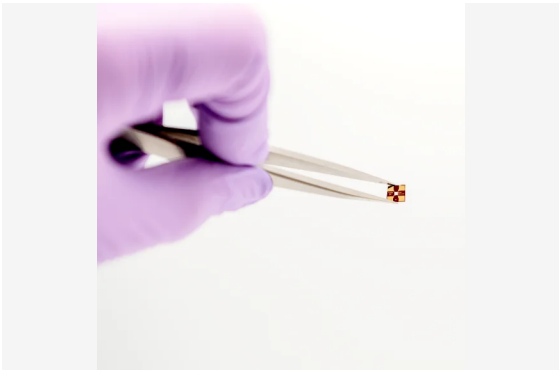


EMILIE™ · CONSUMABLE

EMILIE Light Chip

A reference chip carrying a broadband linear absorber, used to record the FT-IR light-source spectrum.



ROLE IN THE DATA-PROCESSING WORKFLOW

STEP 1

Record the light-source background with the EMILIE Light chip

STEP 2

Record NEMS-FT-IR spectrum of your analyte on a sampling & sensing chip

STEP 3

Divide the analyte spectrum by the light source spectrum from step 1.

STEP 4

Normalize to the SiN peak at 835 cm^{-1} and convert to absorbance units using the EMILIE scaling factor.¹

STEP 5

Process a blank chip the same way (steps 2-4), then subtract it from the analyte spectrum.

¹ For the full procedure see the *Data Processing Guide for NEMS-FT-IR Spectroscopy*, available at invisible-light-labs.com/resources.

FEATURES

- ✖ A specialized linear absorbing material records the FT-IR spectrum of the light source, such as a globar.
- ✖ Essential for post-processing: the sample and blank spectra are divided by this background.
- ✖ Uses dedicated EMILIE-LIGHT-Background pre-settings; the lot number is printed on the bag slip.
- ✖ Distinct from a blank chip, which carries everything but the analyte: the light chip characterizes the instrument, not the sample matrix.

TABLE 1 SPECIFICATIONS

Function	Records the FT-IR light-source background / reference spectrum
Absorber	Broadband linear absorbing material
Role in workflow	Step 1 of the five-step background and blank correction
Chip platform	50 nm SiN
SiN reference absorptance	0.21 ± 0.01 at 835 cm^{-1}
Handling note	Produces large frequency changes; may trigger an Output Range warning during tracking