ABSTRACT: The purpose of this study is to recreate the standard degradable sanitary pad with herbal finish, organic biodegradable ingredients to incorporate a more environmentally friendly alternative while upholding its absorbency through multiple sustainability tests. The multiple natural ingredients are used to recreate the standard degradable sanitary pad to create an economically friendly alternative, then the Corn fibre-based pad will have the best longevity and sustainability because organic Corn husk fibres were mixed with wood pulp in different proportion it is most likely to withhold longevity of the padding due to its good moisture management. Some of the chemical compounds in Acalypha indica cause dark chocolate-brown discoloration of blood, and its antibacterial. The herbal extraction was carried out using a standard Soxhlet extraction method. The extracts was finished onto the fibres as herbal composites using a standard dyeing procedure. The mordant sodium chloride was added to impart permanent colour to the fibres. The surface change in the fibres if any was also determined under Scanning electron microscope. As expected for the antibacterial potential of the selected herbs in the study

Keywords— sanitary pad, Corn fibre, Acalypha indica, eco friendly

INTRODUCTION
The uterus is a hollow muscular organ located in the female pelvis between the bladder and rectum. The ovaries produce the eggs that travel through the fallopian tubes. Once the egg has left the ovary it can be fertilized and implant itself in the lining of the uterus. The main function of the uterus is to nourish the developing fetus prior to birth. The menstrual cycle is regulated by the complex surge and fluctuations in many different reproductive hormones. These hormones work together to prepare a women's body for pregnancy. The hypothalamus (an area in the brain) and the pituitary gland control six important hormones. Menstrual disorders are problems that affect a woman's normal menstrual cycle. They include painful cramps during menstruation, abnormally heavy bleeding, or not having any bleeding. Menstruation is a process in which woman discharge blood and other material from the lining of the uterus at an interval of about 28 to 35 days from puberty until menopause. It causes serious problems to the women if not managed properly. This menstrual discharge can be absorbed by some absorbent material. The functional requirement of a feminine hygiene product is to absorb and retain the menstrual fluid so that back tracking of fluid does not happen and at the same time it should be odor free. Most often cotton flannel, bamboo, or hemp. Most styles have wings that secure around the underpants, but some are just held in place (without wings) between the body and the underpants. Infrequently changing a sanitary pad can lead to an infection and result in symptoms such as itching, swelling, and abnormal vaginal discharge. So there is a need to develop techniques to impart antimicrobial agents to the textile substrates, There are many natural products which show antimicrobial
properties. The main objective of this study was to evaluate the antimicrobial properties of Acalypha indica herbal finished textile fibers for the development of sanitary napkins

OBJECTIVES OF THE STUDY

Sanitary napkins to protect the skin

There are several potential causes of a rash due to wearing a pad. They include friction, an allergic reaction to the pad’s materials, and irritation from heat and moisture. The purpose of a sanitary pad is to trap and collect menstrual fluids as they exit the vagina. The trapped moisture and heat can irritate the vulva and cause a rash. So Acalypha indica properties will help protect the skin from allergic reaction. There are several medicinal uses for skin disease.

CORN FIBRE

Corn silk is a common Stigma maydis, the shiny, thread-like, weak fibers that grow as part of ears of corn the tuft or tassel of silky fibers that protrude from the tip of the ear of corn. The ear is enclosed in modified leaves called husks. Corn is available in both spun and filament forms in a wide variety of counts from micro denier for the finest lightest fabrics to high counts for more robust applications. It is derived from naturally occurring plant sugars. Corn silk contains a variety of pharmacologically-active compounds and as such is used in many types of folk medicine, including as a diuretic and as an inhibitor of melanin production.

Corn fiber balances strength and resilience with comfort, softness and drape in textiles.

Corn also uses no chemical additives or surface treatments and amazingly, is naturally flame retardant. Fiber filament is said to have a subtle luster and fluid drape with a natural hand offering a new material to stimulate creativity. The fabric made from corn fibre is easy to care for, cheap and very comfortable to wear. Moreover, it is stain-resistant and UV resistant. Moreover, the production of this fabric requires the use of less fuel, and is hence environment-friendly as well.

ACALYPHA INDICA

Acalypha indica is an herbaceous annual that has catkin-like inflorescences with cup shaped involucres surrounding the minute flowers.

It can grow up to 1.2 m (3.9 ft) tall in favorable circumstances, but is usually smaller. The leaves are broad ovate, 1.2 cm–6.5 cm × 1 cm–4 cm (0.47 in–2.56 in × 0.39 in–1.57 in). The leaf base is rounded to shortly attenuate. The leaf margin is basally 5-nerved and is crenate-serrate with an acute or obtuse apex. The petiole is 1.5–5.5 cm (0.59–2.17 in) long. The flower spikes are axillary, 2.5–6 cm (0.98–2.36 in) long, monoeocious, with a rachis terminating in a triradiate hood. It grows in disturbed places such as waste lands, road sides, crevices in walls. It also grows in rocky hillsides, forest edges and river banks. It prefers moist and shaded places. The plant has many traditional medicinal uses. In Madagascar, the crushed plant is used for skin parasites. In Mauritius, the sap of crushed leaves mixed with salt, or a decoction of plant, is used for scabies and other skin problems. In the Seychelles and Réunion, a root infusion or decoction is taken for asthma, and also to clean the liver and kidneys. The root decoction is also taken for intestinal worms and stomach ache. The leaf sap is taken as an emetic. An infusion together with the roots of Tylophora indica is taken in Réunion as an emetic in the case of poisoning. A leaf infusion is also taken as a purgative and vermifuge in Réunion and Madagascar. In East Africa sap of the leaves is used for eye infections. Leaf powder is used for maggot-infested wounds. Acalypha indica is listed in the Pharmacopoeia of India as an expectorant to treat asthma and pneumonia. Some of the chemical compounds in Acalypha indica cause dark chocolate-brown discoloration of blood, and gastrointestinal irritation in rabbits. Ingestion of Acalypha indica may lead to hemolysis in people suffering from glucose-6-phosphate dehydrogenase deficiency. Acalyphin is used as a substitute for ipecacuanha, a vermifuge, expectorant and emetic.
MATERIALS AND METHODS

Acalypha indica herbal finished sanitary napkins

Corn Fibre

Treatment of Acalypha indica (Acalypha indica herbal finish)

Construction of sanitary napkin

PROCESS OF THE SAMPLE

Introduction
Corn fiber is a sustainable and soft. Corn fiber balances strength and resilience with comfort, softness and drape in textiles. The fiber filament is said to have a subtle luster and fluid drape with a natural hand offering a new material to stimulate creativity.

Methodology
The main purpose of Acalypha indica herb uses. It help to product the skin from various skin disease while wearing a single pad for long time. It must be eco-friendly and biodegradable. The material chosen for Sanitary napkin corn fiber have softness and good absorbent properties.

Process
At first, coir fibre is taken and vetiver (Chrysopogon zizanioides), which has the properties of absorbing heat and odour also has many ayurvedic properties in it. This is chosen as a primary process and both fibres are blended. This taken as a middle layer. After that, essential oil (lavender oil) is applied as finishing on non-woven fabric. This helps to remove bad odour from the car. Then, it is given as a middle layer and non-woven fibre is used as a top and bottom layer of the car floor mat. It is washable and biodegradable, and finally, the top, middle and bottom layer are sewn at the edge.

III. RESULTS AND DISCUSSION
RESULT AND DISCUSSIONS
The prepared car floor mat is taken and the samples are tested for further usage. The washability of the car mat is tested. The odour absorbing capacity is also to be checked.

Physical properties
The physical properties of the car floor mat, the diameter of coconut fibres is approximately same and magnitudes of tensile strength are quite different. There are variations in properties of coconut fibres, and Chrysopogon zizanioides. So these both coir fibre and Chrysopogon zizanioides is blended together to get better good properties. The washability of car mat, 4-5 washes. The outer coconut fibre had a higher elongation property which could makes it to absorb or withstand higher stretching energy as compared to the inner coconut fibre. The fragrance withstand for 2-3 washes.

Chemical properties
Coconut fibres contain cellulose, hemi-cellulose and lignin as major composition. These compositions affect the different properties of coconut fibres. The pre-treatment of fibres changes the composition and ultimately changes not only its properties but also the properties of composites. Some times it improves the behaviour of fibres but sometimes its effect is not favourable.
CONCLUSION

The versatility and applications of coconut fibers in different fields is discussed in detail. Coconut fibers are reported as most ductile and energy absorbent material. It is concluded that coconut fibers have the potential to be used in composites for different purposes. Various aspects of many coconut fibers reinforced composites have already been investigated; and the economical and better results are achieved as reported by many researchers. Since the use of coconut fibers has given some marvellous products, there is still possibility of the invention of new products containing coconut fibers with improved results. In civil engineering, coconut fibers have been used as reinforcement in composites for non-structural components. There is a need of investigating the behaviour of coconut fibre reinforced concrete to be used in main structural components like beams and columns. The coir and vetiver (Chrysopogon zizanioides) are blended together. Non woven fabric is choosen as top and bottom layer. Non woven fabric is taken as middle layer and finishing is given using essential oil. The essential oils like lavender oil, rosemary oil and eucalyptus oil is used as non woven fabric as middle layer. This is used to prevent insects, bad odour and vetiver is used to control heat from car. This car floor mat is made by natural and ayurvedic (vetiver). It is bio-degradable and it controls smell, heat and insects away. This is easily washable car floor mat.

V.REFERENCES ARTICLE

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