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**Micro-Compounding of ABS/PA6 Blends Based Nanocomposites:  
The Effects of Screw Geometry and Processing Conditions**

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The micro-compounders, which serve as cost and time efficient research facilities, provide possibilities of processing a few grams of material and they have the capability of continuous or batch processing with the same thermal environment as a conventional extruder. It enables you to use these micro-compounders as a fast screening tool in the field of polymer based nanocomposite development. In this study, the DSM Xplore 15 ml micro-compounder is used as a processing tool. The effects of screw geometry of the micro-compounder on the properties of nanocomposites produced from ABS/PA6 blends compatibilized with an olefin based copolymer and organo-clays are studied. The blend composition and clay content are used as the material parameters; screw-speed and screw geometry are used as processing parameters. By changing these parameters, the dispersion of the nanoclays together with the structure of the blend are examined in terms of mechanical properties and morphology.