

# TUMBLIR ACCESSORY FOR THE AGILENT CARY 630 FTIR

The Measure of Confidence

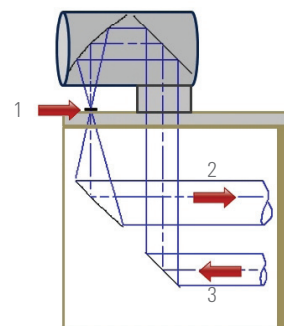


Change the way you analyze liquid samples forever

Imagine never having to use an infrared (IR) transmission cell again. Have you ever wanted to measure liquid samples with the ease of using an ATR — and obtain accurate, quantitative results in seconds? Now you can. Agilent's unique TumbLIR technology will change the way you analyze liquid samples forever.

## How does it work?

The Agilent TumbLIR accessory for the Cary 630 FTIR facilitates FTIR transmission measurements of liquids, without the inconvenience of cumbersome IR transmission cells — no spacers, windows, or syringes are needed. The TumbLIR accessory provides superior sensitivity, accuracy and repeatability, is easy-to-use, and is controlled by the Cary 630 MicroLab pictorial software interface designed to get users up and running in minutes. The TumbLIR is available in a single pathlength, for a specific method. However, you have the option to select from between 30–1000  $\mu\text{m}$  which covers most of the regulatory transmission methods. If more than one pathlength is required, then the DialPath accessory should be used.



### Optical diagram of the TumbLIR accessory

1. Sample position
2. Outgoing IR light
3. Incoming IR light

For more information:  
[www.agilent.com/chem](http://www.agilent.com/chem)



Agilent Technologies

## Features

**Innovative** — unique to Agilent, TumbIR offers a factory-preset pathlength of your choice to measure transmission of liquid samples and polymer thin films in the MidIR region.

- Pathlength options
  - Choice of fixed pathlength between 30–1000  $\mu\text{m}$
  - Pathlength repeatability of  $\pm 0.25 \mu\text{m}$
- Sample types
  - Liquids
  - Polymer films (< 50  $\mu\text{m}$  thick)
- Wavelength range
  - Mid IR region from 5,100–600  $\text{cm}^{-1}$

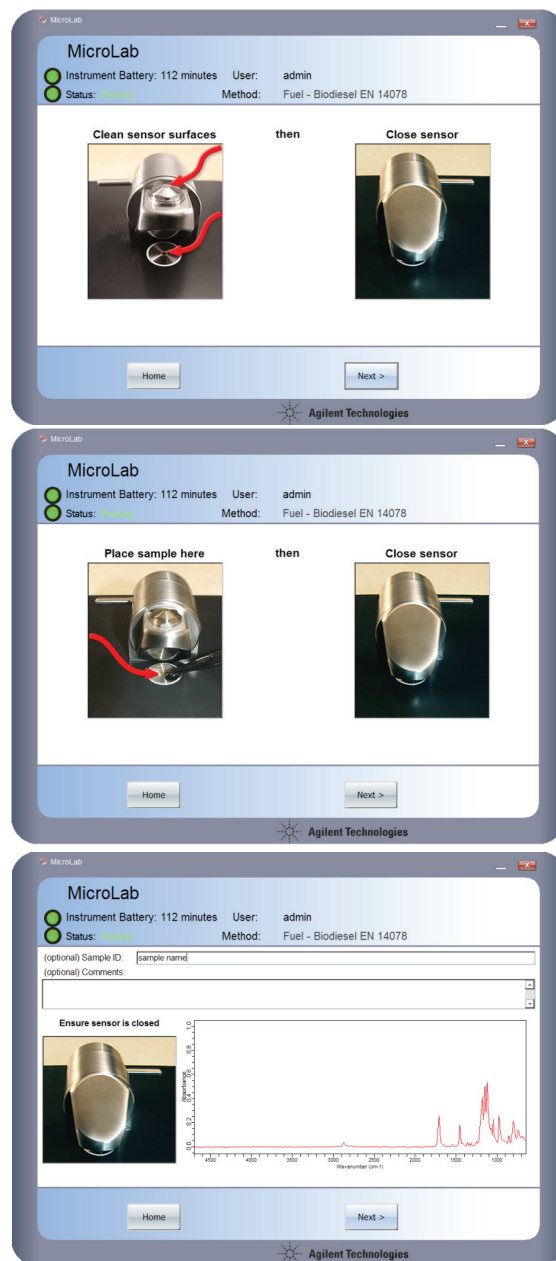
**Intuitive software** — multi-language software guides users through every step of operation, while color coding alerts make it easy to see whether samples meet specification. Includes the versatility to handle both qualitative library matching and quantitative analysis. The software also provides a feedback mechanism to advise when the accessory requires cleaning, ensuring you get the right answers everytime.

**Reliable** — designed originally for out-of-lab use in Agilent mobile FTIR products, the Cary 630 FTIR is the most rugged FTIR on the market today. Using ZnSe windows that are optimized for superior energy throughput, the TumbIR can be used in the most humid and tropical of environments, providing answers you can trust, day-in/day-out.

**Flexible** — Simply rotate the arm on the TumbIR to move to the read position and analyze your sample in seconds. Rotate to the open position, clean with a wipe of a cloth, and you are ready for your next measurement. Because alignment is preset at the factory, no other adjustment is required.

**Compact** — takes up only 9 x 10 cm of bench space, and weighs just 1.4 kg (3 lb).

Step-by-step instructions guide users, making operation and interpreting the results easy and reliable



Using the TumbIR to measure thin polymer films eliminates the need to mount samples on a card. This allows you to see exactly where in the sample you are measuring as well as eliminating fringe patterns on the film. DialPath shown here.

## How can the TumbIIR help me?

If you measure liquid samples, you are most likely using a conventional transmission IR cell or ATR. Assembling conventional cells and transferring liquid samples to them can be cumbersome, time consuming, and frustrating if air bubbles get into your sample or blockages or leaks occur and you have to start again. By comparison, the TumbIIR is simple, fast and error free — making analysis as easy as 1-2-3. No more assembly of IR cells and no more air-bubbles — simply turn the TumbIIR mechanism and measure your sample. It really is that simple.

## When do I use the TumbIIR instead of a DialPath?

The difference between these two accessories is the number of pathlength options available. The DialPath provides the flexibility of up to three preset pathlengths and is suitable for method development and research. The TumbIIR has one pathlength and is best suited to routine applications where rapid analysis of both highly viscous and volatile liquids is required. Typical applications include oil and fuel analysis, where established methods require a single pathlength for analysis.



## Three steps to analysis with the TumbIIR

**1** Ensure the crystal is clean



**2** Place your sample on the window



**3** Turn the TumbIIR to analyze



For more information:  
**[www.agilent.com/chem](http://www.agilent.com/chem)**

Agilent Products are for Research Use Only.  
Not for use in diagnostic procedures.  
Information, descriptions and specifications in this  
publication are subject to change without notice.

© Agilent Technologies, Inc. 2013  
Published in USA, April 1, 2013  
5991-2202EN

The Measure of Confidence



**Agilent Technologies**