

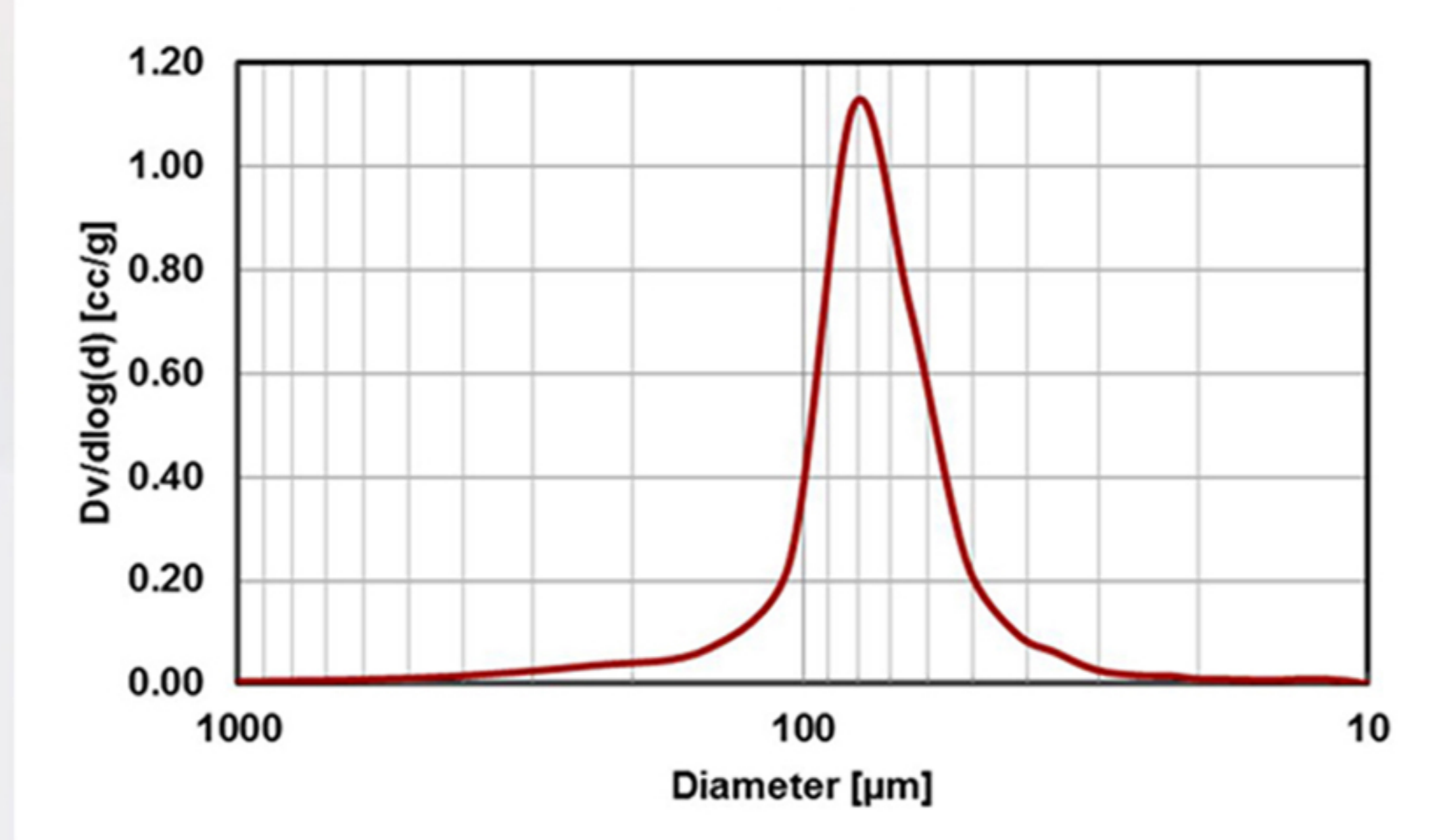


FTIR



Fourier-transform infrared spectroscopy (FTIR) is a technique used to obtain an infrared spectrum of absorption or emission of a solid, liquid, or gas. An FTIR spectrometer simultaneously collects high-resolution spectral data over a wide spectral range. This confers a significant advantage over a dispersive spectrometer, which measures intensity over a narrow range of wavelengths at a time. The term Fourier-transform infrared spectroscopy originates from the fact that a Fourier transform (a mathematical process) is required to convert the raw data into the actual spectrum.

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BJH

(BJH) technique, is to determine the range of pore sizes within a material and their respective volumes. This information is crucial for understanding the material's properties, such as its porosity, permeability, and surface area, which are important in various applications like catalysis, adsorption, and filtration. The test involves measuring the amount of gas adsorbed or desorbed at different pressures, which allows for the calculation of pore size distribution using mathematical models.

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EDX



Energy dispersive X-Ray (EDX) composition analysis, elemental mapping of a sample and image analysis supporting industrial investigational studies and chemical research.

energy Dispersive X-Ray Analysis, also referred to as EDS or EDAX, is an X-Ray technique used to identify the elemental composition of materials. Applications include materials and product research, troubleshooting, deformation, and more.

Intertek EDX analysis applications:

- Product deformation and competitor analysis
- Adhesion, bonding, delamination investigations
- Optical appearance, haze, and color problems
- Disputed claim investigations and expert witness
- Failure investigations, identification of cause

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BET



The BET theory (abbreviated from Brunner-Emmett-Teller theory) is used to measure the surface area of solid or porous materials. It gives important information on their physical structure as the area of a material's surface affects how that solid will interact with its environment. Many properties such as dissolution rates, catalytic activity, moisture retention, and shelf life are often correlated to a material's surface area. Critical to the design and manufacture of solids, surface area analysis is one of the most widely used methods in material characterization. There are many applications in industry like ceramics and pharmaceuticals and many other uses.

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