

MORE THAN 15 YEARS OF CONTINUOUS PROCESSING USING CHEMOSTAT CULTURES. A SHIRE NICHE?

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The poster summarizes Shire's almost unique approach using continuous chemostat cultures for routine commercial production of blood clotting factors. It describes the process, the technology and background on the reasons for applying this approach. In addition the poster covers obstacles and challenges Shire was facing over the last years using continuous culture including transfer and scale up. Finally it elaborates on the different control strategies, Chemostat ($D=\text{constant}; \mu=D$) versus Turbidostat (Cell density is constant), and how Shire improved these microbial concepts for animal cells by inventing the concept of the Cell specific Dilution Rate:

($\frac{D}{\text{Cell Density}} = \text{constant}$).