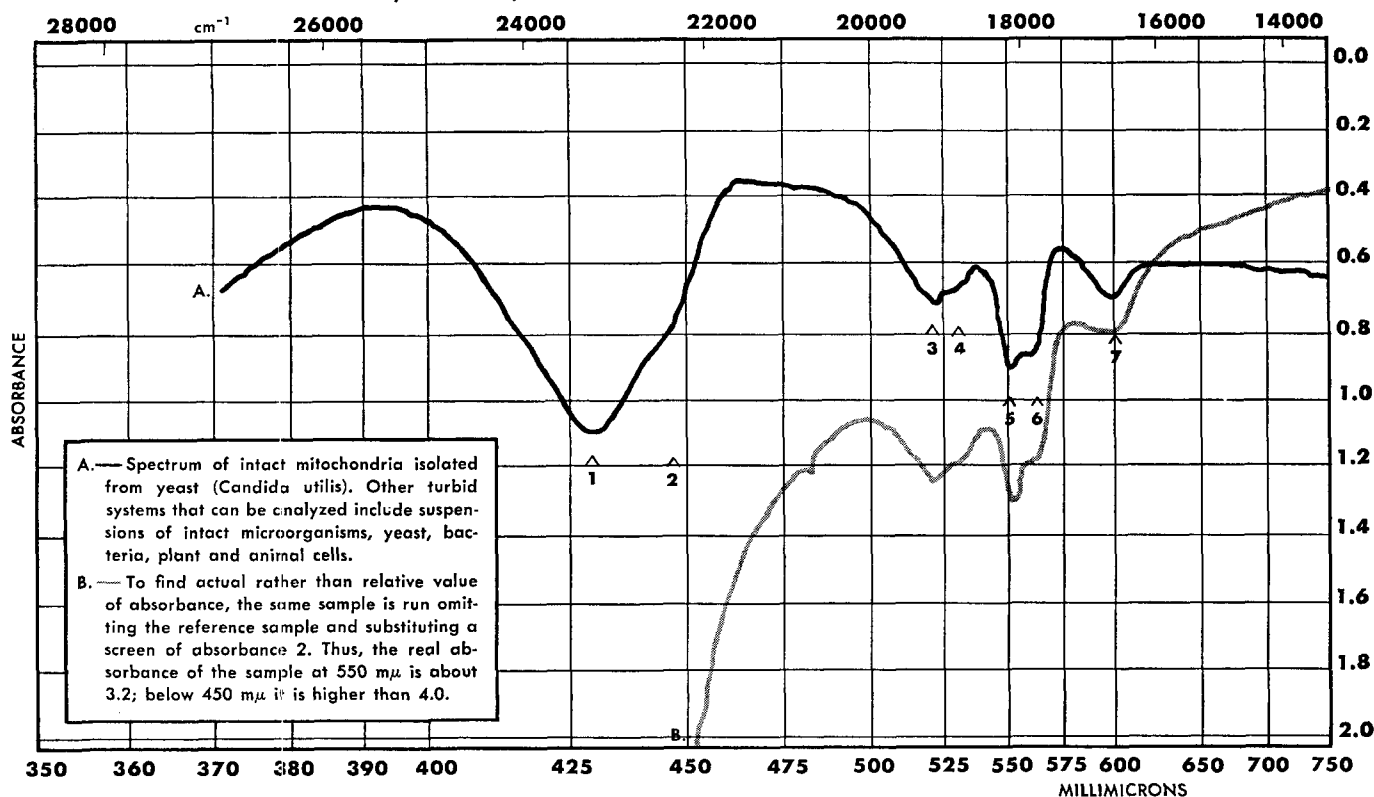


1. Cytochrome b, γ peak. 2. Cytochrome oxidase, γ peak. 3. Cytochrome c, β peak. 4. Cytochrome b, β peak.
5. Cytochrome c, α peak. 6. Cytochrome b, α peak. 7. Cytochrome oxidase, α peak.



HOW CAN YOU RECORD AN ABSORPTION SPECTRUM, IF YOU CAN'T SEE THROUGH THE SAMPLE?

Use a Model 450.

For most spectrometers the obstacles would be just too great—but not for the Perkin-Elmer Model 450. This UV-VIS-NIR spectro-photometer gives you good performance under conditions of extremely low energy caused by drastic light scattering or high sample absorption. Compare it with others. Try a turbid suspension of yeast mitochondria, as we do here, or a suspension of diatomaceous earth. We've obtained useful readings when more than 99.99% of the energy was absorbed or scattered by the

sample.

The Model 450 gives you high-precision measurements over the widest range of samples and wavelengths. You get accurate absorbance readings even at the short wavelengths of the UV spectrum, thanks to efficient UV transmitting optics, UV-sensitive photomultipliers and a sealed optical system that can be purged with nitrogen. Accuracy is on the order of ± 0.003 to ± 0.005 absorbance units, and reproducibility is within 0.002 absorbance units in the basic 450 photometric system. As an exclusive, we offer an ordinate scale which is expandable by increments up to 50X for high-precision readings.

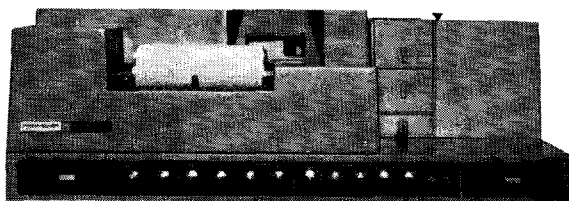
In any single wavelength range, the instrument's speed is unexcelled. You can scan the whole UV region in one minute, the VIS region in half that time. Pen response is 0.3 seconds full scale. Runback is at maximum forward speed, and you can quickly re-run a scan on the drum recorder—something it isn't easy to do with a strip chart recorder.

In the near IR, the standard Model 450 irradiates the sample with monochromatic light, unlike other instruments using undispersed IR which heats the sample causing re-emission and transmittance errors.

The instrument is especially good for the low-concentration differential analyses of analytical chemistry. Sample requirements are such that work with as little as 40 microliter samples is routine. A wide variety of accessories converts the Model 450 for fluorimetry, polarimetry, colorimetry, flame photometry, sample temperature control, recording of absorbance as a function of time and other options.

Here is a dependable, high-performance instrument that keeps on working under the most difficult conditions. Try your toughest spectroscopic problems on our P-E Model 450. We'll be glad to arrange a demonstration. For technical details, write for our brochure. Instrument Division, Perkin-Elmer Corporation, 702 Main Avenue, Norwalk, Conn. 06852.

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