

The Instalab's unique system of 10nm bandpass filters are customer-replaceable, greatly enhancing the flexibility of the instrument replaceable filters speed up calibration while reducing costs and allowing the instrument to be quickly and economically reconfigured.

## Thermoelectrically cooled detector

This exclusive DICKEY-john feature increases both sensitivity and dynamic range. The detector is obliquely mounted to minimize spectral reflectance error.



## IR source

Field-proven, long-life tungsten halogen lamp

## Chopper Disk

Provides an alternating light source to enhance the stability of the reading

## Patented rotating sample cup

The most effective means available for minimizing or eliminating the effects of sample geometry in non-homogeneous samples. The cup rotation is computer controlled, with 120 readings taken at 3" intervals and averaged for each wavelength of incident light.

## Ceramic reference disk

This DICKEY-john design swivels into place when the sample drawer is opened – allowing the reference reading to be taken through the entire optical system.

## Model Specifications

<b>Weight:</b>	29.5 kg
<b>Dimensions</b>	Height: 34.6 cm
	Width: 56.5 cm
	Depth: 41.5 cm
<b>Power Requirements:</b>	102-132 VAC, 57-63 HZ or 187-242 VAC, 47-53 HZ
<b>Wavelengths:</b>	6-10 (customer replaceable)
<b>Storage Capacity:</b>	52 constituent matrix
<b>Serial Computer Interface:</b>	Standard (RS-232-C)
<b>Printer:</b>	Optional
<b>Accuracy:</b>	Exceeds federal specifications for NIR instruments
<b>Sample Integration Technique:</b>	Rotating cup
<b>Filter Bandpass:</b>	10 nm
<b>Light Source:</b>	Tungsten Halogen
<b>Calibration Storage:</b>	Non-volatile EEPROM
<b>Typical Analysis Time:</b>	10 seconds

<b>UL Listed/CSA Certified:</b>	Yes
<b>Detector:</b>	Thermoelectrically cooled lead sulphide
<b>Reference Measurement:</b>	Through entire optical system, against ceramic disk
<b>Gain Setting:</b>	Customer adjustable, using Optigain <sup>®</sup> feature
<b>Diagnostics:</b>	Self-test, automatically after every sample

Your distributor:



DICKEY-john Corporation reserves the right to make changes to dimensions, technical specifications and other information without further notice.

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