

Sitting on a ticking bomb



Centra lne
Laboratorium
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Between statistics and reality

Assessment of the presence of acid corrosion
in the collection of the Central Archives of Historical Records
in Warsaw.

OPINION

Manuscript records in AGAD are strongly affected by the
ink corrosion

What is wrong with this statement?

YEAR 2007

Assessment of the presence of acid corrosion in the collection of the Central Archives of Historical Records in Warsaw

PROJECT „*Application of the DTPA in conservation of the objects endangered by the ink corrosion*” Project leader dr Barbara Wagner

The aim: evaluation to what extend the historical collections of the paper documents are at risk of degradation caused by the ink corrosion.

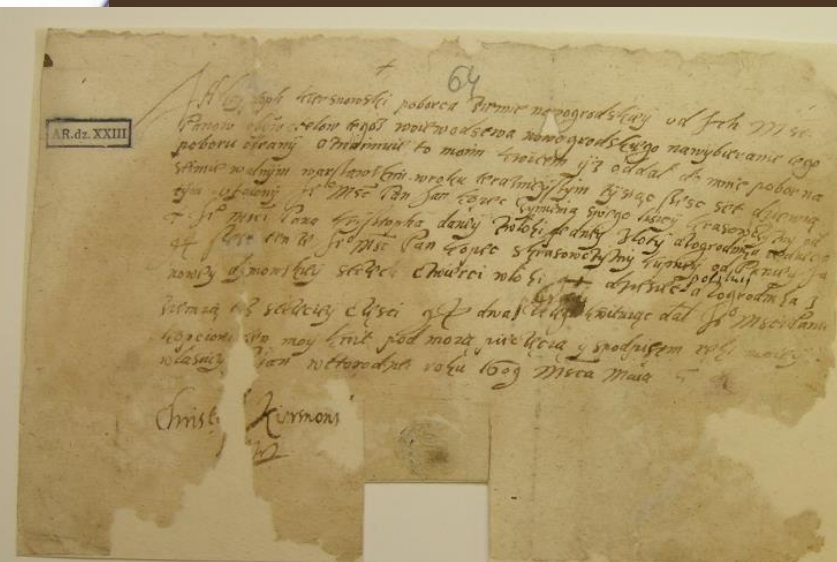
Random sampling according to UPAA



- Sample of 300 objects
- Excluded parchment charters and cartography
- Holdings were measured with the meter - 5704 mb (.280 000 archival units)



an
archival
unit



Sygn. AR dz. XXIII t.70 p.6 str.64-65 (l.p.109)
Dok. nr 26 / III / 2009

300 objects from whole archive



153 bound volumes (51%)
including

14 volumes from the
juridical records
collections

And 147 loose paper documents files
(49%)

Classification of the ink corrosion according to the INKCORE scale

Fe+2 indicator examination



Moy Wielki M. Panie y Koch

AR, dz. V

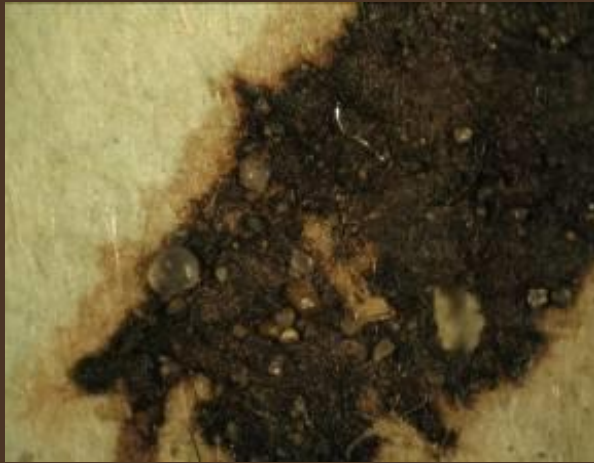
cyzostaniu naywyżey
nosze Wmianu
Debrac od Pa Pa

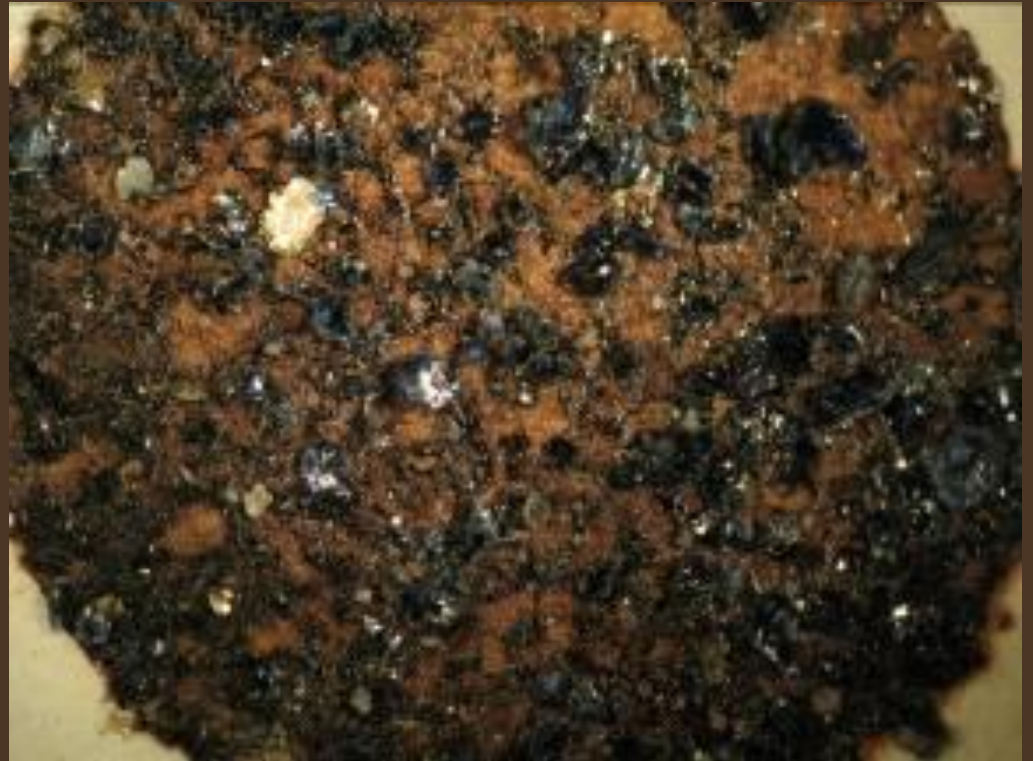
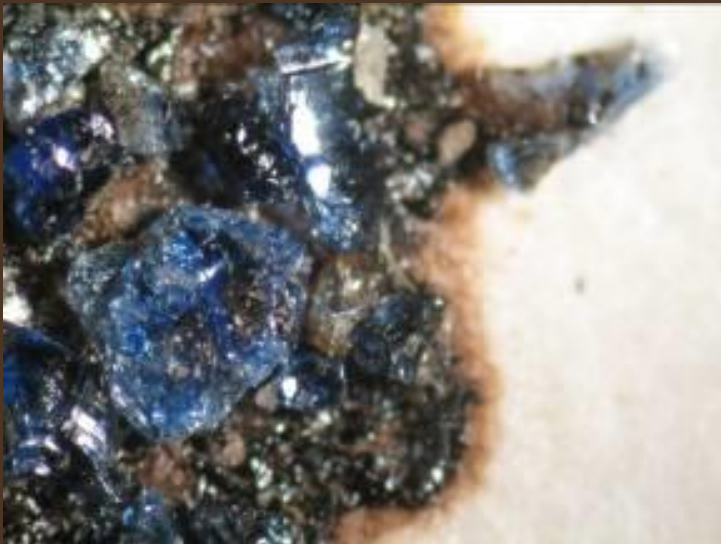
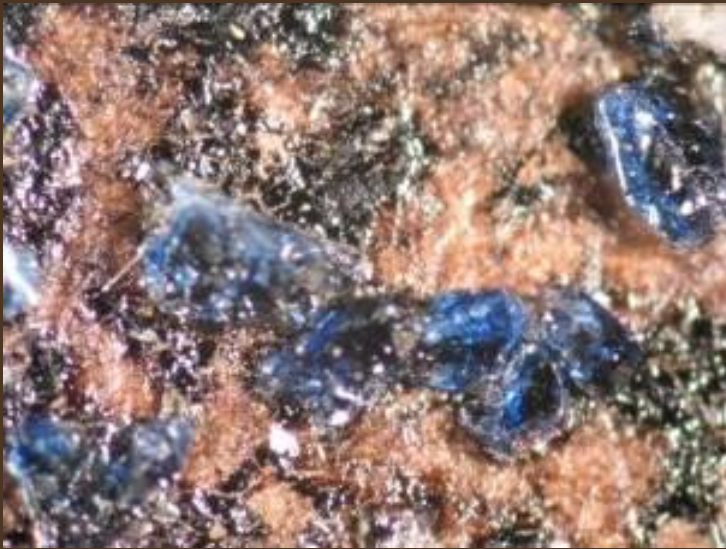
Moy Wielki M. Panie y Koch

AR, dz. X

cyzostaniu naywyżey Wmian
nosze Wmianu dym tyzycu
Debrac od Pa Pa Grefnika Di

Microscopy observations – variety of the drying powders

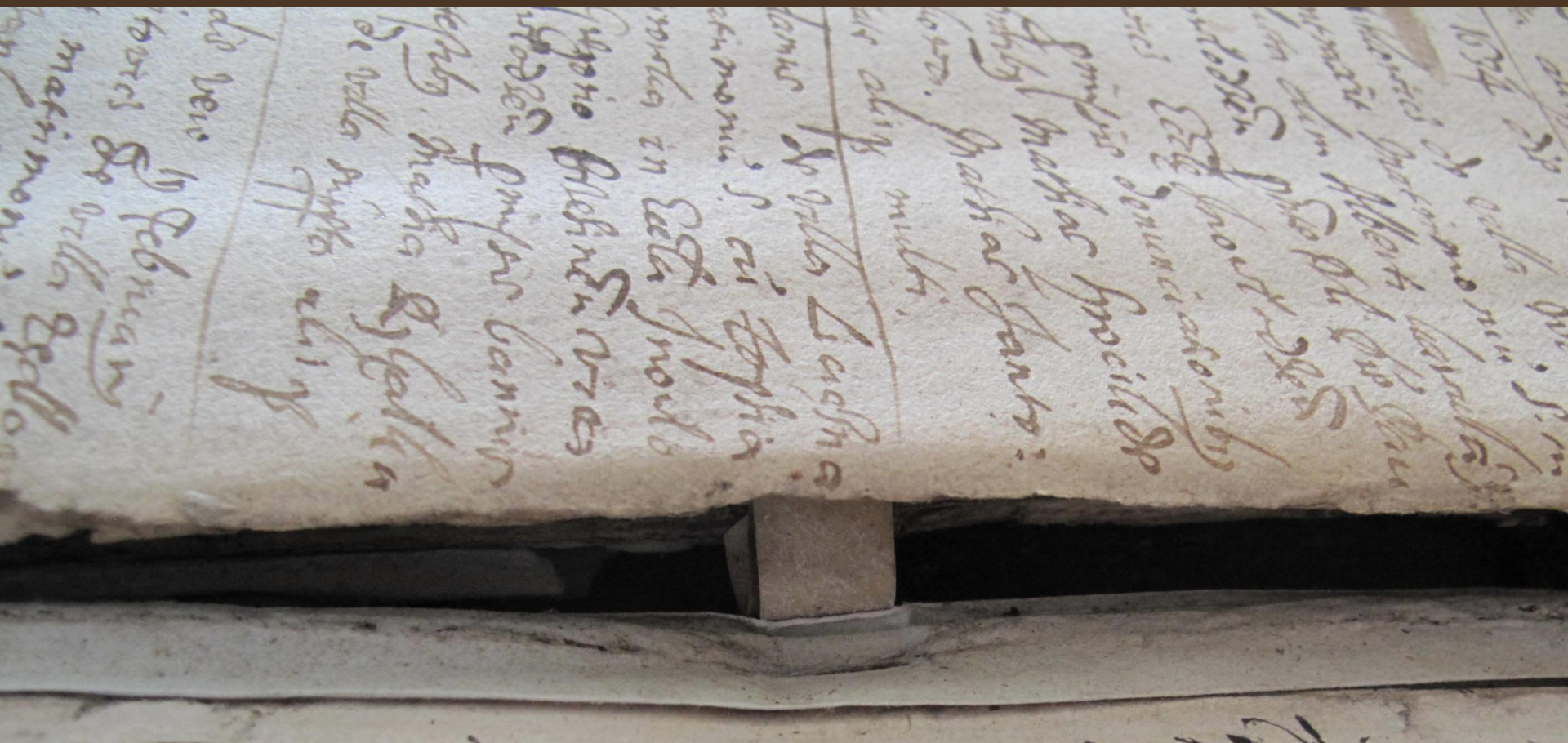




Ink corrosion assessment model

Birgit Reissland z NCI

(Netherlands Collectie Institute)



... des Armes a empêche les semailles
... partie du Pays. Le labourage
... impossible, partant on le bétail a
... Les Paysans, dont les greniers sont
... les Cabanes sont brulées, on vendues
... les, ont fui par milliers, en Terres
... Beaucoup de Seigneurs terriers ont
... même par les même raisons.
... ~~s'appellait~~ La Pologne, commence déjà
... er à un desert. La Famine est
... manable pour l'année prochaine,
... continuant à

VICTORINUS

Quinta in vigilia Festi Sancti
 Apollinarii Anno Domini Millesimo sexcento

OPUSCULUM

in personis per officio
 Pastorem Capellanum et Curatorem

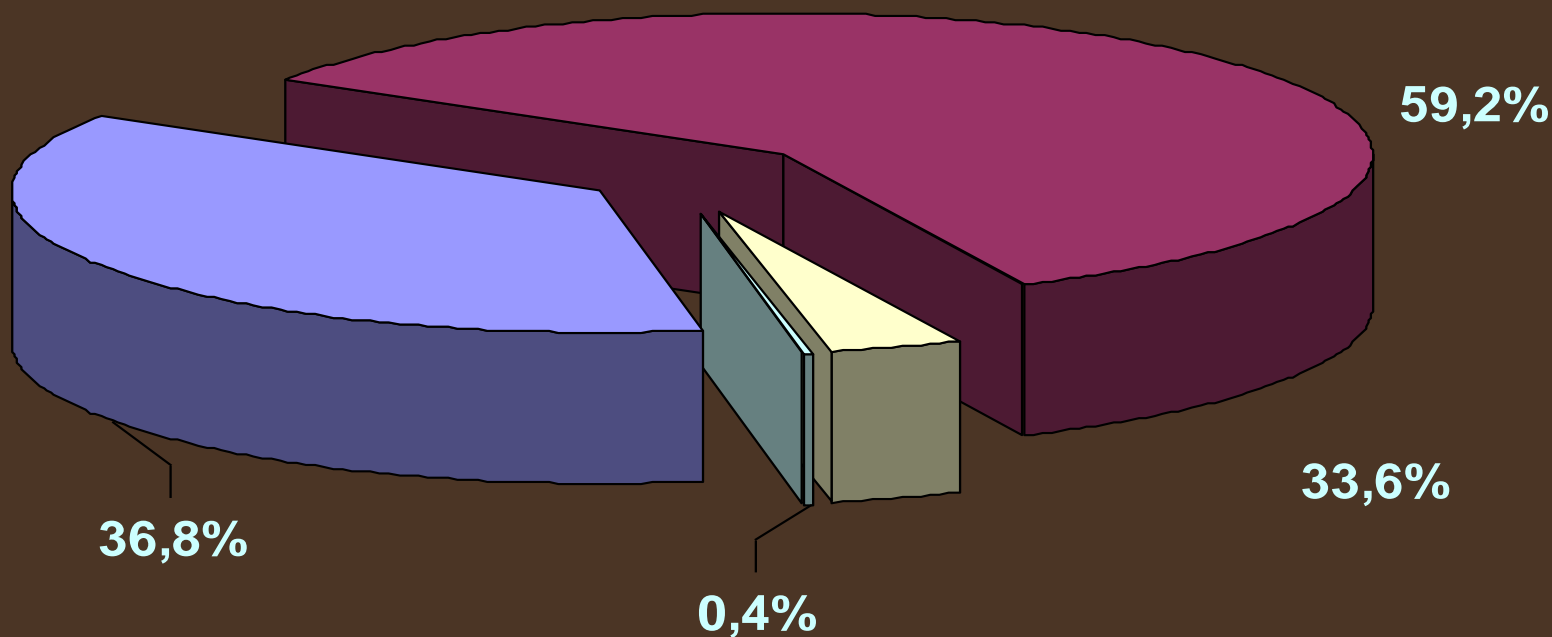
3





Results of the observation assessment of the 300 random objects

■ 1- stan dobry ■ 2 - stan zadawalajacy ■ 3 - stan zły ■ 4 - stan bardzo zły



Some more results

Examination with the Neevel paper indicators showed presence of the ions Fe^{+2} in the 44 objects (almost 15% of the sample group) without any symptoms of the ink corrosion.

In 95 % of the examined objects Indicators showed presence of the Fe^{+2} ions.

2012

we have to
move 10000

juridical volumes



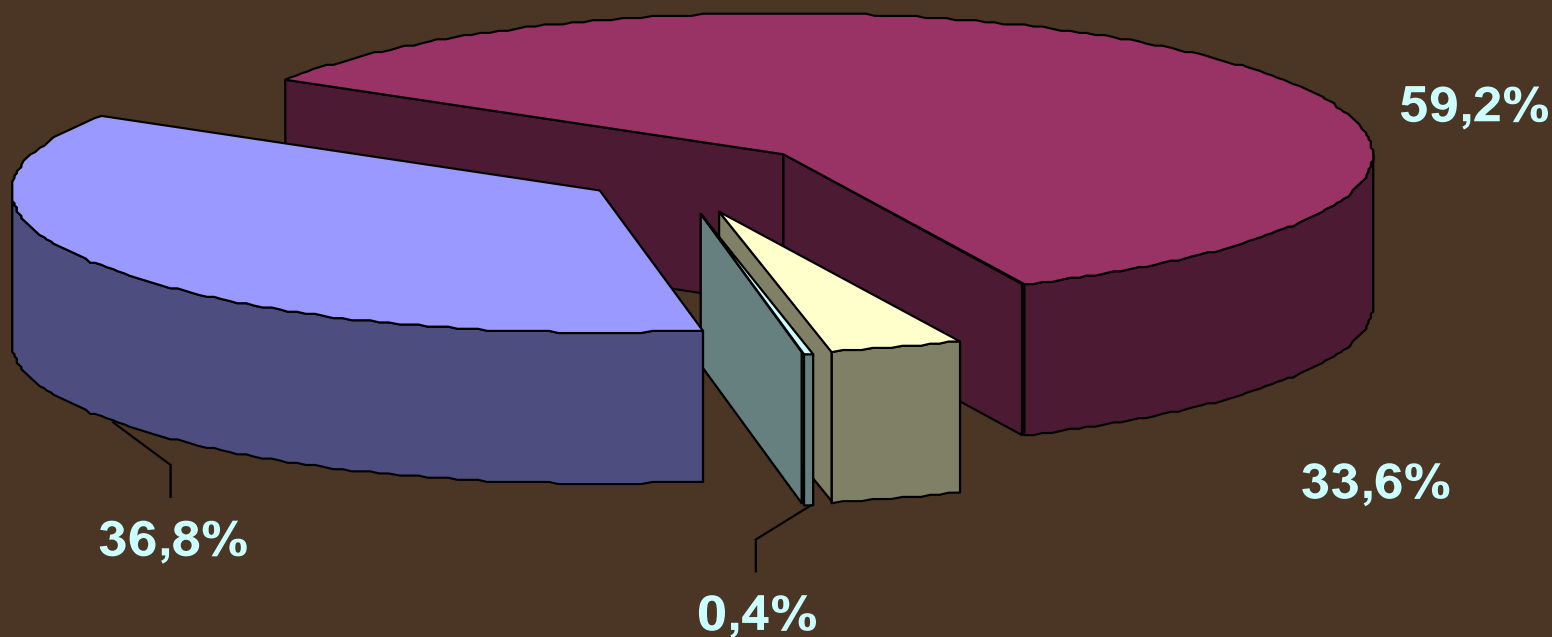


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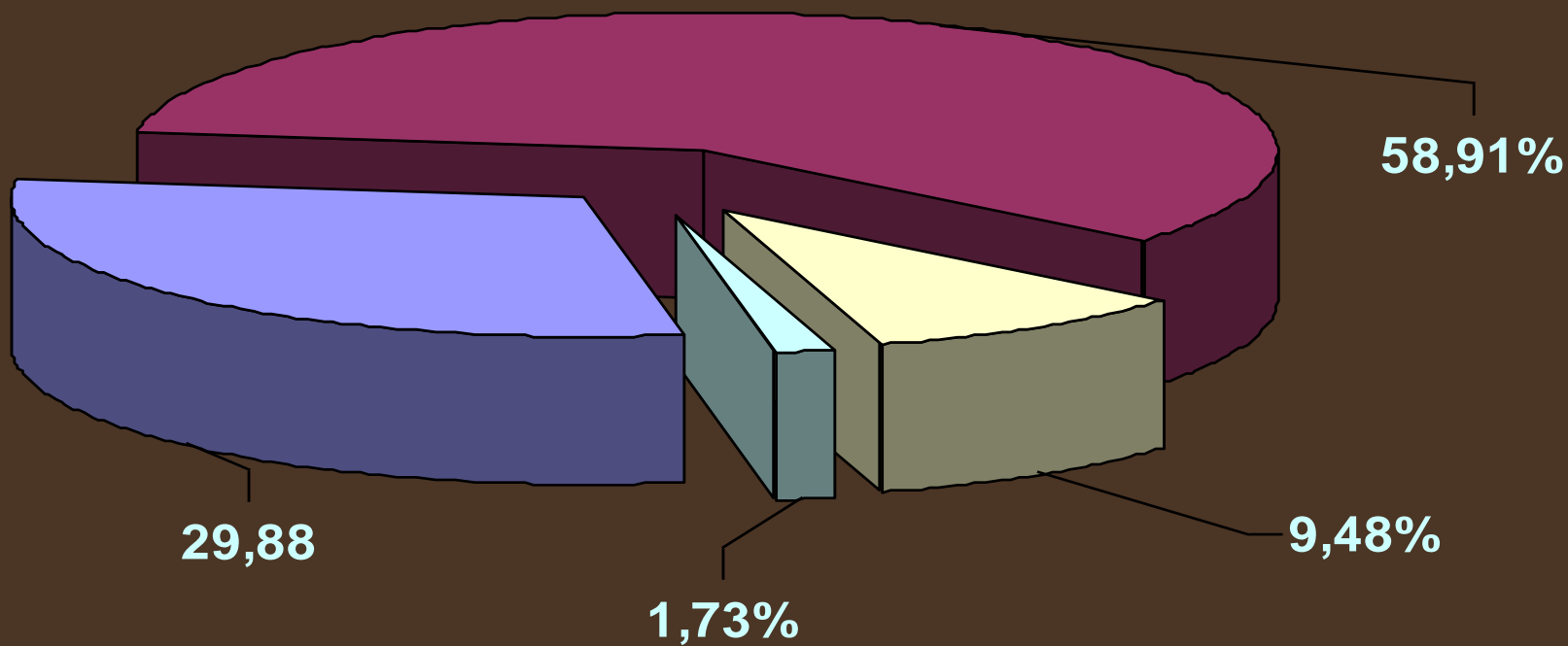
Results of the visual assessment of the 300 randomly chosen objects

■ 1- stan dobry ■ 2 - stan zadawalajacy ■ 3 - stan zły ■ 4 - stan bardzo zły



Results of the visual assessment of the 10 300 manuscript books

■ 1- stan dobry ■ 2 - stan zadawalajacy ■ 3 - stan zły ■ 4 - stan bardzo zły



Something has to be done ?



Major suspects: Fe, Cu, Mn, Zn

CONTRA

PHYTATES

or

DTPA

diethylenetriaminepentaacetic acid

And here new problems start..

1. Side effects
2. Single sheet treatments
3. Complicated application process
4. Need for the fully equipped laboratory
5. Hazardous chemicals
6. Expensive, unstable chemicals

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