



X-ray Photoelectron Spectrometer (XPS)

Make: Thermo Scientific

Model: K-Alpha-KAN9954133

XPS is a powerful technique to determine the quantitative elemental composition of sample surfaces. XPS measures the kinetic energy of photoelectrons ejected from the valence shell, from which the binding energy that is specific to each element is obtained, and the elemental composition of the sample can be revealed. The incident X-ray penetrates the top around 10 nm of the surface layer, XPS can probe the surface ligand structure regardless of the size of the particles. Since it has monochromatic X-ray with small-spot system it is capable of depth profiling and elemental mapping. XPS is routinely used to analyze inorganic compounds, metal alloys, semiconductors, polymers, elements, catalysts, glasses, ceramics, paints, papers, inks, woods, plant parts, make-up, teeth, bones, medical implants, bio-materials, coatings, viscous oils, glues, ion-modified materials and many others.

Essential Specifications:

Analyzer: 180° double focusing hemispherical analyzer with 128-channel detector

X-ray source: Al- K α micro-focused monochromator with variable spot size

Ion Gun: Energy range 100-4000 eV

Charge Compensation: Dual beam source

Sample Size: 4-axis sample stage, 60 x 60 mm sample area, and 20 mm maximum sample thickness