

Conventional Experiments	Simulation Experiments
Conventional experimentation is based on statistical model with mathematical calculations	Simulation experimentation is based on underlying science theories and physics principles
Conventional approach fail to realize the characteristics of the particles at any given point of time	Simulation approach tracks and records the characteristics & behavior of any particle and any number particles during experimentation execution
This may be fast in deriving the results, but cannot capture failures & issues	Simulation experimentation models are little slow in arriving results, but establishes high accuracy in predicting outcome, failure root causes and allows strategical corrective actions implementations
Material qualification which suits to product development cannot be accessed	Material calibrations is possible to recommend specificity of materials which suit end product development
The results are based only on empirical models (mathematics)	Physics based methods such as DEM (Discrete Element Method), CFD (Computation Fluid Dynamics, FEM (Finite Element Method) uses principles like Mass, Momentum, Energy
Little scope to establish correlation between critical process	High scope and can clearly establish correlation between critical processes
Conventional doesn't guarantees reducing experimental burden	Simulation reduces experimental burden