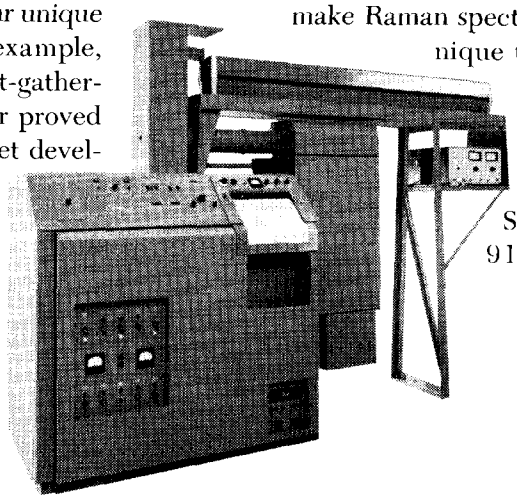
But in no way does Raman replace your IR equipment. On the contrary, our CARY 81 Raman Spectrophotometer with laser source gives you a whole new spectrum of molecular information. It simply illuminates areas IR instruments can't. Symmetrical vibrations of molecules, for example, are easily and conveniently observed; and depolarization measurements aid in band assignments.

This sounds as if the laser itself has finally made Raman spectroscopy a convenient and dependable analytical approach. This is partly true; it greatly reduces fluorescence problems. But even with a laser source, the Raman effect is notoriously weak. Success in measuring this effect still hinges on the monochromator, and, to some degree, on our unique image-slicer. With the 81, for example, we weren't satisfied until the light-gathering power of the monochromator proved 15 times greater than anything yet developed. Then and only then were we able to examine many samples which are difficult to excite. Some were as small as one μl and included both strongly colored materials and aqueous solutions.

The laser, of course, does offer the important advantage of being a flexible source. With the 81, you can excite a sample from *two* points of view. A right-angle view simplifies polarization studies and also lets you observe low frequency modes, down to 20 cm^{-1} (e.g., lattice and torsional vibrations and rotational transitions). Or, you can easily direct the laser beam down the center of the capillary sample tube. This coaxial view (unique with the 81), has high sampling efficiency, and allows you to study weak bands in detail and make fast routine scans.

Together, the laser and the CARY monochromator make Raman spectroscopy an essential research technique that can no longer be overlooked.



Find out how the CARY 81 lets you fully exploit the advantages of Raman. Write CARY Instruments, a Varian Subsidiary, 2724 S. Peck Road, Monrovia, California 91016. Ask for Data File A701-18

CARY® 81

Infrared has blind spots that only Raman can see

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