

<b>Project Title- 4</b>	<b>Breathability of Woven Surgical Gowns Treated with Nano Finishes(Anti Microbial &amp; Blood repellent finishes)</b>
<b>Principal Investigator</b>	Dr.K.P.Chellamani
<b>Cost</b>	Rs.25.00 lakhs
<b>Date of Commencement</b>	01.10.2009
<b>Duration</b>	24 Months
<b>Date of Completion</b>	30.09.2011
<b>Abstract</b>	<p>Surgical gowns &amp; surgical face masks are important components of surgical apparels. They are expected to perform as barriers and provide increased protection to the health care workers. These continues to be a growing demand from operation theatre staff for improved security and protection against blood and liquid borne pathogens, especially against viruses such as Hepatitis B.</p> <p>On a global basis, single use non-woven products are now used in about 60 – 70% of all surgical interventions<sup>1,2</sup>. Several studies have confirmed the superiority of single use surgical products in terms of resistance to bacteria.However, in India, majority of the hospitals use only woven products for surgical apparels (particularly surgical gowns). The woven gowns are washed and sterilized before use.In 90% of the hospitals, where woven products are used as surgical gowns, they are used without any functional finishes. The argument against finishing the surgical gowns is that finishing brings down the breathability of the surgical gowns and hence they are not comfortable to wear.</p> <p>Recently, nano finishes were introduced in the market and as per claims<sup>3</sup> nano finishes do not affect the breathability of treated fabrics. However, no published data is available in this aspect.</p> <p>The present study is proposed to generate relevant information in this area.</p>
<b>Highlights</b>	<p>To investigate and identify appropriate nano finishes towards providing anti-bacterial and blood repellent characteristics to woven surgical gowns</p> <p>To study the relative advantages of nano finishes (over conventional finishing chemicals) in terms of breathability (air permeability, water vapour transmission and wickability) of treated fabrics.</p>
<b>Area of applicability</b>	Medical textile
<b>Target beneficiaries</b>	Hospitals : Health care workers
<b>Status</b>	Ongoing