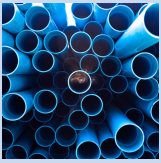

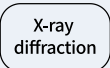

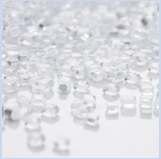




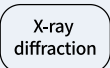

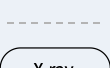


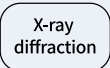



Field/Category	Technology	Product name/ Series name	Function/Role
  Film	 X-ray diffraction	SmartLab, MiniFlex	Measuring with X-ray fluorescence spectrometry enables non-destructive evaluation of characteristics of polymer film such as mechanical strength and transparency.
	 Thermal analysis	TG-DTA, DSC series	Thermal analyzers can be used to survey the thermal characteristics (melting point, rate of expansion) of polymers and analyze their gas emissions. They play a role in determining appropriate conditions for use of polymers and methods for their disposal.
  Resin	 CT	Nano3DX, CT Lab series	The range of applications of plastics is expanding, for purposes such as reinforcement and weight reduction. XCT is used for applications such as observing the condition of reinforcing fibers in plastics and quantitative evaluation of internal gaps. By improving quality while increasing production efficiency and reducing costs, XCT contributes greatly to the goal of producing good products cheaper.
  Ceramics	 X-ray diffraction	SmartLab, MiniFlex, MiniFlex XpC	Accurately assessing characteristics of cement such as curing time and strength requires analysis of high precision and accuracy. Quantitative analysis using X-ray fluorescence spectrometry is finding increasing favor in cement research and quality control for its simplicity and quick results.
	 X-ray Fluorescence	ZSX Primus series, Supermini200, NEX series	The composition of ceramics is stringently controlled to ensure that their characteristics match their intended applications. X-ray fluorescence spectrometry is used in quality control as it enables solids to be analyzed as they are.
	 Thermal analysis	DTA8611	Ceramic parts are fired at extremely high temperatures. High-quality ceramics require binders that burn off efficiently during firing. Thermal analyzers play a role in simulating complex manufacturing processes.
  Metal	 X-ray diffraction	SmartLab, MiniFlex	When developing metal-based materials, obtaining metal-based materials that deliver the target characteristics requires evaluation under a wide range of temperatures and atmospheric conditions. X-ray fluorescence spectrometry enables crystal phase changes to be observed in detail during heating under special atmospheres such as hydrogen, ammonia and steam.
	 X-ray Fluorescence	ZSX Primus series, Supermini200, Simultix 15, NEX series	Control of electroplating deposition and metal composition is vital in preserving product functionality. X-ray fluorescence spectrometry is widely used in metal manufacturing industries for its ability to measure specimens as they are.

Field/Category	Technology	Product name/ Series name	Function/Role
  Metal	 X-ray Fluorescence	Niton series	<p>Metal recycling has grown increasingly active in recent years as companies strive to make effective use of limited resources. Handheld X-ray fluorescence spectrometry devices can be used to inspect the elements in recycled products on the spot.</p>
	 Thermal analysis	TG-DTA, TMA, Evolved Gas Analysis series	<p>Thermal analyzers can be used to survey the thermal characteristics of metals including transformation points, melting points and rates of expansion. Metals are used in a wide range of environments, so information on their thermal characteristics is vital for selecting the right metals for a particular application or use environment.</p>
  Ore	 X-ray diffraction	SmartLab, MiniFlex, MiniFlex XpC	<p>In research on the evolution of planets and the structure of the Earth, the composition and molecular structure of rocks and minerals are routinely analyzed. X-ray fluorescence spectrometry, enables examination of the components of mineral facies and their composition.</p>
	 Thermal analysis	TG-DTA/GC-MS	<p>Cement made from minerals requires precise changes in weight in order to examine quality. In addition to thermal characteristics obtained using TG-DTA, when combined with GCMS, thermal analysis can be used to measure CO2 volumes, which are vital for environmental measures.</p>
  Food	 X-ray diffraction	SmartLab, MiniFlex	<p>The flavor and texture of butter change dramatically with temperature. Accordingly, producers pay close attention to the crystallization of fats and oils to maintain favorable product quality. X-ray fluorescence spectrometry and differential scanning calorimetry (DSC) enable surveying of characteristics of butter such as crystalline structure and melting point.</p>
	 Thermal analysis	TG-DTA, DSC series	<p>Thermal analyzers measure foods in many ways, helping to determine the melting point of chocolate and the softness of chewing gum, for example. They also play a role in evaluating features such as ideal storage conditions and the “melt-in-the-mouth” feeling of foods.</p>
	 CT	Nano3DX, CT Lab series	<p>Expressing flavor, texture and so on in numbers is no simple matter. XCT expresses numerically such features as content by percentage, homogeneity and the number and size of bubbles, delivering good taste experience through high-level quality control.</p>
  safe and secure	 Handheld Raman	CQL ID series	<p>The handheld Raman spectrometer is used in the security field, including law enforcement, customs and defense, to guard against the threat of terrorism that is growing worldwide. Chemical weapons, explosives and their precursors can be detected while still in their containers, enabling on-the-spot threat assessment.</p>
	 Handheld Raman	CQL ID series	<p>Handheld Raman spectrometers are used in fields such as customs and drug interdiction to identify stimulants, narcotics and other illegal drugs. These devices can detect substances through their containers in a non-destructive manner, allaying concerns about destroying evidence.</p>