

Laboratory Services

April 19, 2001

FTÅ provides for-fee measurement services on customer samples for interfacial tension, contact angle, absorption, and surface energy. This work is performed using FTÅ equipment at the facility in Portsmouth, Virginia. A customer representative can witness the measurements, if desired, at no additional cost. A short written report is furnished with all measurements to summarize the results and explain how the measurements were made. All samples are returned to the customer along with the report.

All work is performed on a "best efforts" time-and-material basis. This means that as many measurements as possible will be performed within the allocated block of time. The customer chooses the level of effort, and hence the cost, in advance. This note will give some guidance as to what to expect, but it is best to consult with FTÅ personnel about the specifics of the samples beforehand. Any measurement that can be made on FTÅ equipment is available on a for-fee basis, but the setup time will vary significantly depending on the nature of the sample. No hazardous samples can be handled at the Portsmouth facility.

1. The minimum length of time is 4 hours or a half-day. Service is available for any length of time in multiples of half-days.
2. Controlled-environment measurements, such as heated chambers, relative humidity control, or liquid-liquid measurements take two to three times as long as measurements in room air.
3. Contact angle or surface tension measurements can be made on two or three simple samples in a half-day. However, once the instrument is setup, a much larger number can be handled per hour, so 10 to 20 might be done in a full day.
4. Lewis acid-base measurements require three separate test fluids and are therefore three times as long as simple single-fluid contact angle measurements.
5. Liquid-liquid interfacial tension measurements require mutual saturation of the fluids, and then can add substantially to the time required.
6. Contact angle measurements require about a square centimeter of surface per drop or per liquid. Surface and interfacial tension measurements require 100-500µl of fluid.
7. Large samples may have to be cut down to fit on the stage, so consult FTÅ marketing if you do not wish to have the sample cut.
8. Normal turn-around is one week after receiving the samples.