

# BUILDING A SUSTAINABLE FUTURE: DISCHARGE PRINTING'S ROLE IN ENVIRONMENTAL STEWARDSHIP

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## Background

Discharge printing is a technique used in textile printing to create designs on fabric by removing the colour from specific areas by application of a discharge paste. The discharging agents can be oxidizing or reducing agent that chemically react with the dye chromophore and make it colourless. It is also known as extract printing.

Types:

1. White discharge
2. Colour discharge.

## Evolution

- 19th Century - Bleach was used to discolour dyes from unwanted areas.
- Late 19th Century - Stannous Chloride was valued for its ability to selectively remove dyes from fabric, allowing for the creation of intricate patterns and designs.
- Early 20th Century - Sodium Formaldehyde Surfoxalate (1905)
- Zinc Formaldehyde Surfoxylate

Advantages:

1. These chemicals could produce near white discharge.
2. After print fabric was soft to feel.
3. Fine and intricate designs were possible to create.

## Popular Fashion Trends with Discharge Prints



Strawberry Thief



Polka Dots



Custom Print T-Shirt

Disadvantages:

1. Remains of tin and formaldehyde would release in waste water as effluent if left untreated.
2. Artisans working with the chemicals would face health hazards related to skin and respiratory track over the time.

**"The environment and the economy are really both two sides of the same coin. If we cannot sustain the environment, we cannot sustain ourselves." -- Wangari Maathai**

Awareness among textile designers steadily increased regarding the development of eco-friendly discharge printing techniques aimed at minimizing the use of harsh chemicals and reducing environmental impact.

## Experimentation with Eco-Friendly Discharging Agents

- Oxalic Acid
- Hydrogen peroxide
- Enzymes
- Ozone
- Potassium Permanganate
- Digital Discharge Print
- Resist Discharge Print

Advantages:

1. Minimal impact on the environment.
2. Less likely to release harmful toxins or cause allergic reactions, which makes it safer for artisans.
3. Often biodegradable and less likely to contribute to water pollution.
4. Serves to those consumers who are increasingly seeking products that are produced using sustainable and eco-friendly practices.
5. Long-term savings by reducing the costly environmental remediation, regulatory fines, and health-related expenses.

## Conclusion

Achieving the same effect as traditional discharge printing, known for its classic appeal, is now feasible with contemporary fashion designs by employing eco-friendly discharge agents and build a sustainable future.

## References

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