

Fischerscope X-RAY XAN 500

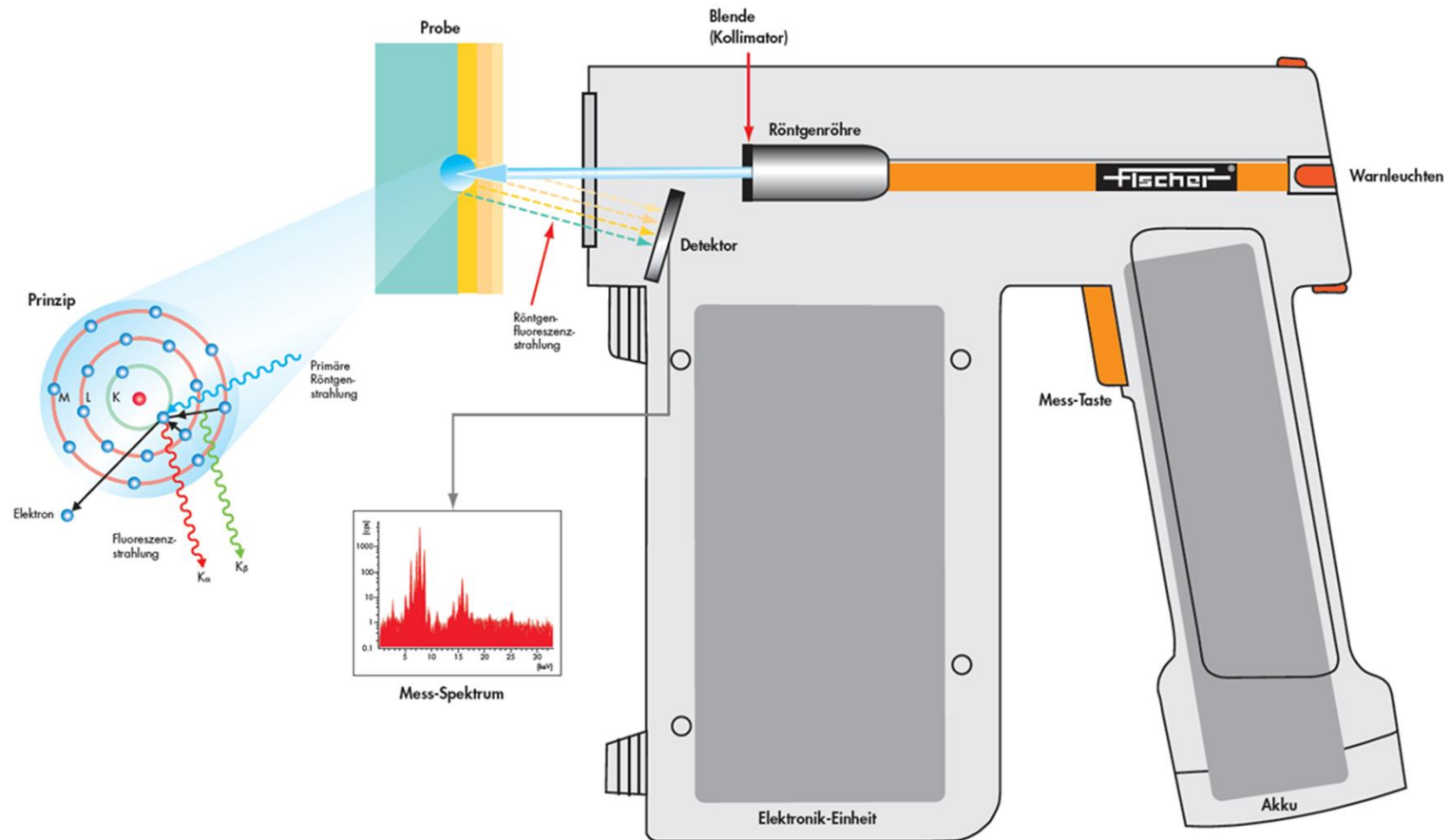
Applications

- General
 - Mobile
 - Stationary (with measurement box)
 - Inline due to small dimensions
- Large coated parts like machine components and housings
- Analysis of precious metals
- Electroplating industry: Thickness of coatings, composition of coatings, composition of base material, solution analysis of baths.
 - Example: ZnNi/Fe with simultaneous thickness and composition measurement



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Measurement Principle



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Features

- Robust housing (IP54): suitable for rough environments
- Mini X-Ray tube 40 kV, 3 mm aperture, SDD
- Software WinFTM wit full functionality
 - Possibility of standard-free measurements (without calibration)
 - works with Windows 7,8, 8.1 and 10
- User safety: security switch, flashings LED's when shutter open
- Tilting protection with three point support: less measurement errors
- Measuring head very close to sample: High precision with short measuring time!



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Measurements of gold alloys on brass

- Application/material system: AuCu/CuZn
- Simultaneous determination of:
 - Coating thickness of the red gold coating
 - Composition of the red gold alloy
 - Composition of the base material

t = 5 x 30s	Rotgoldschicht						Grundwerkstoff Messing			
	d [μm]	RSD d [%]	c(Au) [%]	RSD d [%]	c(Cu) [%]	RSD d [%]	c(Cu) [%]	RSD d [%]	c(Zn) [%]	RSD d [%]
Sollwerte	6,7	-	76	-	24	-	63	-	37	-
Standardfrei	7,3	0,7	75,8	0,1	24,2	0,4	65,8	1,0	34,2	1,9
Kalibriert	6,7	1,9	75,8	0,3	24,2	0,8	62,9	1,6	37,1	2,7

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Analysis of gold alloys

Comparison of standard-free and calibrated measurements of jewellery alloys

Jewellery alloy			Standard free, 5 measurements, 30s			calibrated, 5 measurements, 30s		
sample	Element	cert. value	c [%]	Δc [%]	RSD [%]	c [%]	Δc [%]	RSD [%]
CBUAX	Au	32,83	32,72	-0,11	0,21	32,88	0,05	0,22
	Ag	12,22	13,21	0,99	0,19	12,12	-0,1	0,63
	Cu	38,70	38,62	-0,08	0,22	38,77	0,07	0,1
	Zn	16,25	15,55	-0,7	0,32	16,26	0,01	0,21
ADZBN	Au	57,99	56,71	-1,28	0,19	58,06	0,07	0,1
	Ag	29,81	31,47	1,66	0,33	29,67	-0,14	0,11
	Cu	12,20	11,96	-0,24	0,36	12,27	0,07	0,48
	Zn							
ADMLJ	Au	58,00	57,7	-0,3	0,14	57,97	-0,03	0,1
	Ag	4,98	5,51	0,53	0,21	4,96	-0,02	0,55
	Cu	37,02	36,81	-0,21	0,22	37,08	0,06	0,1
	Zn							
ADKVS	Au	74,59	74,29	-0,3	0,05	74,58	-0,01	0,11
	Ag	4,97	5,42	0,45	0,32	4,95	-0,02	0,81
	Cu	20,44	20,29	-0,15	0,16	20,47	0,03	0,34
	Zn							
ADPT	Au	75,10	74,9	-0,2	0,05	75,18	0,08	0,09
	Ag	5,00	5,49	0,49	0,57	5	0	0,35
	Cu	9,87	9,94	0,07	0,58	9,83	-0,04	0,38
	Zn	10,03	9,6	-0,43	0,38	10,04	0,01	0,27



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Key points

- Versatile applications
- Mobile bench-top device with measurement box
- High precision even at short measuring time
- Safe to use
- Calibration allows for true and traceable results

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Thank you for your attention !

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