A durability study of inks used in the printing of contemporary graphic artworks.

Sánchez-Marín, B.[1]; Campillo-García, D.[2]; Espejo-Arias, T.[2];
López-Montes, A.[2]; Blanc-García, R.[3];

[1]*Department of Fine Art, Faculty of Fine Arts (University of Murcia, Spain)*
[2]*Department of Painting, Faculty of Fine Art (University of Granada, Spain)*
[3]*Department of Analytical Chemistry, Faculty of Sciences (University of Granada, Spain)*

Abstract (not more than 300 words)

Graphic artwork offers tremendous potential for artistic expression. The processes associated with its production have been particularly influenced by technological developments over recent decades, particularly with regard to printing materials and techniques.

The present study is concerned with the durability of graphic artwork produced using contemporary media and printing materials. The aim of the investigation is to analyze different printing techniques used in the present day, by studying the various inks used in each case.

Three techniques are examined –offset printing, inkjet print and laser printing –to establish the factors that can lead the printed image to fade or undergo alterations.

The present work captures the main results of the study and contributes to a better understanding of the materials and techniques in question. Furthermore, the validation of these results prepares the ground for new research to address the challenges of stability, conservation and durability associated with printed graphic artwork, and thus to reflect on the printing process that is most fit-for-purpose.

Keywords: *Durability, graphic artwork, inks, printing techniques.*

Professional Biography (100-150 words)

Brenda Sánchez Marín is a print professional at Sanmar Graphics Ltd. (Murcia, Spain). She currently holds a collaboration scholarship at the Department of Fine Arts, University of Murcia, and is a member of the research team on the project "New Alternatives for Understanding Materials & the Conservation and Restoration Processes of Graphic Artwork and Documentary Heritage"(Ref. MAT2014-58659-P). The project, funded by the Spanish Ministry of Economy, Industry and Competitiveness, investigates contemporary printing inks from a physical–chemical perspective. The team with which Ms. Sánchez Marín collaborates has extensive experience in the study of materials and techniques used in the production of graphic documents, and in the application of intervention protocols for their conservation and restoration.

Recent Publications (up to 5)

- López Montes, A.; Collado-Montero, F.; Castillo, E.; Blanc, R.; Campillo-García D.; Espejo, T. (2017). Aging analysis of a color facsimile binding for the 14th century

manuscript “Registro Notarial de Torres”. *COLOR research and application*, vol. 42, 4 ISSN: 0197-1360. (pp. 474-485). DOI: 10.1002/col.22093

- González-García, S., Campillo-García, D., Espejo-Arias, T. (2017). Novedades sobre la datación de los manuscritos árabes de la Escuela de Estudios Árabes de Granada a partir de su estudio codicológico. *Al-qantara*, vol. XXXVIII, 1, Consejo Superior de Investigaciones Científicas. ISSN: 0211-3589. (pp. 99-111). DOI: 10.3989/alqantara.2017.004
- López Montes, A.; Espejo-Arias, T.; Blanc-García, R.; Campillo-García D. (2016). Conserving the Notarial Register of Torres (Jaén, Spain): A study of a fourteenth-century archive binding. *Care and conservation of manuscripts*, nº 15, University of Copenhagen – Museum Tusculanum Press. ISSN: 1602-1339. (pp. 137-152).
- Ana Mª López Montes; Anne-Laurence Dupont; Teresa Espejo Arias; Rosario Blanc García. (2016).Identification of colorant materials after an artificially aged process. Óptica pura y aplicada. 49 - 3, pp. 143 - 153. 2016. ISSN 0030-3917
- González-García, S., Collado-Montero, F., Campillo-García, D. y Espejo-Arias, T. (2015). Apporti della colorimetria allo Studio e dalla conservazione dei documenti, Colore e Colorimetria. Contributi multidisciplinari, Vol. XI/A. Gruppo del Colore. Associazione Italiana Colore. Milán, Italia. ISBN: 978-88-99513-00-9, pp. 13-25.



Email Id: brenda.sanchez1@um.es

Any Comments:

1 - Department of Fine Art, Faculty of Fine Arts (University of Murcia, Spain)

Campus de Espinardo, 03100 Espinardo, Murcia (Spain)

2 - Department of Painting, Faculty of Fine Arts (University of Granada, Spain)

Avda de Andalucía, s/n. 18071Granada (Spain)

3 - Department of Analytical Chemistry, Faculty of Sciences (University of Granada, Spain)

Avda Fuentenueva, s/n. E-18071 Granada (España)