

## Temperature dependence of product composition

The Combustion model was used.

The following were simulated using the following initial concentrations

Cellulose – 0.40

Hemi-Cellulose – 0.3

Lignin – 0.3

Initial Char (if needed) –  $10^{-6}$

In the graphs the following color coding is used

Blue – 600°C

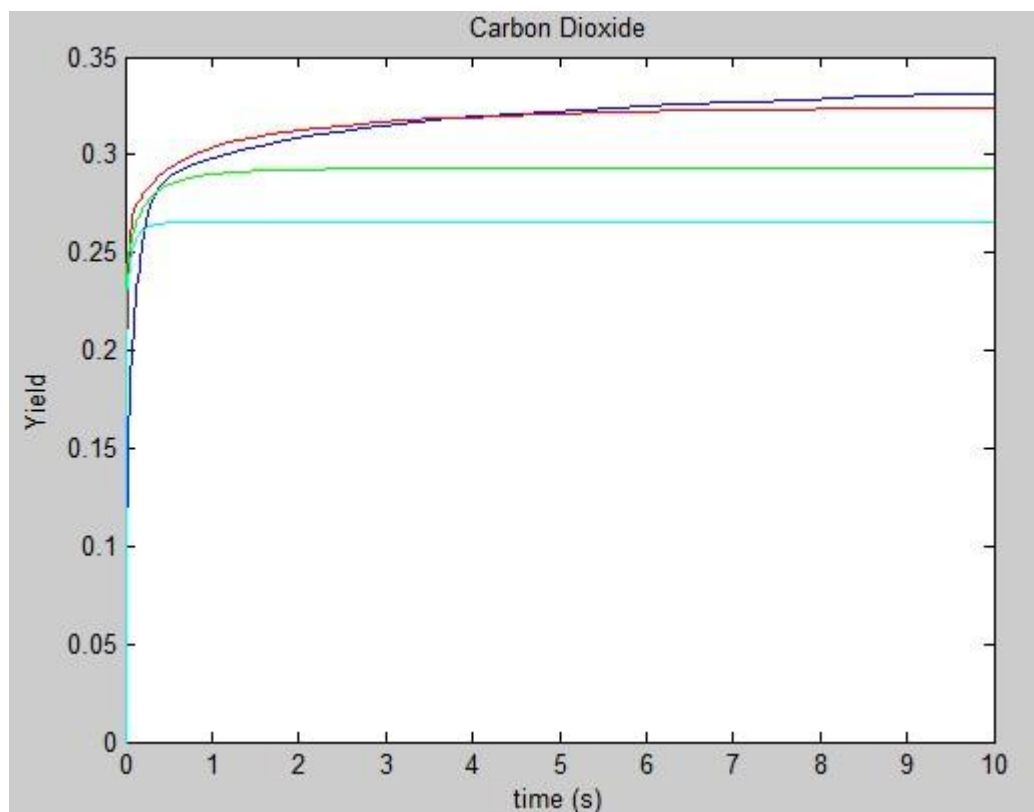
Red – 700°C

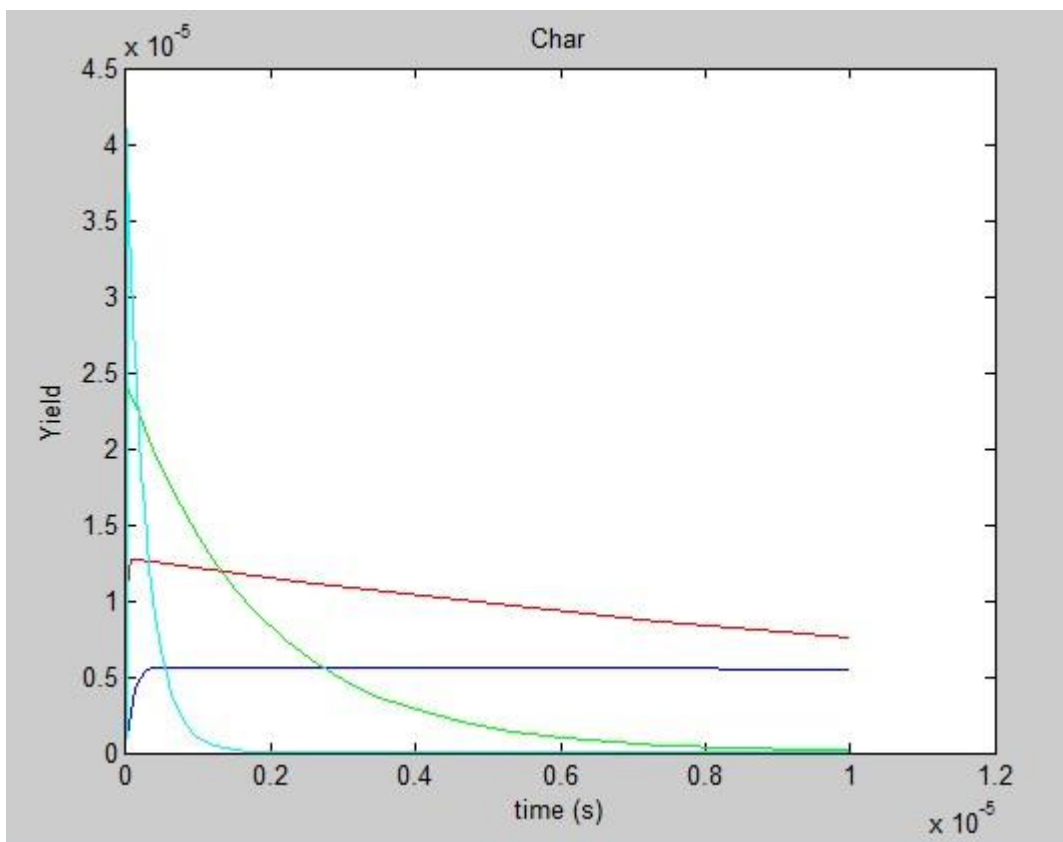
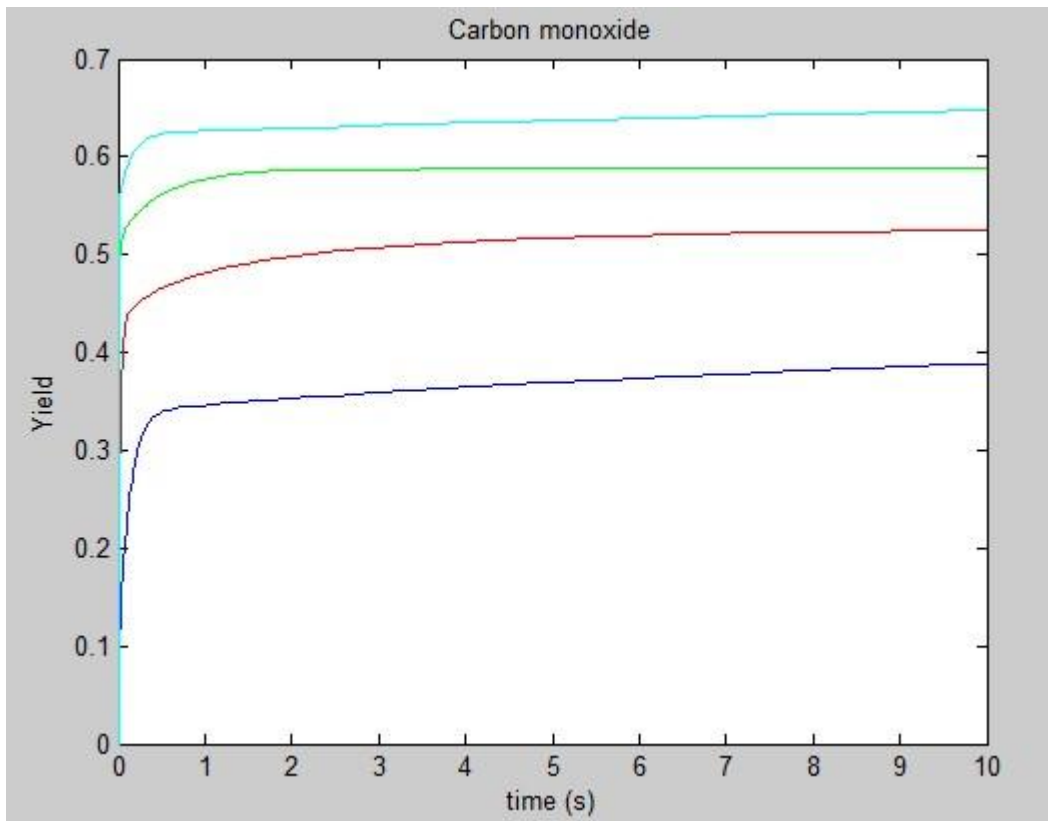
Green – 800°C

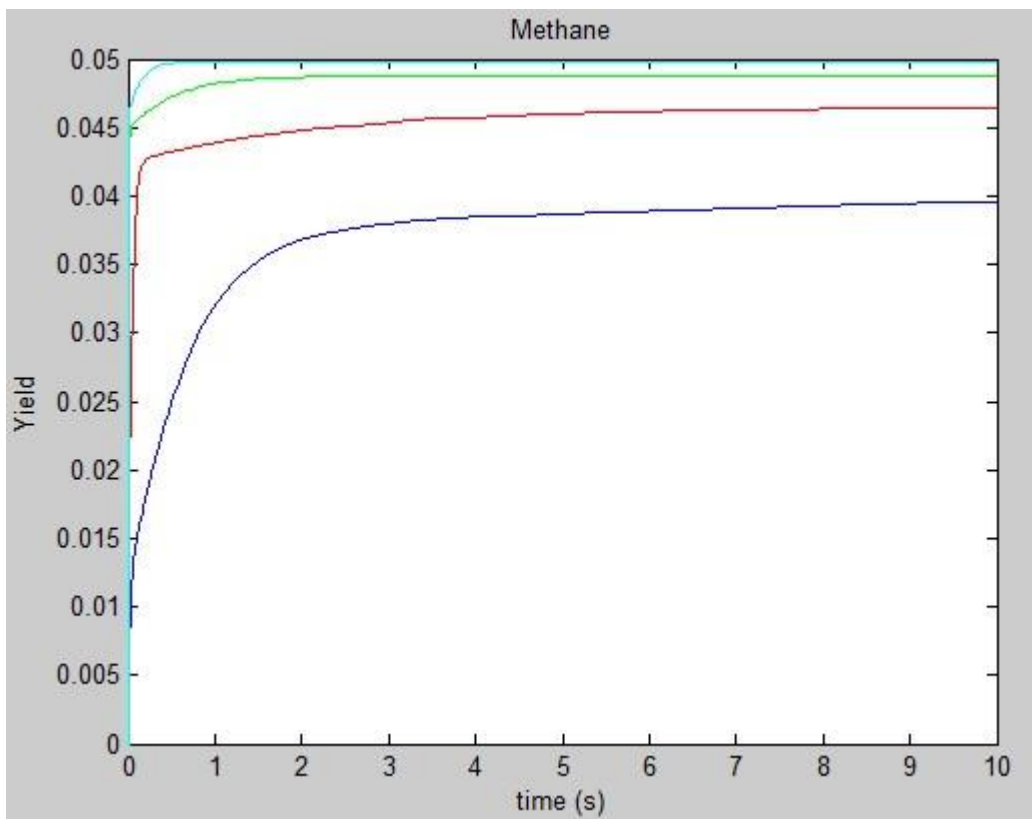
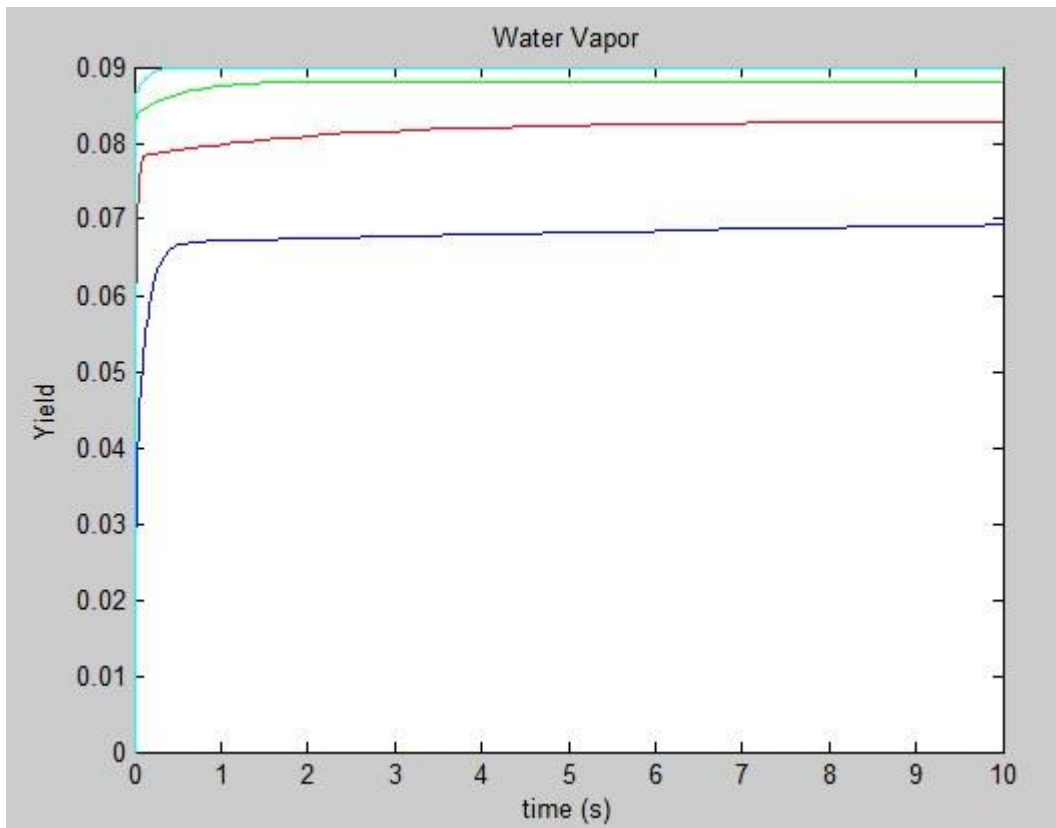
Cyan – 900°C

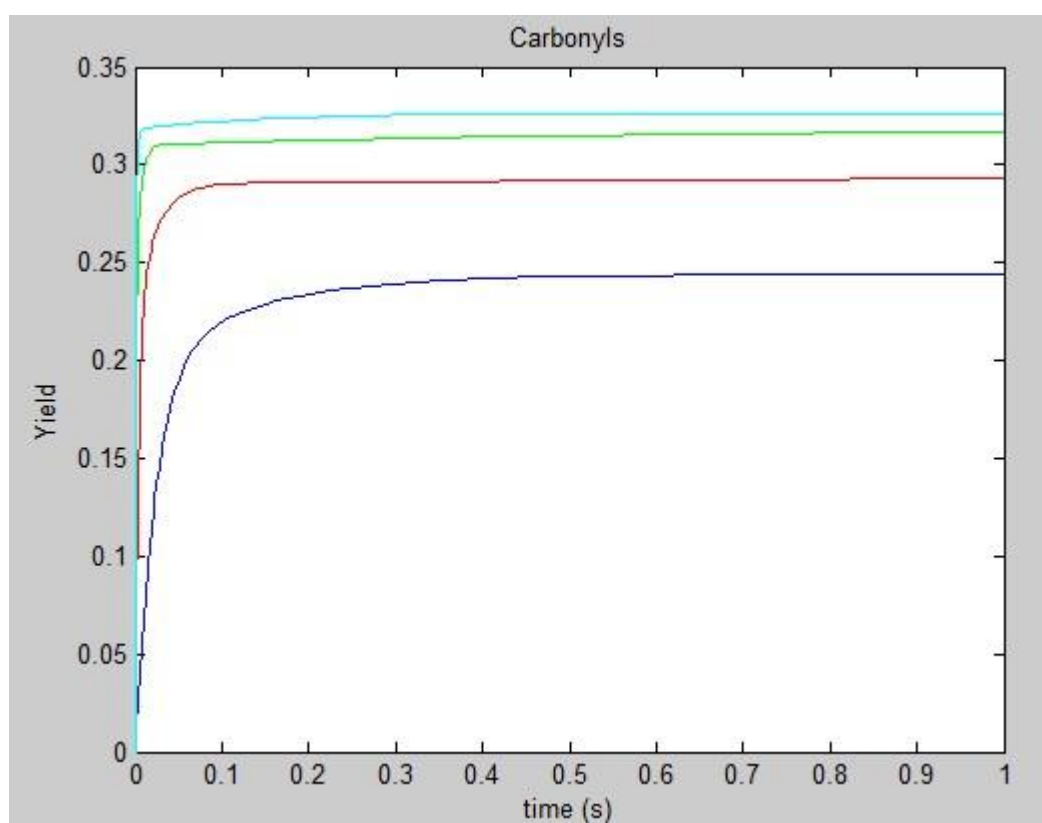
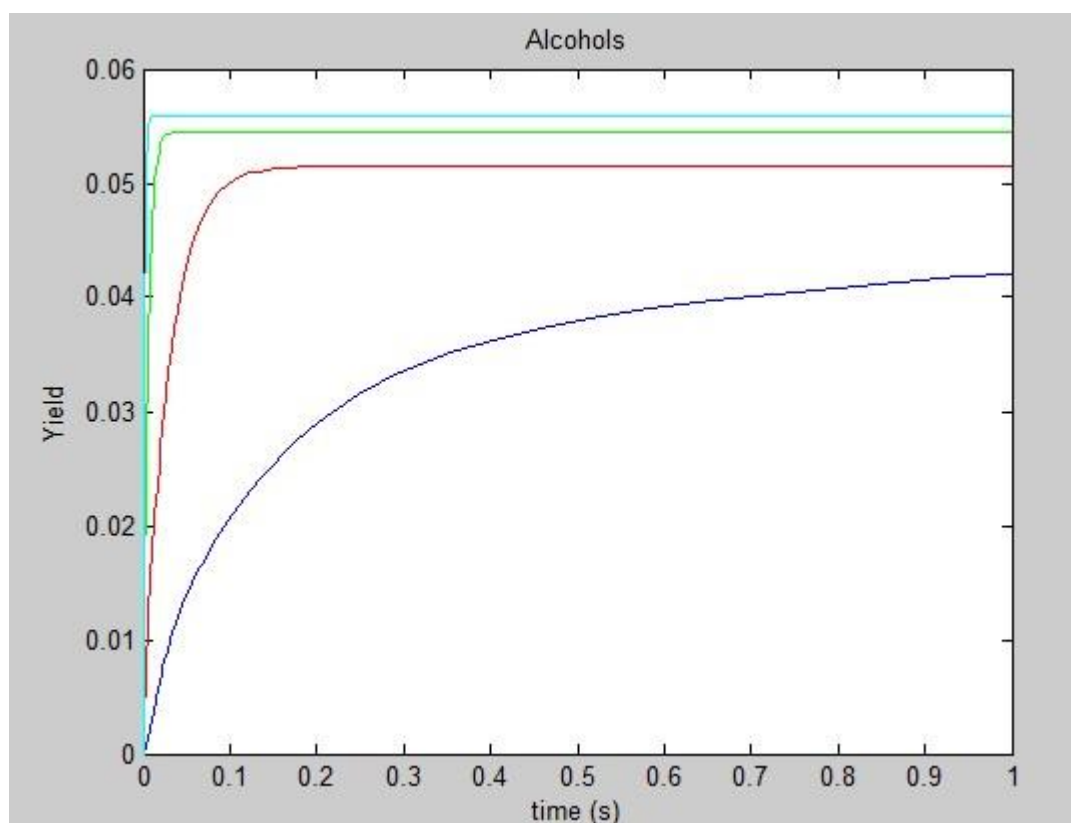
### Observation

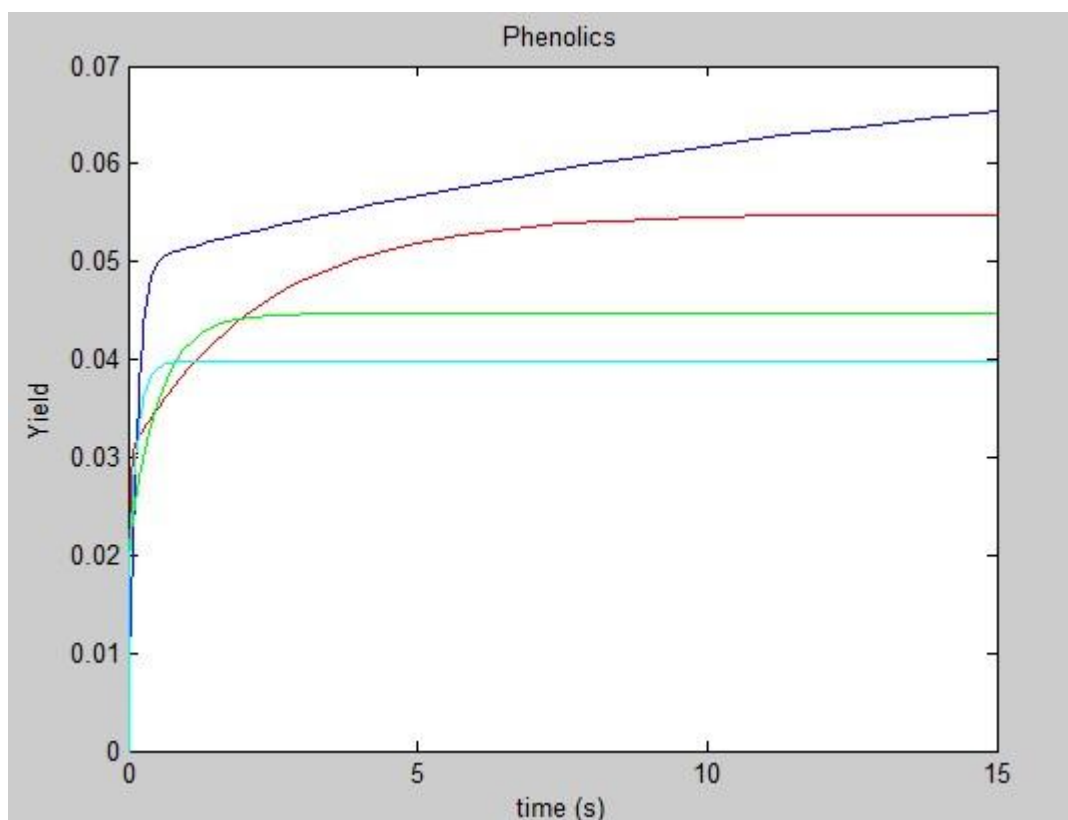
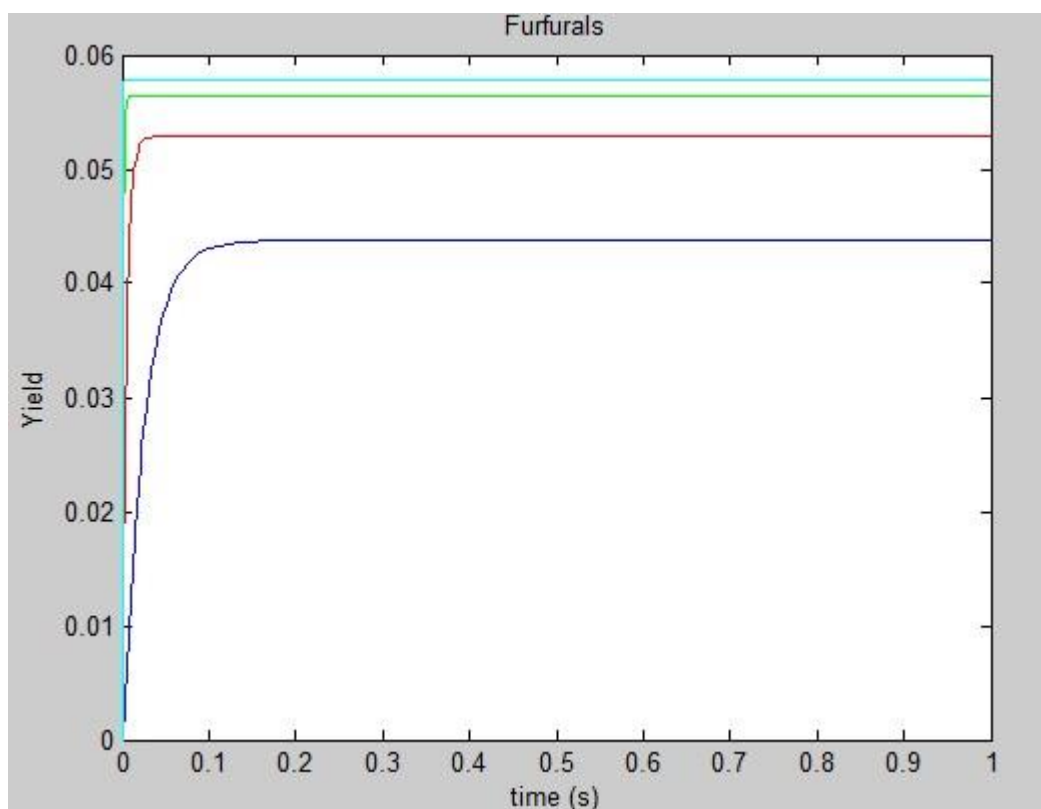
- Most Products either increase or decrease smoothly with increase in temperature
- Phenolics show some abnormal temperature dependence probably because some phenolics have lower yield with increase in temperature and some higher.











Unable to plot a graph with longer time span since MATLAB gives inaccurate results.

