DISCUSSION

Use of herbal products is the delightful way to prevent from chemically made susbtances and their side affects but these susbtances are becoming contaminated because of some negative aspects. The study was carried out to explore the ways of contamination and the kind of contamination. Herbal products usually resist the gowth of microorganisms due to their medicinal properiesy. But some herbal products like herbal shampoos are less susceptible to contamination than other products presumably because they contain surfactants only. Viable bacterial count was not recovered from herbal shower bath soaps, herbal facial cleanser, hand, herbal body lotion and herbal shampoos,respectively. Only 2% of herbal Neem soap were was heavily contaminated by aerobic spore forming bacteria (bacilli), while non of the others contamined with such as huge number of bacteria. Related to the averagearray contamination levels,5% of herbal Mehandi showed bacteria, compared to 2% of hand and herbal body lotion which were contaminated to same extentwere recovered from one sample of herbal shampoos; *Staphylococcus aureus* was recovered from 4 samples. One isolate of *Asperguillas* was also detected in sample of herbal face wash. One isolate of *E.coli* was also detected in a sample of herbal cleanser. The pH of all the tested samples was alkaline pH (6.5-7). Bacterial contamination in new herbal cosmetic products is common because of the surroundingin which the products are manufactured and packed. Herbal ornamental ingredients are affluent in nutrients and these supplynaturalsubstrates in the variety of sugar, starch, protein, amino acid,organic acid lipid etc. for microbial growth. Organisms such as *Pseudomonas putidesses* posse a mixed functions oxidase enzyme that enable them to utilizes substrates that many other organisms are unable to use.The ability of microorganisms to utilize substrates depends upon their survival strategies. The nutrients needed by organisms include nitrogen, sulphur, phosphorus and mineral. The materials are required for enzyme function and cellular osmorgulation are furnished as components or raw matererial or in water. Water is amajor medium in many cosmetic products and it has been the source of finished product contamination. Generally,microorganisms of interest in raw materials or herbal cosmetic products grow best around neutral pH7.0 and many yeasts are able to tolerate acidic conditions.Natural herbal cosmetic ingredients supply nutrients for microbial growth.Therefore, herbal cosmetics should be produced in a prefectly clean hygienic environment.

CONCLUSIONS

Cosmetic item tainting is an exceptionally regular happening to spread disease. Shockingly, most clients are essentially unawareabout the security risksconnected with items that they utilize each day. The important points should be taken under the cosideration found in this study and expanded use of natural cosmetic agents in the general public, alongside low valueprocedures taken by the producers and sellers leave an incredible question mark on the security of these products' safety.

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Screening of *Escherichia coli* O157 Strain from Stool Samples in Karachi, Pakistan

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ABSTRACT

***Escherichia coli* are the leading non-pathogenic flora of the human intestine. However, some *E. coli* strains have developed the capability to cause infection in gastrointestinal, urinary, or central nervous system in human hosts. O157 strain is an in frequent source of infection, although it can be severe and may lead to a serious intestinal infection along with bloody diarrhea. Most of the people fully convalesce from a O157 infection. However, in only some people, it can be lethal. In this study, the rapid detection method of *Escherichia coli* O157 in feces by using the latex agglutination test kit (Remel-wellcox) and latex agglutination reagents (Remel-wellcolex,) was studied. The latex test was found to be a straightforward, highly competent and reliable test for detecting *E. coli* O157. Out of 52 samples, 20 samples were tested positive tested. The existence of O157 positive clinical sample appeared to be an indicator of presence of this hemorrhagic strain. For the strains of *E. coli* O157 latex reagents used with high (100%) sensitivity and specificity. Our results revealed that the commercial latex reagents are fine substitutes to typical serologic methods for categorizing the O157 antigens of *E. coli*.**

Keywords: *E. coli O157, Remel latex agglutination test, wellcolex latex agglutination test.*

INTRODUCTION

Escherichia coli is a widespread inhabitant of the gastrointestinal tract of humans and animals. *Escherichia coli* are effortlessly grown in the clinical laboratory, although the characterization of the different pathogens involves detection of virulence factors that are not normally available in all clinical laboratories. *E. coli* is one of the best understood and exemplified living organisms along with laboratory studies from biochemical, physiological and genetic view point (Trabulsi *et al.*, 2002).

Some types of *E. coli* are relatively harmless and they live in the intestines as a normal flora without causing any problems. However, other types of *E. coli* may cause intestinal infections. The pathogenic strains of *E. coli* release a poisonous substance known as toxins. The toxins released by *E. coli* damage the intestines and cause inflammation. Among the intestinal pathogens there are six well-described categories: entero pathogenic *E. coli* (EPEC), enterohaemorrhagic *E. coli* (EHEC), entero toxigenic *E. coli* (ETEC), entero aggregative *E. coli* (EAEC), entero invasive *E. coli*(EIEC) and diffusely adherent *E. coli* (DAEC)(Stephen, 2009). The *E. coli* pathotypes can also cause infections in animals employing many of the same or unique virulence attributes that are present or absent in human strains. (Hartland and Leong, 2013; Jelacic *et al.*, 2008).

E. coli O157 is the most widespread part of pathogenic *E coli* strains known as Entero-haemorrhagic, Verocytotoxin-producing, or Shiga-toxin-producing strain. The infection caused by EHEC O157:H7 includes; asymptomatic mild infection with uncomplicated diarrhea. Screening of EHEC O157:H7 is usually made by biochemical characterization of *E. coli* isolates, serological tests for O157, and H7 flagellar antigen detection by agglutination with the respective anti-serum. Presumptively positive strains are further confirmed by molecular techniques,