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GSK mbH
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Ihr Zeichen/
Ihre Nachricht vom

Mein Zeichen
(Bei Antwort bitte angeben)
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Deacidification process by the GSK mbH company– Assessment of the deacidification performance of the BoCo1 unit

Dear Sir or Madam,

The research unit Mass Preservation Systems for written Cultural Materials of the University of Applied Sciences and Arts, Hanover has been substantially involved under my leadership in the development, extension and increasing use in production of the newly developed deacidification machine for block materials, BoCo 1, of the GSK company. In the laboratories connected with the research unit quality control of the results of production runs based on the recommendations of the German DIN standard was carried out, as well as further quality-related examinations.

The results of the evaluation of a large number of measurement sequences provide the basis for the following assessment of the deacidification process of the BoCo1 unit.

Summary of the results of the examination and assessment:

The procedure was carried out in a multi-strand, multi-path production unit constructed specifically for this purpose. In production mode the machine can carry out three functions,

singly or in combination: cleaning (with decontaminating and purging effect), deacidification and consolidation.

We had standardised test books and original materials made of paper of various kinds, age and fragility available as test material. A pre-requisite for the procedure is that the material is available in bound form (the following were tested: book material, adhesive bound, sewn, stapled material).

Without exception the treated test materials and deacidified original materials exhibit values conforming to DIN standards and falling within prescribed tolerances for pH value, alkaline reserve and tensile strength. Thus, they satisfy requirements for archives and libraries which we are aware of.

No alcohol groups are applied as part of the cleaning or deacidification processes. In the case of the combined deacidification and consolidation process a small amount of alcohol is necessary for the process. However, this is removed from the sheets after deacidification and stabilization, and does not remain in the sheet structure.

All results support the unambiguous conclusion that BoCo 1 unit is a machine that is safe to operate and provides an effective procedure for treating acidic and fragile paper materials.

Yours sincerely,



Prof. Dr.-Ing. Ulrich Lüdersen

Head of the Research Unit Mass Preservation Systems for Written Cultural Heritage

Head of the Mechanical Process Engineering Department

Board Member of the AUBIOS Research Center

Board Member of the Research Network INERG