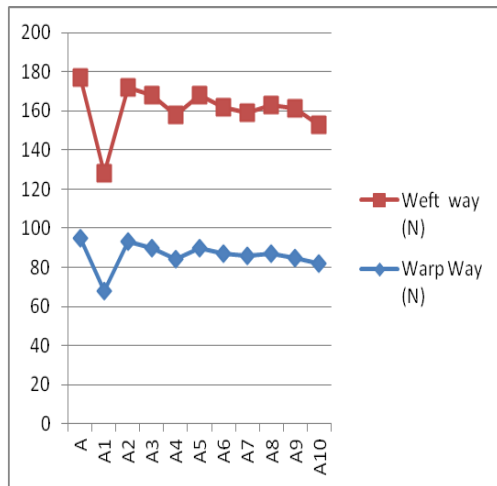


4.2 Effect Of Btca / Cd On Tensile Strength:

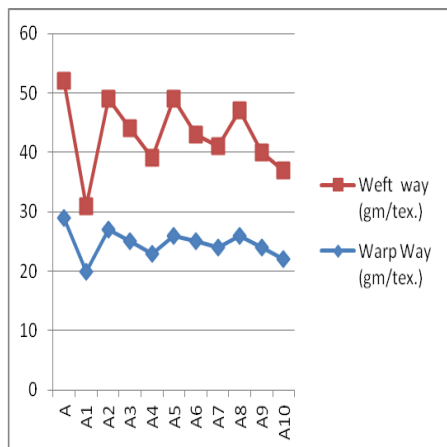
The tensile strength of the fabric refers to its resistance to tensile force. The breaking strength of a fabric is used both for quality control and as a performance test. For industrial and other purposes where the fabric is subjected to high tension, it is proper that breaking strength be measured. In case where the fabric isn't called upon to withstand large tensile force, breaking strength is often used to provide a central check on quality of a woven fabric. In this project, the tensile strength of untreated and BTCA treated fabrics was determined with a tensile strength tester according to ASTM Test Method D 5035. From this project, BTCA is affected tensile strength, when concentration of BTCA is increase; tensile strength of treated fabric is decrease, when compare to DMDHEU, BTCA shows less tensile strength loss due to the formation of more cross linking. Cyclodextrin not impact on the tensile testing behaviour.



Fig*. III: Tensile Strength of BTCA, DMDHEU and CD Treated & Untreated Fabric

4.3 Effect Of Btca / Cd On Tearing Strngth Test:

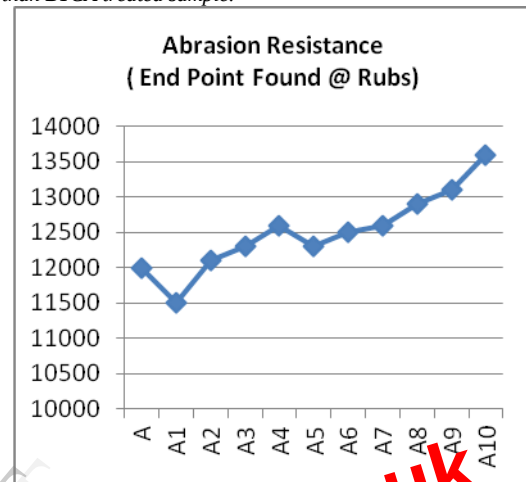
Tear resistance is one of the important properties of the fabric. Tear strength of a fabric refer to its resistance to tearing force. For all flat sheets like materials such as fabric, plastic film and papers, the breaking strength of the material is far greater than its tear resistance. While it may be difficult to introduce a tear in any of these materials usually the tear propagated at a relatively low load. This project the tearing strength of untreated and CD / BTCA treated fabrics was determined with a Elmendorf tear strength tester according to ASTM Test Method D 1424. For this project, BTCA is affected 6-9 % of strength loss when we use 8% of BTCA, whereas DMDHEU treated fabric have strength loss is 15 to 20 %; whereas the CD is significantly affect the strength of the fabric.



Fig*. IV: Tearing strength of BTCA, DMDHEU and CD Treated & Untreated Fabric

4.4 Effect Of Btca / Cd On Abrasion Test:

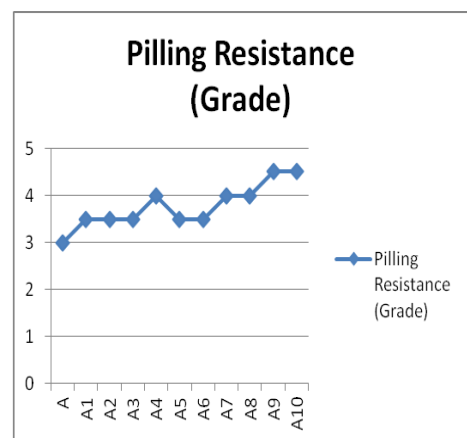
Abrasion is the wearing a way of any part of a material by rubbing against another surface. Adequate abrasion resistance of textile materials is essential for customer acceptance and stratification. This Martindale apparatus is designed to give a controlled amount of abrasion between fabric surfaces at comparatively low pressures in continuously changing directions. The results of this test should not be used indiscriminately particulars not for comparing fabrics of widely different fiber composition or construction. This present study of abrasion resistance BTCA, CD treated fabrics was determined with a Martindale abrasion resistance tester according to ISO 12947-2- 1999 method. DMDHEU treated sample cause more abrasion than untreated sample and the due to less cross linking nature of CD, the sample cause less abrasion than BTCA treated sample.



Fig*. V: Abrasion resistance of BTCA, DMDHEU and CD Treated & Untreated Fabric

4.5 Effect Of Pilling Tendency

Visual evaluation of the samples revealed that the pilling of fabrics untreated lyocell was better than that of the one which underwent the various wet treatment process. Lyocell fabric laundered ten times as per the AATCC 135-2004 standard, and then observes the pilling grades. As per the ISO 12945-1 standard, the grade 5 represent the outstanding pilling resistance, as well as 1 represent the poor pilling resistance, in general the cross linking cause more pilling especially in case of DMDHEU treated sample than untreated but due to the peculiar nature of CD and BTCA such instance is not occur; however, the sample shows better pilling tendency for CD/BTCA treatment.



Fig*. VI: Pilling resistance of BTCA, DMDHEU and CD Treated & Untreated Fabric