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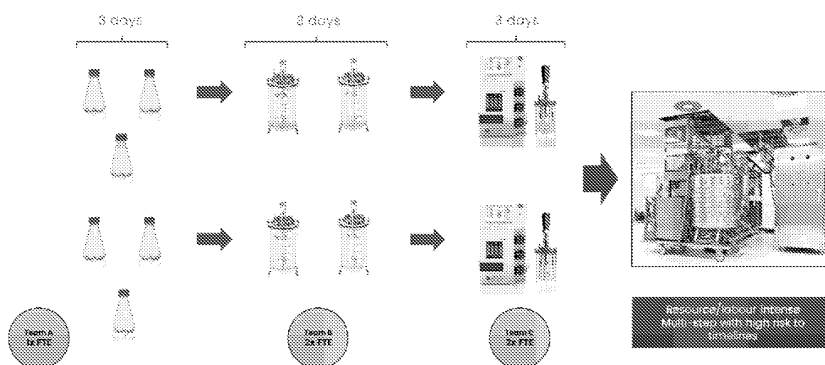
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(54) Title: CELL CULTURING SYSTEMS AND METHODS

Figure 1



(57) Abstract: The invention relates to methods and apparatus for culturing cells. There is provided methods and apparatus for providing a seed train comprising a chemostat, turbidostat or auxostat and methods and apparatus for medium exchange during culturing using gravitational settling separation.