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Study the Mechanical Properties of Starch-Silicone Rubber Composites Using in Prosthetic Liners

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Abstract:Composites materials works to improve the physical properties of materials used in the manufacture of prosthetic liners, therefore the aim of this project is to enhance the mechanical properties of starch-silicone rubber composites that makes it prosthetic liners, so we have to add the different percents of the starch to the silicone rubber to determine the right addition for manufacturing high-performance to it. The optimum result shows 5 % of starch because it gives the highest mechanical properties.As detailed, the presence of filler tended to increase the hardness of the samples whilst reduce the tensile and tear strength. Starch is extremely hydrophilic, this leads to absorbing the accumulated sweat between the liner and stump besides that its used to reduce the cost.

Keywords :Silicone rubber; Composites; Starch.

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