



Across

2. Information recorded from experiments to guide scale decisions
5. Amount of product obtained relative to input materials
8. Mathematical representation used to predict scale-up behavior
9. Adjusting variables to achieve best performance in scale up
11. Ensuring operations do not pose undue risk during scale up
12. Devices that measure and monitor variables in scale-up trials
14. Rate at which material is processed in a pilot system

Down

1. Confirming that pilot results meet design expectations
3. Computer-based mimicry of process conditions before physical testing
4. Planning layout and specifications of a pilot facility
6. Vessel where chemical transformations are carried out during scale up
7. Combining ingredients uniformly to ensure consistent reaction
10. Energy transferred to raise temperature during process trials
11. Collecting representative portions for analysis during testing
13. Limited quantity production run preceding larger manufacturing