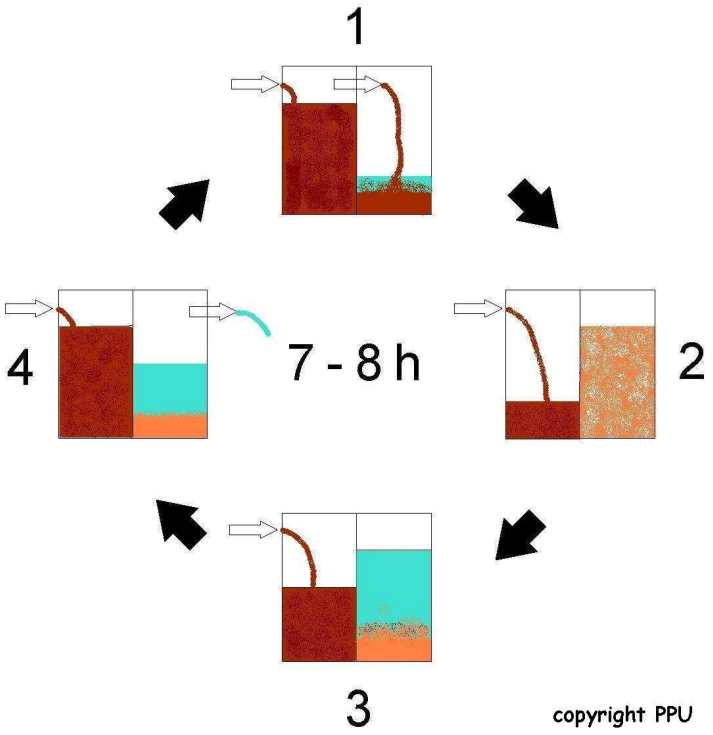
SBR-technology

The **sequencing batch reactor** process (SBR process) is a variation of the conventional activated sludge process. The SBR consists of a reaction chamber that initially serves as a biological reactor and then as a sedimentation tank. In contrast to continuous-flow reactors, the SBR is filled and emptied discontinuously. The traditional spatial separation of the biological processes and sedimentation is replaced by a temporal one. The interval betaken the beginning of the filling process and the end of the extraction of clearwater and a possible rest period is called a cycle.

The SBR cycle is characterised by a sequence of successive process phases. The hydraulic decoupling of the SBR process makes it possible to design the duration, frequency and order of the cycle phases variably. The cycle starts with the filling phase in which the initial breakdown processes begin under anaerobic or anoxic conditions. In the actual decomposition or reaction phase the reactor is aerated. Depending on the purification goal, non-aerated phases can also be introduced. Then comes the sedimentation phase in which the activated sludge settles and a layer of clearwater forms. The clearwater is extracted in the sedimentation phase. The cycle then starts over again. The SBR process does not require a secondary purification phase.



1. Filling phase (biological reactor)
2. Purification phase
3. 60-minute sedimentation phase
4. Clearwater extraction phase

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