PCA based temperature controller was used to control Ethanol concentration produced in Yeast fermentation process. The controller was designed at a specific operating point and its disturbance rejection performances were studied. Substrate inlet temperature proved to be the most significant disturbance input from the analysis of open loop responses. Q-statistic (SPE) of process measurements confirmed that in the face of disturbances and noise the process could be held to the specific operating condition using the controller designed in subspace.
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Control of Yeast Fermentation Bioreactor in Subspace


**Index Terms**

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**Keywords**

Principal Component Analysis  bioreactor  subspace