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Carbon fibers are ingredients for the rigid composite material used in aerospace and other applications. It is very important to ensure the strength of carbon fibers to meet the required standard. Lio et al. (2014) studied Burr type-X distribution for percentile quality control charts of carbon fibers through maximum likelihood estimator (MLE) and moment method estimation (MME). However, both MLE and MME did not provide close mathematics forms for the estimators of percentiles. Therefore, three additional methods, estimator based on percentile, least square method, and weighted least-square method, is used in this paper. Empirical distribution data were collected through simulation using R language. Stimulation was carried out with different sample sizes, and different percentile of interest. Two thousand bootstrap repetitions, $B=2000$, had been used to determine the control limits for each bootstrap chart. The collected ARLs, UCLs and LCLs through stimulation can be compared with all proposed control charts and two existing procedure by Lio, et al.(2014) to monitor carbon fiber strength quality in terms of average running length for in-control and out-control procedures. (Received September 07, 2017)