



SECURITY FEATURES OF POLISH CIRCULATION BANKNOTES (and not only)

dr inż. Mateusz Kowalcze SJ

FORENSIC LABORATORY OF THE PROVINCIAL POLICE HEADQUARTERS IN KRAKOW



POLICE FORENSIC LABORATORIES IN POLAND

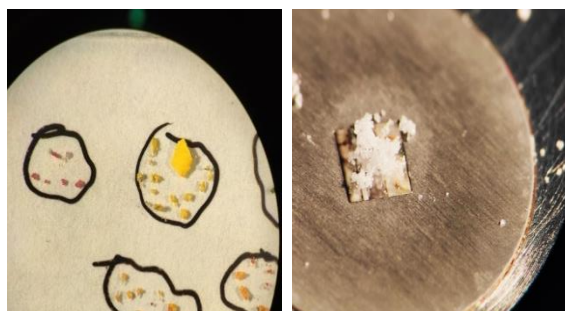




SELECTED TASKS OF FORENSIC LAB

- performing forensic examinations and opinions
- performing research and analysis of the collected evidences
- participating in the inspection of crime scenes
- cooperation with other scientific and research units





**Experts + professional
research equipment**



SELECTED RESEARCH SPECIALTIES

Chemistry

Genetics

Mechanoscropy

**Weapons
and ballistics**

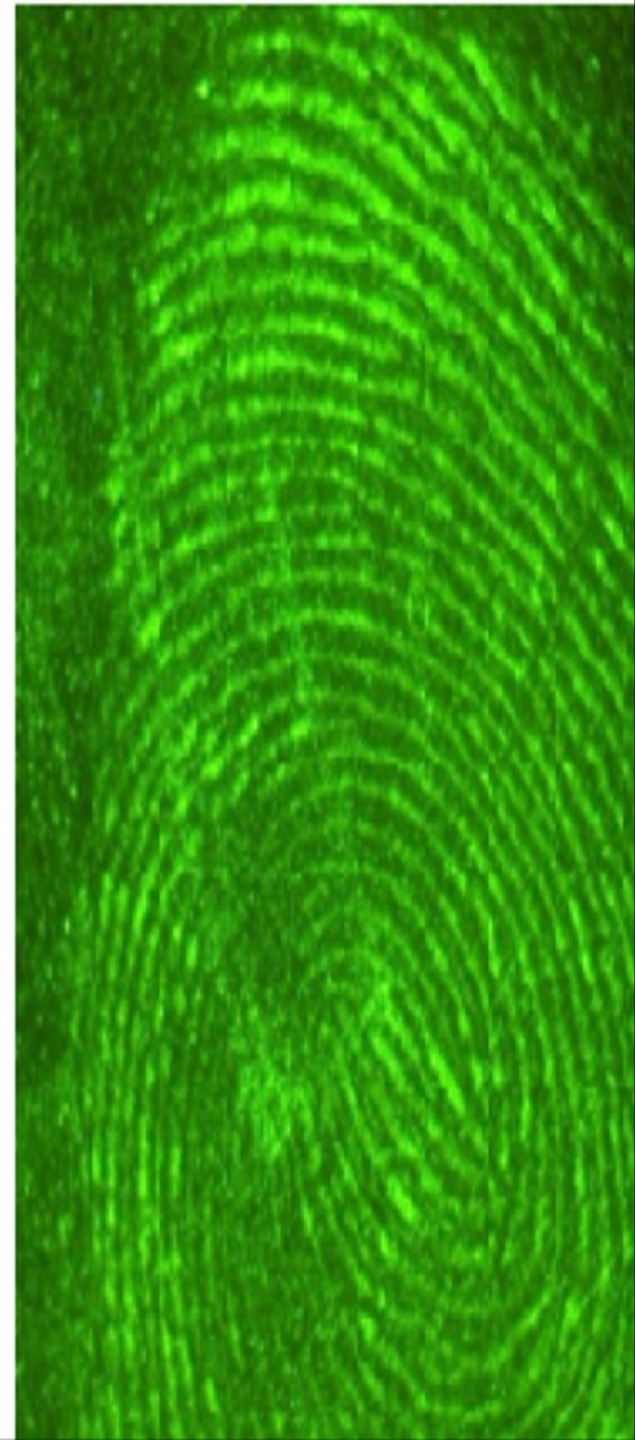
**Classic
document
examinations**

**Technical
document
examinations**

**Digital data
analysis**

Dactyloscopy

Traceology





Polish circulation banknotes

- Polish paper money (banknotes) are denominated in Polish zloty and issued by the National Bank of Poland as part of the monetary system introduced as a result of the denomination of the Polish zloty.
- In 1995, the following denominations were introduced: PLN 10, 20, 50, 100 and 200.
- These denominations were modernized in 2014 (PLN 10, 20, 50 and 100) and 2016 (PLN 200).
- The denomination of PLN 500 was introduced in 2017.
- The banknotes - part of the "Polish Rulers" series - were designed by Andrzej Heidrich.
- Since 1997, all denominations have been produced by PWPW in Warsaw.





Security features of Polish circulation banknotes



NARODOWY
BANK
POLSKI

WARSZAWA
12 STYCZNIA 2017

500 zł

OWY

100

**Security
in a paper base**

**Security using optically
variable elements or inks**

**Security in the printing
process and technique**



Secured paper

Commemorative \$10 Note





**SECURITY
IN A PAPER BASE**

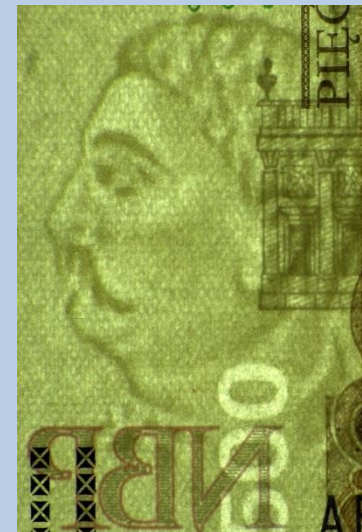
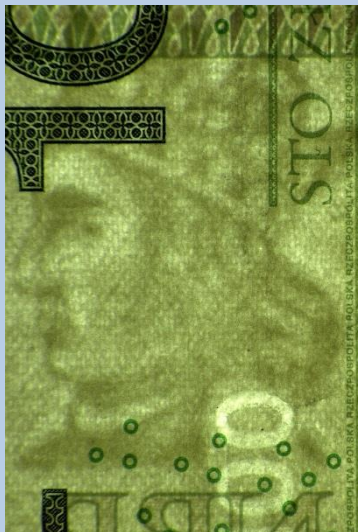
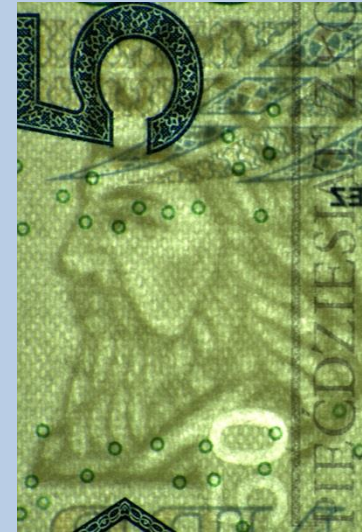
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SECURITY IN A PAPER BASE

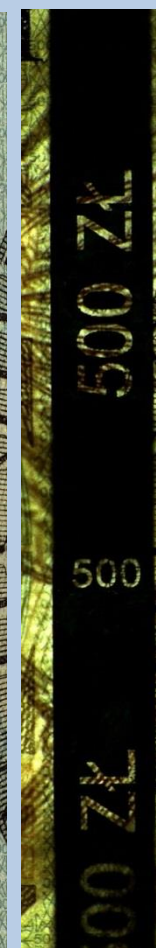
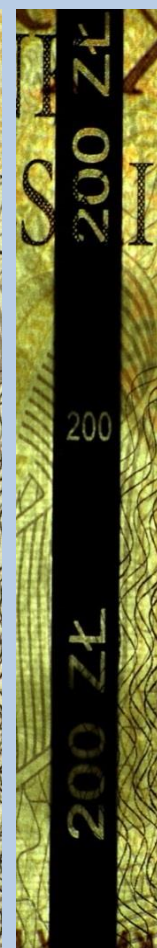
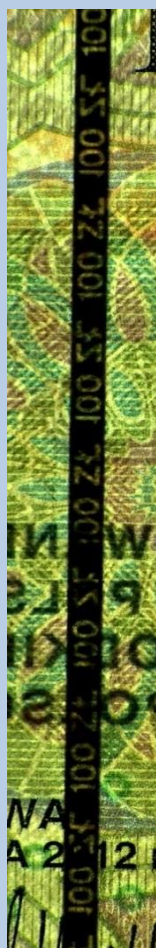
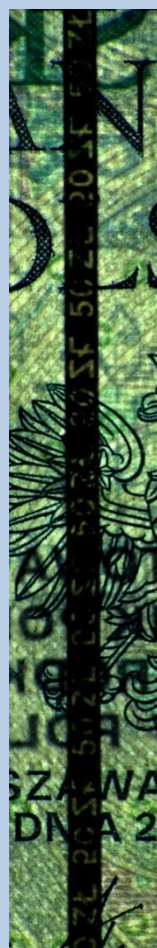
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SECURITY IN A PAPER BASE

Security thread





SECURITY
IN THE PRINTING PROCESS
AND TECHNIQUE

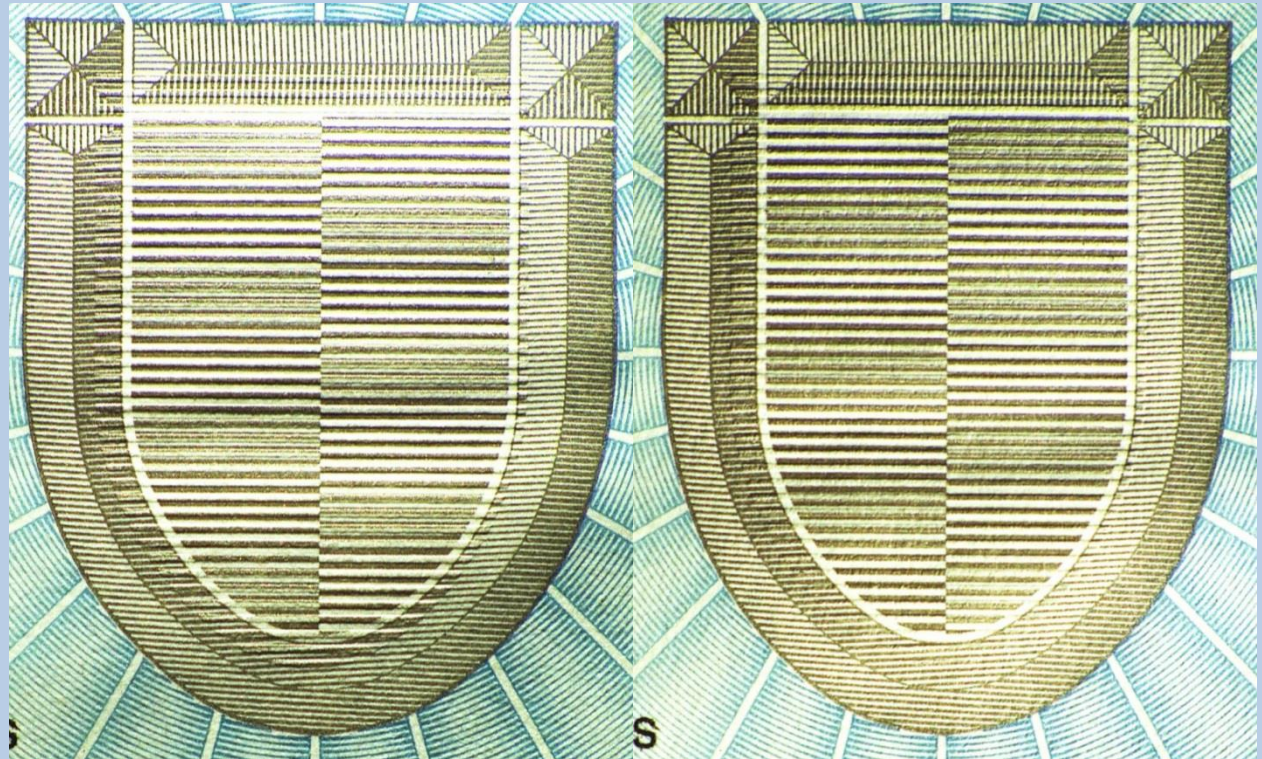
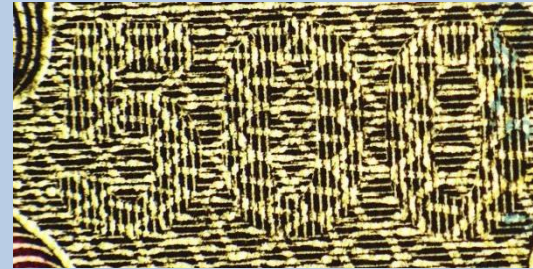
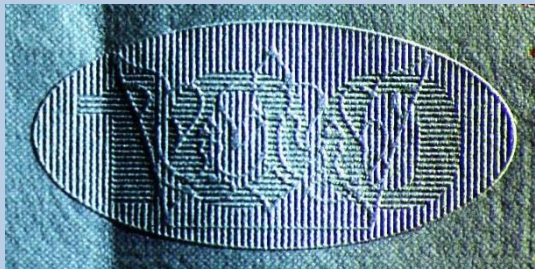
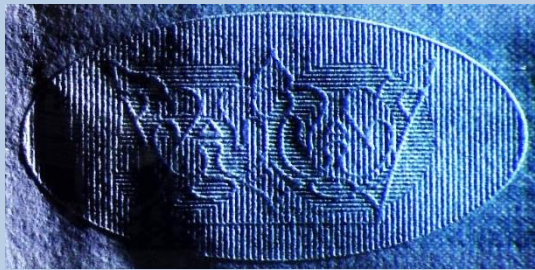
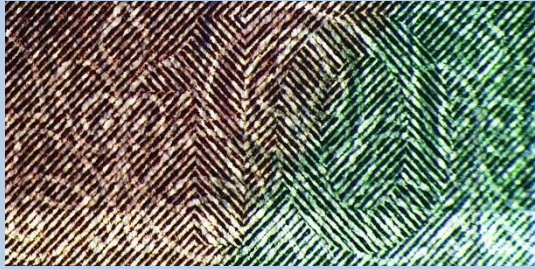
Relief printing





SECURITY
IN THE PRINTING PROCESS
AND TECHNIQUE

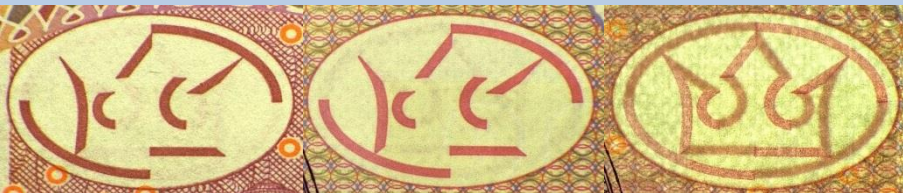
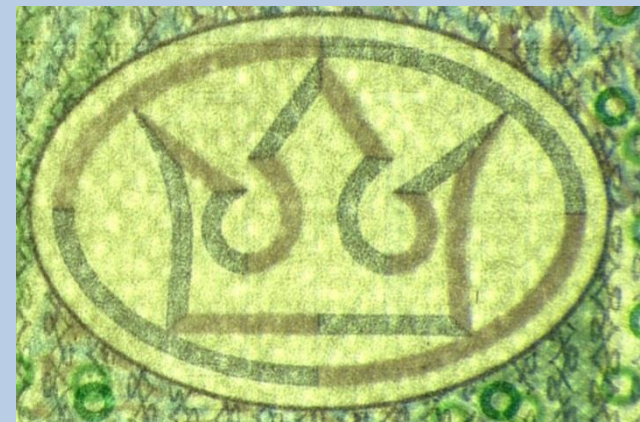
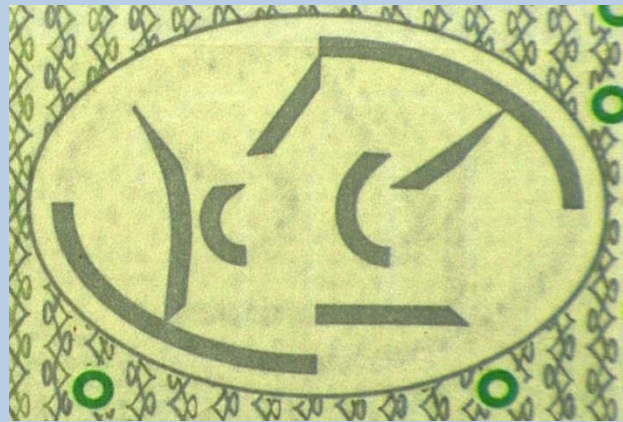
Angle effect





SECURITY
IN THE PRINTING PROCESS
AND TECHNIQUE

Recto verso



Microprinting

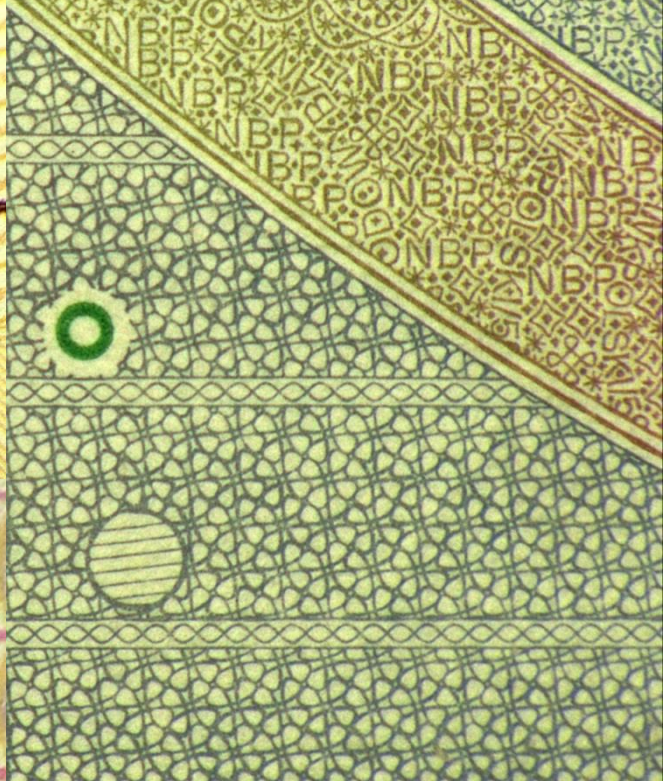




ZABEZPIECZENIA
W DRUKU

Iris print

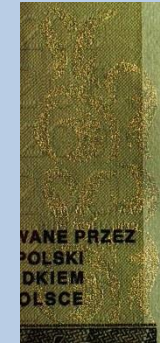
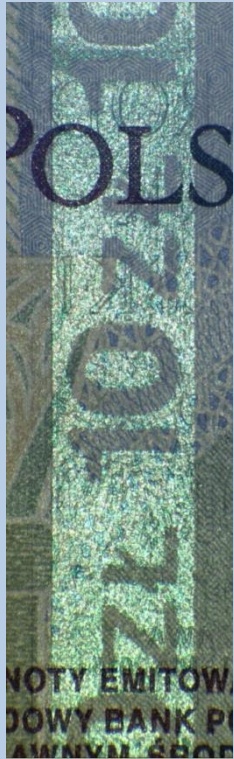






SECURITY USING
OPTICALLY VARIABLE
ELEMENTS OR INKS

Optically variable elements or inks





SECURITY USING
OPTICALLY VARIABLE
ELEMENTS OR INKS

Ultraviolet or Infrared



Hygienic
NOTE

23



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Ultraviolet or Infrared



Hygienic
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NARODOWY BANK POLSKI

500



BANKNOTY EMITOWANE PRZEZ NARODOWY BANK POLSKI
SĄ PRAWNYM ŚRODKIEM PŁATNICZYM W POLSCE

500 PIECSET
ZŁOTYCH

NBP



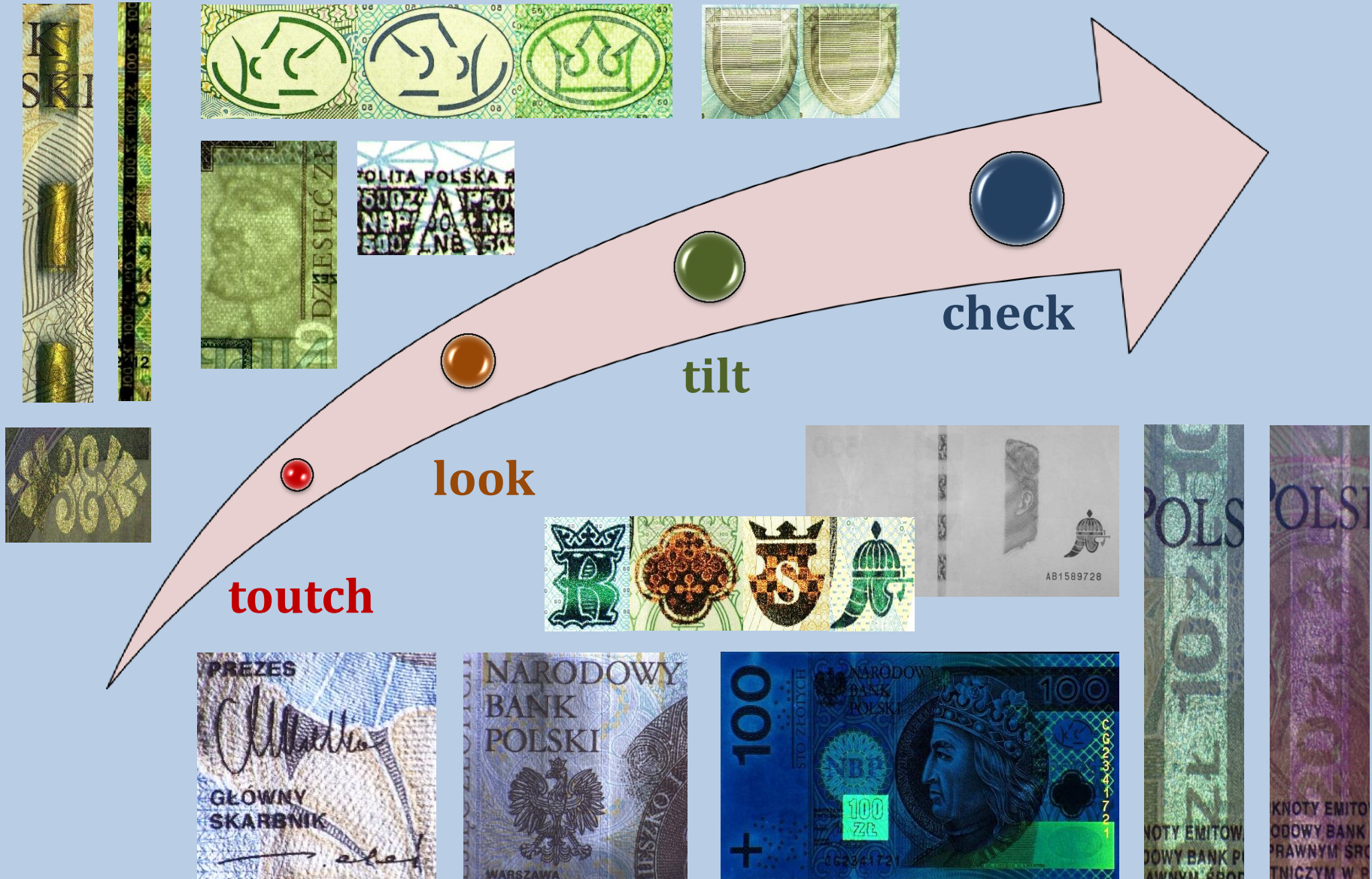
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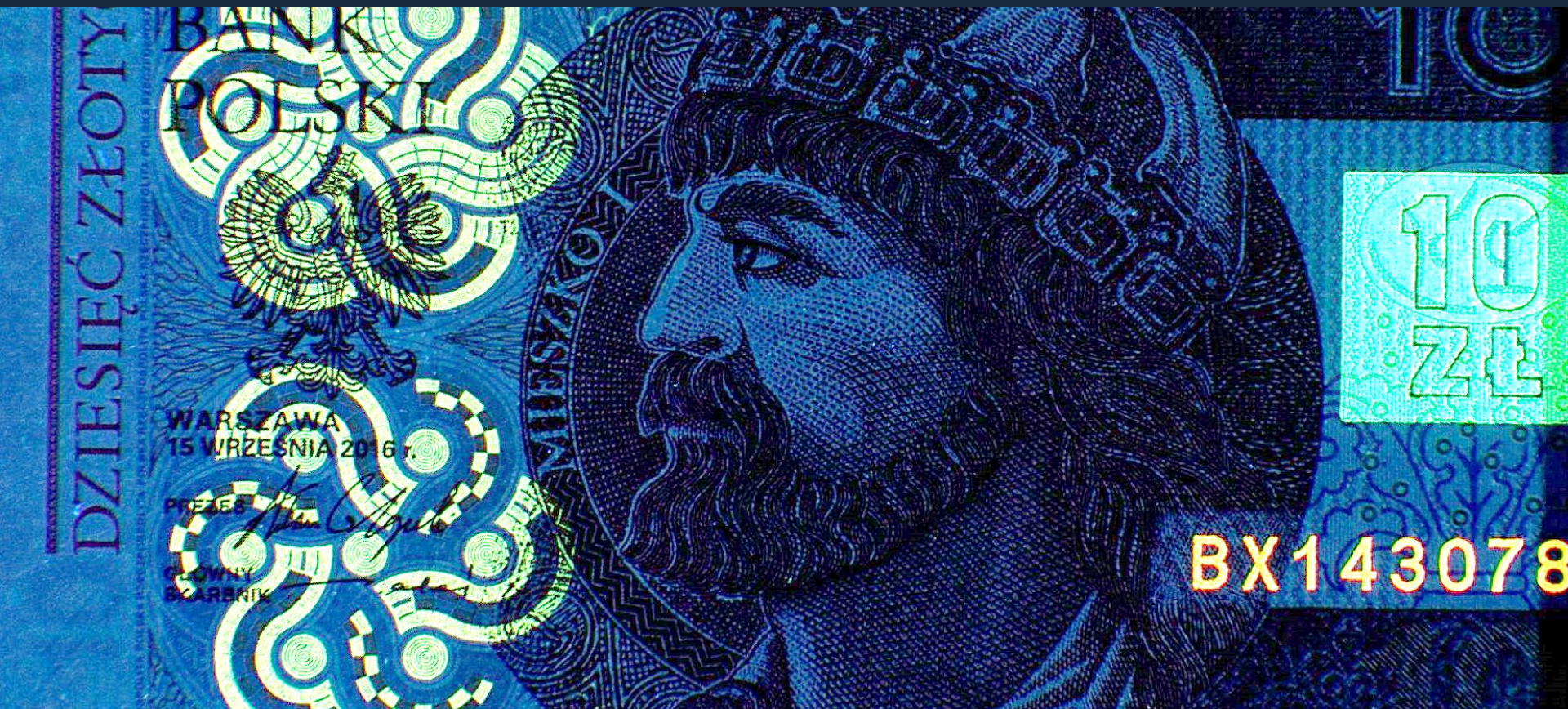




Basic rules for recognizing the authenticity of banknotes



THANK YOU FOR YOUR ATTENTION ;)



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