

**Abstract:**

Five plaster and one fiberglass casting bandages available on the Kenyan market were evaluated for breaking strength and resistance to abrasion. Under the test conditions, scotchcast was found to be 2.6 times stronger than the strongest plaster of Paris preparation when the load per unit thickness was compared and was significantly different from the plaster casts in terms of maximum load ( $p = 0.0001$ ). Among the plaster products, there were significant statistical differences ( $p = 0.029$ ) in maximum strength with Helm and Plasrun-gyps withstanding the greatest load. Scotchcast was the most resistant to abrasion while among the plaster product, Salvaplast and POP-Nairobi Enterprises showed satisfactory resistance. Helm, Plasrun-gyps and Veronese proved least resistant under the testing conditions.