Desktop XRF Mineral analyzer （light elements）

DW-EDX3600H

The high- performance desktop XRF geology and mining analyzer DW-EDX 3600H, is equipped with globally advanced analysis technology, intelligent vacuum system and developed electronic technology. Combined with low-energy tube, vacuum system and low background technology. It efficiently reduces testing interference, and improves energy resolution of Mg, Al, Si. P and other light elements in geology and minerals.

Specialized in Mineral Elements and Grade Testing

- DW-EDX3600H Mining Analyzer is specially designed for geology and mining industries
- High precision, fast testing speed and easy operation, etc
- Bear several testing analysis modes, including alloy, soil, precious , and RoHS.
- Testing samples includes minerals, slag, rocks, etc.
- Analytical content is from Na to U.
- Testing samples can be solids, liquids, and powders

Advantages

- Highly efficient super-thin window x-ray light tube, which is specially developed for mineral testing, reaches the international advanced level.
- Silicon Drift Detector (SDD), provides better energy linearity, resolution, spectrum characteristics and higher peak/base ratio.
- Built-in CMOS HD camera.
- Automatic switch of collimator and filter according to different samples, eliminating the troublesome manual operation.
- Triple x-ray protection design

  (1 Machanical protection: segregate x-ray

  (2 Electronical protection: Automatic shut-down of x-ray when opening the cover during testing

  (3 Software protection: Automatic shut-down of software program when opening the cover during testing
- LCD screen directly shows the important parametersTube voltage, tube current and vacuum degree
- 2L vacuum pump

Parameters

Measurable range	**Na toU**
Analytical range	**ppm—99.99% (different materials, with different analytical range)**
Simultaneous analysis	**Testing tens of elements simultaneously**
Precision	**0.05% (content 96% t)**
Testing time	**60s-200s**
Resolution	**(140±5)eV**
Tube voltage	**5KV-50KV**
Tube current	**50 y A-1000 p A**
Sample chamber size	**320mmx100mm**
Ambient temperature	**15°C-30°C**
Ambient humidity	**35%-70%**
Voltage input	**AC 220V (Optional: 110V)**
Power	**200W**
Instrument dimension	**660mmx510mmx350mm**
Weight	**65Kg**

Standard Configuration

-Highly efficient super-thin window x-ray light tube

-High-performance electronic cooling UHRD detector

-Signal-to-Noise Enhancer

-CMOS HD camera

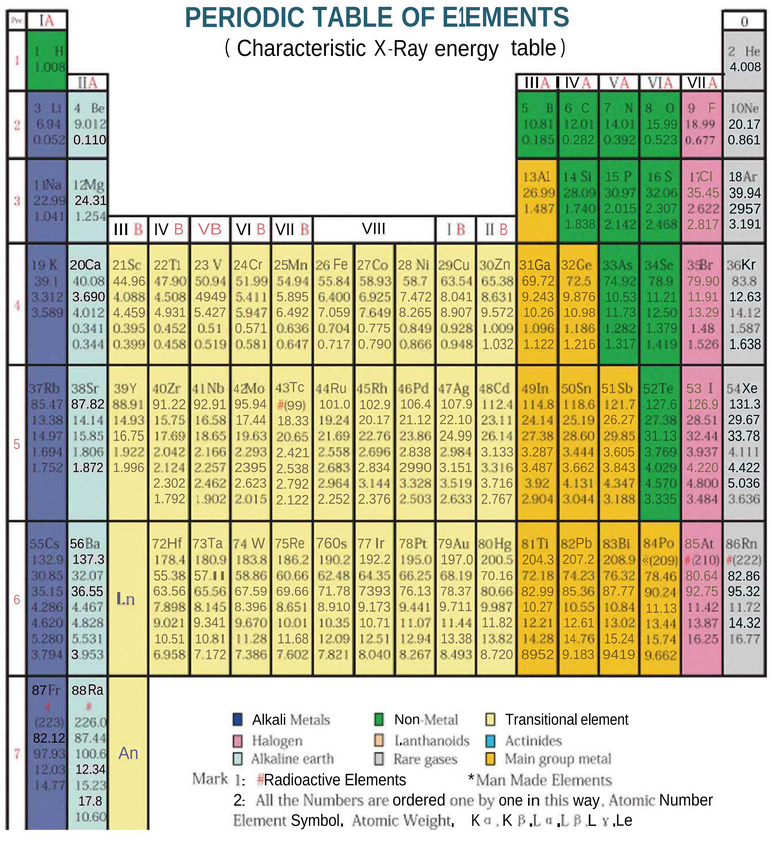
-Collimator and filter

-Triple safety protection mode

-90mmx70mm LCD

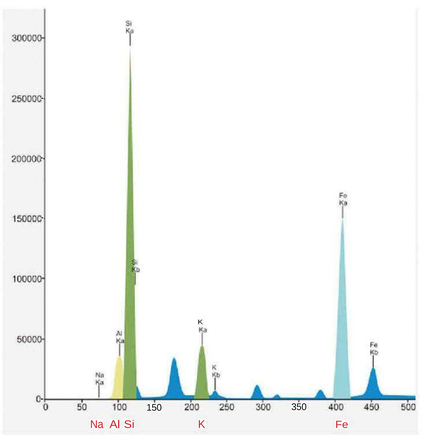
-Vacuum Pump

Periodic Table of Elements



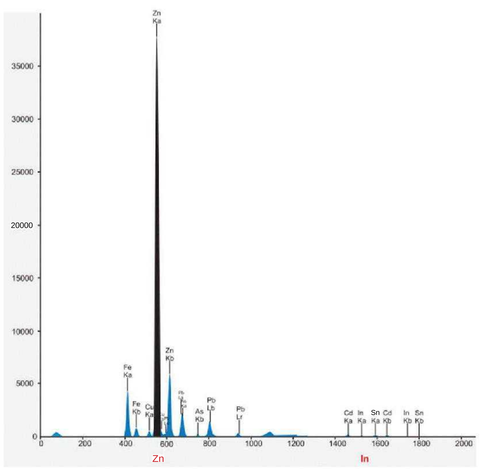
Application Cases

Case 1 -- Caolin



Name	Na2O	Al2O3	SiO2	Fe2O3	K2O
Kaolin-1	0.4775	16.3222	74.6662	4.8268	3.4161
Kaolin-2	0.5892	16.5028	74.6302	4.8413	3.4483
Kaolin-3	0.4711	16.4921	74.6794	4.8281	3.4532
Kaolin-4	0.5814	16.4986	74.6796	4.8460	3.4570
Kaolin-5	0.5375	16.4457	74.6653	4.8253	3.4422
Kaolin-6	0.5425	16.4979	74.6883	4.8258	3.4540
Kaolin-7	0.5494	16.4726	74.6485	4.8116	3.4443
Kaolin-8	0.4972	16.4997	74.7446	4.8327	3.4443
Kaolin-9	0.5439	16.5299	74.6029	4.8235	3.4394
Kaolin-10	0.4972	16.4562	74.6771	4.8126	3.4386
Kaolin-11	0.5773	16.5287	74.7196	4.8233	3.4478
Average value	0.5331	16.4769	74.6729	4.8270	3.4441
Range	0.1181	0.2076	0.1416	0.0343	0.0409
Standard deviation	0.0418	0.0576	0.0388	0.0104	0.0110
Relative standard deviation	7.8326	0.3495	0.0520	0.2147	0.3207

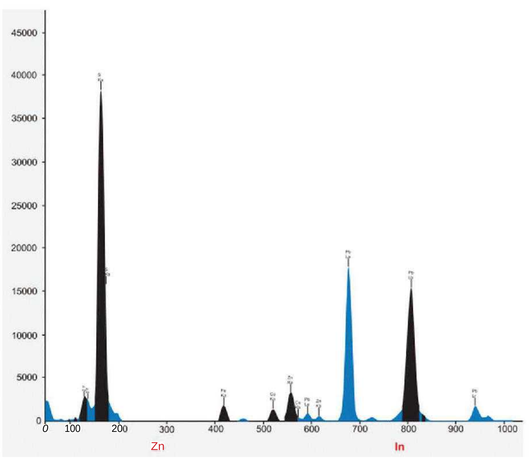
Case 2 -- Zinc concentrate



Zinc Concentrate Testing Results and Repeatability

Name	In	Zn
Zn Mineral 1	0.1662	45.7814
Zn Mineral 2	0.1814	45.6665
Zn Mineral 3	0.1681	45.7325
Zn Mineral 4	0.1843	45.7121
Zn Mineral 5	0.17	45.7047
Zn Mineral 6	0.174	45.5882
Zn Mineral 7	0.1866	45.5271
Zn Mineral 8	0.1882	45.6769
Zn Mineral 9	0.1857	45.6586
Zn Mineral 10	0.1804	45.6416
Zn Mineral 11	0.1808	45.7063
Average value	0.1787	45.6724
Standard deviation	0.0078	0.0698
Relative standard deviation	4.3849	0.1527

Case 3 -- Lead concentrate



Repeatability

Name	Pb	Zn	Cu	Fe	Ca	Si	S	Mg	Al
1	53.62	5.05	3.56	10.11	1.19	3.98	14.16	0.28	0.27
2	53.45	4.95	3.48	9.91	1.28	3.37	15.30	0.32	0.26
3	53.32	5.15	3.49	9.89	1.32	3.54	15.23	0.20	0.26
4	53.84	5.13	3.29	9.94	1.26	3.46	14.98	0.35	0.24
5	53.42	5.07	3.88	9.69	1.25	3.37	15.36	0.61	0.25
6	53.79	5.09	3.46	10.10	1.24	4.12	15.48	0.29	0.28
7	53.23	5.04	3.48	9.97	1.28	3.84	14.98	0.44	0.26
8	53.31	5.06	3.64	9.66	1.19	3.21	14.65	0.52	0.24
9	53.80	5.13	3.54	9.76	1.34	3.94	14.32	0.42	0.27
10	53.19	5.01	3.31	9.82	1.27	4.16	15.04	0.37	0.26
11	52.86	5.34	3.67	9.24	1.60	3.72	14.16	0.43	0.29
Average value	53.44	5.09	3.53	9.83	1.29	3.70	14.88	0.38	0.26
Standard deviation	0.30	0.10	0.17	0.24	0.11	0.33	0.48	0.12	0.02
Relative standard deviation	0.57	1.96	4.68	2.48	8.64	8.90	3.25	30.37	5.87