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PPT National Virtual Innovation Competition 2022 (PPTNVIC '22)
Empowering Students Towards Educational Innovation

ScanF- CD (SCIENCE CHROMATOGRAPHY ART AND DESIGN FICTION ON FILTER PAPER- CHROMDECO)

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ABSTRACT

Chromatography techniques are based on including column, thin layer, and paper chromatography. They are not only associated with scientific experiments but also become artworks. In this innovation project, filter paper is used because it has high solvent absorption. It is used to ensure the accuracy of the motifs produced and will be dried in a certain period to produce an interesting combination of art colours and fictional designs. The main objective of the ScanF- CD (Science Chromatography Art and Design Fiction on Filter Paper -ChromDeco) innovation project is to highlight the results of art and design fiction motifs, which are produced through chromatography techniques using filter paper. The novelty is divided into three, first, the results of chromatography between the absorption and separation of the pigments to colour will combine two types of solutes, namely mobilizing agent and colour agents. Next, the resulting motifs are then taken digitally to be composed using Picasa computer software. Lastly, the end product will be produced using art and fiction design of filter paper chromatography, which are; hanging decoration, bookmark, stationery cup, wall decoration, and picture frame on the market. Permanent agent is used in 12.5cm ashless filter paper brand double rings. Colour agent is used as a soluble material that can be purchased in the market. In conclusion, we have learned a lot from this project, for example, the chromatography techniques by using filter paper to produce some art and design fiction motifs.

Keywords: Chromatography technique, art and design fiction, filter paper, end product

1. INTRODUCTION

Paper chromatography technique is one of the colour pigment separation techniques on filter paper [1]. In this innovation project, filter paper is used because it has high solvent absorption. For example, black colour can be separated into primary colour pigments (yellow, blue and red) and secondary colours (purple, green and orange). Patterns in science fiction are drawn using colour markers on filter paper. Then the filter paper is placed on a container containing a cone-shaped filter paper soaked in water. After a few minutes, the resulting colour pigment will be left to dry for a certain period to produce an interesting combination of patterns and colours. The combination of various colours produced through chromatographic techniques can be composed to produce interesting science fiction motifs with Picasa computer software. The design of the end product has commercial value in materials such as wallpaper, gift wrapping interior, home decor, bookmarks, textiles and picture frames. The centered design will also be able to provide contemporary techniques in the interior decoration industry.

2. MATERIAL AND METHOD

This research employed the design fiction motifs which were produced through a chromatography technique using filter paper. This method is based on the principle of separation or purification by chromatography which is based on differential adsorption on adsorbent [2]. In this innovation project,

we required materials to produce chromatography such as filter paper (12.5 cm ashless double rings), coloured pen, solvent i.e., distilled water and 50 ml beaker. In this project we used a filter paper (12.5 cm ashless double rings) because it ensures the accuracy for the motifs produced and dried in a certain period to produce an interesting design after a combination of art colours and fictional designs are formed and also has a high solvent absorption [3]. The results of chromatography between the absorption and separation of the pigments will combine two types of solutes namely mobilizing agent and colour agents. To prepare a variety of chromatographic patterns, first of all using a mobilizing agent which was placed in a container in a predetermined quantity for a certain period of time to ensure the distance or the result of the process of separation of pigments against colours can be produced. Afterwards, a permanent agent was used in the 12.5cm ashless filter paper brand, Double Rings. The selection of this type of paper is important because the length factor of the paper is relative to the solute material to be separated through the separation speed against the colour pigment formed. In the last step, a colour agent was used as a soluble material that can be purchased in the market. The process of drawing point plots on filter paper was done through experimentation in repeated quantities. Finally, the selection of point plot drawing will be selected to get the appropriate motif. The combination of various colours produced through chromatographic techniques will be digitalised to be composed using Picasa computer Software.

3. RESULTS AND DISCUSSION

The results obtained show an interesting combination of art and design fictional chromatography. How's separation produced? The preparation of chromatography techniques starts with patterns drawn randomly on filter paper using coloured pens to produce a variety of art forms and fictional designs. Then the pattern-drawn filter paper will be placed on the cone-shaped filter paper soaked in water in a beaker. Approximately 30 minutes to 1 hour later, the resulting colour pigments are left dried to produce an interesting combination of art and design motifs. After that, the combination of colour pigments will form a variety of art and fiction designs through filter paper chromatography techniques. After the combination, the resulting art motifs and fictional designs are then digitalised. The designs will be combined and composed using Picasa computer Software. Eventually, the end product will be produced using art and design fiction motifs such as wallpaper, home decor, bookmarks, textile patterns, picture frames, etc. The centered design will be able to provide contemporary techniques in the interior decoration industry.

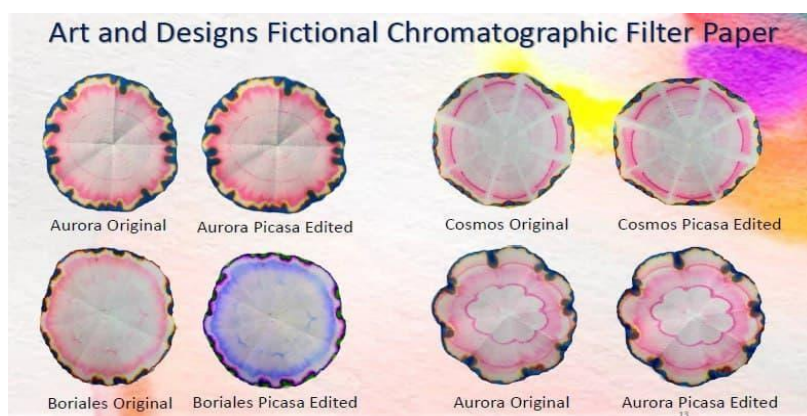


Figure 1. The result of the art and design fictions filter paper chromatography that has been modified using the Picasa computer application

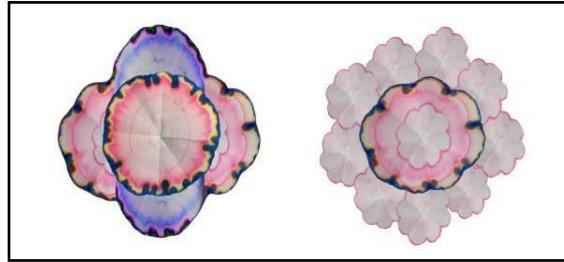


Figure 2. The result of the art and design fictions filter paper chromatography that has been modified using the Picasa computer application



Figure 3. The several end products produced using art design and fiction chromatography filter paper



4. CONCLUSION

In a nutshell, we have learned a lot from this project, namely ScanF- CD (Science Chromatography Art and Design Fiction on Filter Paper – ChromDeco). One of them is that we have learned about chromatography techniques by using filter paper to produce some art and design fiction motifs. In this innovation project, filter paper is used because it has high solvent absorption. There are a lot of benefits to be gained from this project. First and foremost, we are able to improve public understanding of chromatography. For example, the chromatography techniques are not only associated with scientific experiments but it can be made into a work of art. Besides, we are able to create the end products based on art and design fiction chromatographic filter paper on the market. These products that have been produced are hanging decoration, bookmark, stationery cup, wall decoration, and picture frame. Moreover, the end products can be sold in the market or through social media such as Instagram, WhatsApp or Facebook by promoting those designs to attract the public. This design will be able to appeal to everyone in the arts and science to gain new knowledge.

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