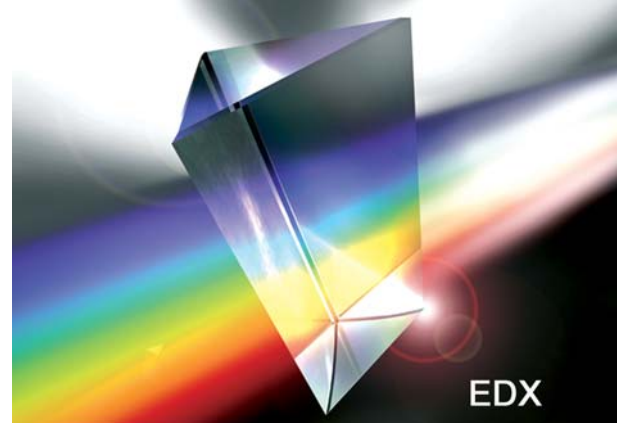


Application Note

Analysis of Pharmaceutical Products



Description

In this application note, the EDX-700/800 is applied towards analysis of a cold tablet. In this report, the range of elements that can be identified and quantified is shown. In addition, the repeatability of this procedure is shown by measuring a tablet a number of times.

Sample Preparation

With the EDX-700/800, there is no need for sample preparation. The tablet is simply placed on commercially available sample holders. This is shown below in Figure. 1.



Fig. 1. Analysis of a Pharmaceutical Product Often Requires no Sample Preparation

Application Data

The following are two spectrum acquired by the EDX 800.

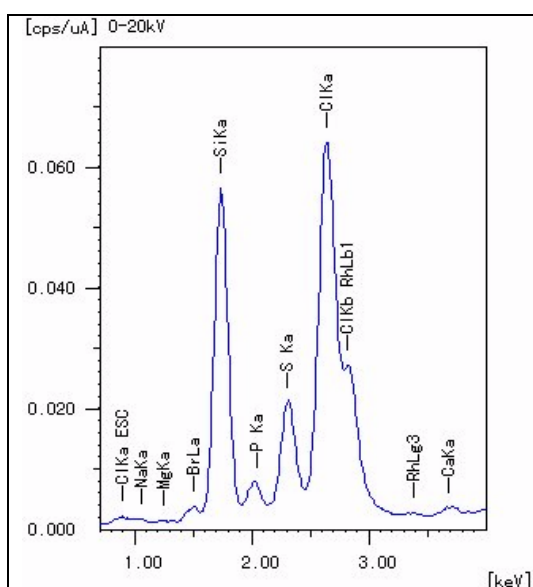


Fig. 2. Spectrum of Na through Ca

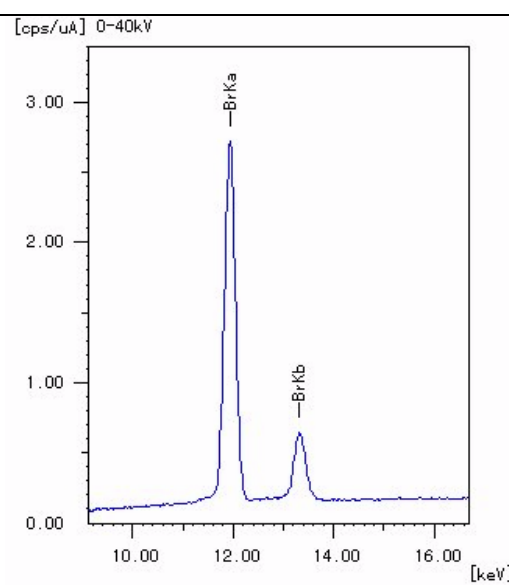


Fig. 3. Spectrum of Br.

Quantitative Results

The data in Table1, shows the quantitative results of the Cold Tablet, by standardless analysis.

Table 1 Quantitative Value of Pharmaceuticals by FP Method

	<i>Si</i>	<i>Cl</i>	<i>Na</i>	<i>Br</i>	<i>S</i>	<i>Mg</i>	<i>P</i>	<i>Ca</i>	<i>C₈H₉NO₂</i>
Measured Value (%)	0.98	0.46	0.12	0.10	0.079	0.035	0.026	0.011	98.19

Precision Results

The elements in the tablet were measured for repeatability. This provides the analyst with the precision they will expect to obtain once using the EDX 700/800 in their analytical laboratory.

Table 2 Repeatability of Quantitative Value(%)

	<i>Cl</i>	<i>Br</i>
Average(%)	0.464	0.103
Standard Deviation(%)	0.0070	0.00063
Coefficient of Variation(%)	1.5	0.61

Measuring Conditions

Instrument : EDX-800	Power : 15 - 50 kV at 15 - 200 μ A
X-ray Tube : Rh	Dead Time : 25 %
Filter : None	Measurement Diameter : 10 mm
Atmosphere : Vacuum	Measurement Time : 100 Seconds

The given specifications serve purely as technical information for the user.
No guarantee is given on technical specification of the described product and/or procedures.