

Sammenlikning EDS - WDS

WDS	EDS
en bølgelende pr. krystall	hele spektret samtidig
høy oppløsning ($\approx 10\text{eV}$)	middels oppløsning ($\approx 140\text{eV}$)
høy tellehastighet $50 \times 10^3 \text{ s}^{-1}$	$5 \times 10^3 \text{ s}^{-1}$
topp/bakgrunn 1000	100
følsomhet 20-200 ppm	500-5000ppm
godt egnet til "røntgenbilder"	egnet for identifisering av faser hvis konsentrasjon >0,5-1%
$Z \geq 5$	$Z \geq 11$ ($Z \geq 5$ vindusløs detektor)

Comparison of EDS and WDS (complementary each others)

WDS	EDS
measures a single wavelength at a time	measures the entire spectrum simultaneously fast data acquisition
high resolution (crystal-dependent, 5 eV best)	medium resolution (energy-dependent, 125eV at 5.9keV)
higher count rate capability $50 \times 10^3 \text{ s}^{-1}$	$5 \times 10^3 \text{ s}^{-1}$
higher peak-to-background ratio 1000	100
detection limitation 20-200ppm	500 - 5000 ppm
accurate quantitative analysis	comparable to concentration >0.5- 1%, limit to peak overlap etc.
$Z \geq 5$	$Z \geq 11$ ($Z \geq 5$ windowless detector)