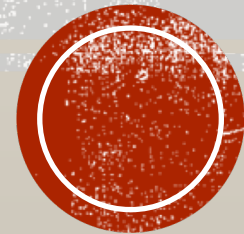


HARMFUL CHEMICAL CLOTHING

AFFECTING HUMAN SKIN AND BODY PROBLEMS

BUF 4700-Contemporary Topics In The Fashion Industry

By MINJI KIM



CONTENTS

- Chemical Compounds
- Illness caused by harmful chemicals
- How Harmful Chemicals Are Used in Manufacturing Clothing
- Solution-Alternatives
- Conclusion



CHEMICAL COMPOUNDS

- Brominated and chlorinated flame retardants:

- A chemical compound made by human

- Added to many diverse products like plastics, electronic devices

- Used for fireproof in the textile industry

- Interrupt hormone systems causing growth and sexual development issues



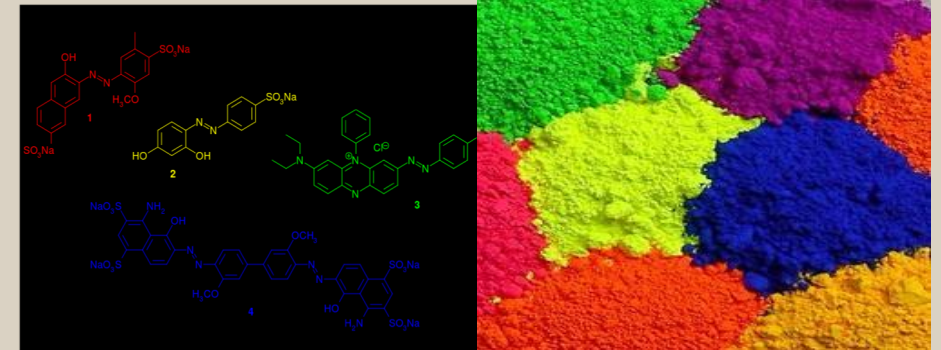
- Azo dyes:

- Molecules have two similar nitrogen atoms between carbon atoms

- Used for dyes in the textile industry

- Cause cancer when human skin is contacted to this toxic

through any textiles



CHEMICAL COMPOUNDS

■ CHLORINATED SOLVENTS:

- A substance persisting in the environment for a long time and reducing an ozone extremely
- Used to dissolve other substances when manufacture and clean fabrics
- Cause problems of the central nervous system, liver, and kidneys to humans



■ Pesticides Used For Cottons:

-**Non-organic cotton;**

- In the growing process, pesticides, chemical fertilizers, and herbicides are used
- At each stage of its production, toxic chemicals, such as harsh petroleum scours, softeners, brightener, formaldehyde, synthetic chemical dyes, and flame retardant are used
- Cause allergies, such as irritated and reddish skin



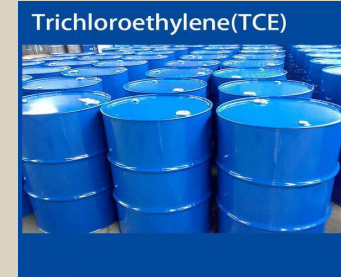
ILLNESS CAUSED BY HARMFUL CHEMICALS

- Cotton: allergies, insomnia, immune disorders, cancer, and neurological disorders by absorbing into skin through the garments
(Infants and children are in more danger than adults)
- Flame retardants: cause neurological disorders; less responsible behavior, more aggression, no pay attention, and bullying behaviors
- Dyes (Blue dyes): cause potential cancer



HOW HARMFUL CHEMICALS ARE USED IN MANUFACTURING CLOTHING

- 1st step: -fibers are cleaned and processed of spinning and weaving
-A solvent named trichloroethylene is used



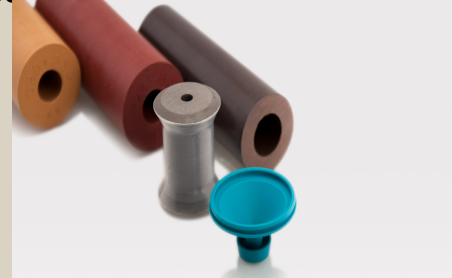
- 2nd step: -fibers are singed and scoured to remove more impurities and then do a bleaching
-a chemical named EDTA (Ethylenediaminetetraacetic acid) is used



- 3rd step: -fabrics are dyed or printed
- Vat dyes, Sulphur dyes, and Chrome dyes are used



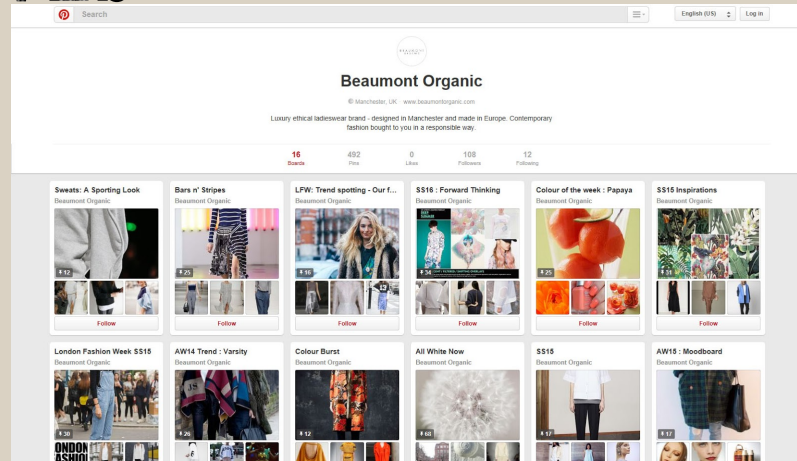
- 4th step: -finish
-fluoropolymers and triclosan(liquid) are used



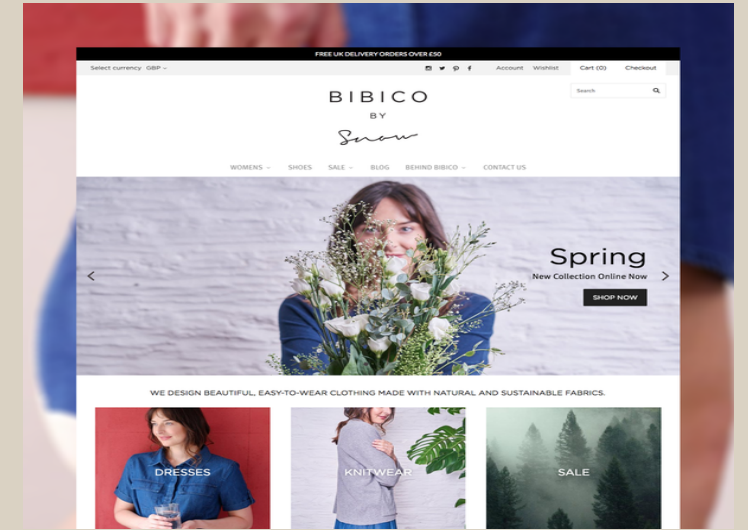
SOLUTION-ALTERNATIVES



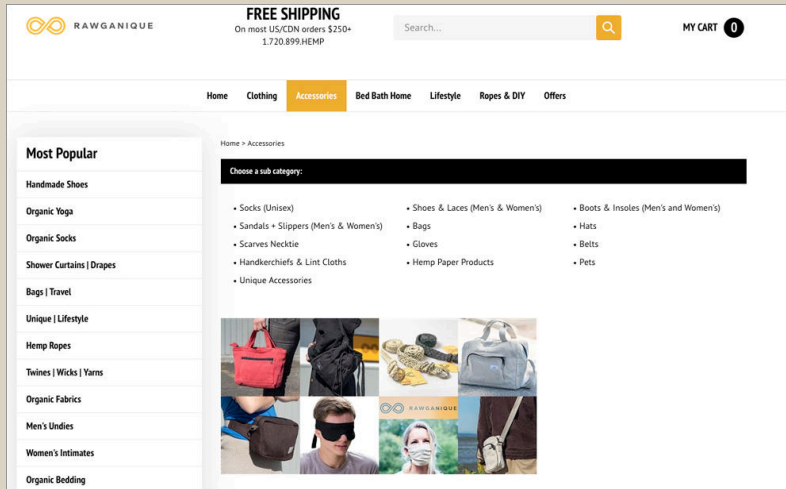
Thought (London, U.K)



Beaumont Organic (U.K)



Bibico (U.K)



Rawganique (Canada)



Synergy clothing (Santa Cruz, CA, U.S)



CONCLUSION

- So many chemicals are used when garments are produced, but there is no clear solution (alternatives). Or, although there are some alternatives, instead of using garments made with chemicals, the alternatives require customers to pay more money than normal garments since the substitutions are made with natural materials, such as organic cotton, hemp, and bamboo. So, even though brands, scientists, and experts have attempted to find alternatives so far, it seems like finding a complete substitution will take more time.

