HISTOMORPHOLOGICAL ASSESSMENT OF THE EXTRACT OF THE STALK OF SORGHUM BICOLOR AS A COUNTERSTAIN

Omoowo BT, Bankole JK, Muhammed AO, Benard SA, Afolabi OO

1. Department of Medical Laboratory Science, Ambrose Alli University, Ekpoma, Edo State, Nigeria
2. Department of Histopathology, Faculty of Medical Laboratory Science, Usman Danfodiyo University, Sokoto, Sokoto State Nigeria
3. Histopathology Unit, Department of Pathology, University of Ilorin Teaching Hospital, Ilorin, Kwara State, Nigeria
4. Department of Histopathology, College of Health Sciences, University of Ilorin, Ilorin, Kwara State, Nigeria

Corresponding Author: Muhammed AO
Email: muhammedrashola@gmail.com

ABSTRACT
Aim: The objective of this study was to investigate the staining ability of the extract of the stalk of Sorghum bicolor as a counterstain on Haematoxylin.

Methods: Tissue blocks of trachea, oesophagus and ileum were retrieved from the Autopsy Block Archive of the Department of Pathology, University of Ilorin Teaching Hospital Ilorin. Eight (8) serial sections labeled A to H were made from each block and stained with Harris haematoxylin. Section A was counterstained with 1% ethanolic eosin, as control. Different preparations of extracts of the stalk of S. bicolor were used to counterstain sections of Groups B to H as follows: B; 5% aqueous extract with 0.5g Potash, C; 5% aqueous extract, D; 5% extract in 70% ethanol, E; 10% extract in 70% ethanol, F; 5% extract in absolute ethanol, G; 10% extract in absolute ethanol and H; 5% aqueous extract with 40μl of acetic acid.

Results: The stalk extracts of S. bicolor stained the cytoplasm in shades of pinkish brown

Conclusion: This study established the cytoplasmic counter-staining ability of stalk extracts of S. bicolor, and the 10% extract in absolute ethanol had the closest resemblance to the Group A, the control group. It is therefore suggested that 10% extract in absolute ethanol can be substituted for eosin due to its domestic availability, ease of preparation and use, and above all, its good cytoplasmic contrast with the nuclear stain.

Keywords: Sorghum bicolor, Counterstain, Extract, Eosin