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THE NATURAL DYES EXTRACT FROM PLANT

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●ABSTRACT

•Most of the synthetic dyes are noticeably found harmful and toxic.
•Natural dyes are obtained from natural sources such as plants, insects and minerals.
•Among all the plant based dye sources i.e. bark, leaves, flowers, seeds etc.
•The main idea of extracting dyes from plant sources is to avoid the environmental pollution.

●INTRODUCTION

• A natural or synthetic substance used to add colour to any material including textile, cosmetic products, food products etc.
•Dye is generally applied in an aqueous solution and may require a mordant to improve the fastness of the dye on the fiber.
•Natural dyes are dyes or colorants derived from plants, invertebrates, or minerals.
•The majority of natural dyes are vegetable dyes from plant sources from roots, berries, barks, leaves and other organic sources such as fungi and lichens.

●PREPARATION OF NATURAL DYES

•collect plant materials when they are at their peak of colour.
•dry them in shade.
•chop all plants materials into small piaces.
•Take requisite amount of material and water depending upon the dye source and boil maintaining the MLR.
•Boil the mixture at least for an hour.
•Strain the material and set the dye bath aside.

●Example of natural dyes●

No.	Name	Botanical name	Extracted from	Colour
1.	Turmeric	Curcuma longa	Roots	Yellow
2.	Indigo	Indigofera tinctoris	Leaves	blue
3.	Madder	Rubia cardifolia	Roots	Red
4.	Ratanjot	Alkanna tinctoria	Roots and bark	Purple
5.	Arjun tree	Terminalia arjuna	Bark	Dark Brown

●REASON BEHIND COLOUR OF DYES

● The main colour of natural dyes depends on the chromophoric group of the colourants.
●They form different colours with different mordants.
● Some plants may have more than one colour depending upon which part of the plant one uses.•
● most organic compounds, dyes possess colour because they absorb light in the visible spectrum 400-700 nm.

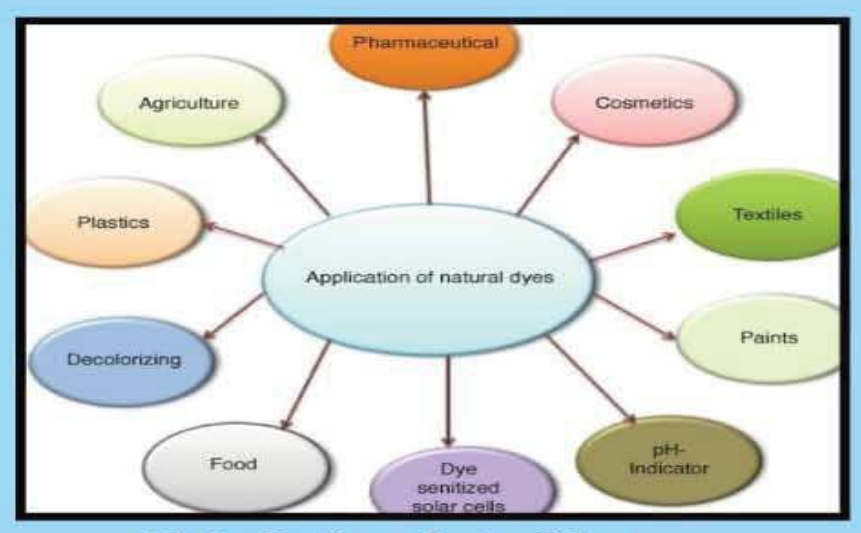

Fig:Applications of natural dyes.

●CONCLUSION

•Establishment of proper characterization and certification protocols for natural dyes would definitely improve consumer confidence in natural dyed textiles and would benefit both producers and users.
•Now the natural dyes are not substitutes of synthetic dyes. They have their own market and expansion in the market is not going to be at the cost of synthetic dyes.