Studies on unconventional Chiengora Fibres and Its Blends for Textile Applications.

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The study is concerned with the characterization of chiengora fibres from hairs of five different dog breeds, analysis of spinnability and production of knitted and nonwoven fabrics of chiengora fibre blends to deduce usability of chiengora fibres. The study reveals that the chemical, morphological and thermal properties of the hairs of five breeds are similar to each other. Only hairs of lhasa apso and pomeranian breed have good machine spinnable characteristics due to their finer denier and higher slenderness ratio and can be machine spun into yarn to create textile products. The chiengora fibres from lhasa apso (L) and pomeranian (POM) are made into yarns based on their comparatively better properties in association with polyester (P) and acrylic (A) and their yarn characteristics were evaluated. The chiengora yarn and its blends are compared with wool (W) yarn and its blends. The yarn characteristics of chiengora fibres are observed to be similar to wool. However the yarn quality index (YQI) of 75/25 and 50/50 lhasa apso polyester were found to be better indicating their suitability for further usage. The chiengora yarns are knitted to fabrics and the properties of these fabrics are ascertained and compared with the properties of developed knitted wool fabrics and its blends. The 75/25 lhasa apso polyester fabrics can be considered as the better blend proportion than other produced fabrics due to their better yarn properties, comfort properties and higher TIV than wool. The chiengora fibre (Lhasa apso) nonwovens and its blends are developed and their properties are measured. Their properties are compared with developed woollen nonwovens and their blends. The research findings indicate that the chiengora fabrics can be used for thermal and sound insulation purpose effectively for textile and industrial applications. The studies indicate that chiengora fibres need not be discarded as a waste and can be effectively utilized as thermal wears.