

Decomposition of N2O5

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This is a Mathematica notebook to illustrate the analysis of data concerning the decomposition of N2O5.

The times at which concentration data was taken (seconds):

```
In[11]:= times = {0, 600, 1200, 1800, 2400, 3000, 3600, 4200, 4800, 6000}
```

The measured concentration (moles per liter) at each time:

```
In[12]:= data = {0.31, 0.254, 0.208, 0.172, 0.141, 0.116, 0.0964, 0.0812, 0.0669, 0.0464}
```

And plot raw data (first install into 2 x 6 matrix "pdata"):

```
In[16]:= pdata = Transpose[{times, data}];  
plt1 = ListPlot[pdata, AxesLabel → {"time (seconds)", "concentration (moles/liter)"}]
```

Not 0th order. Perhaps first order? Try a logarithmic transformation of the data, as was done for H2O2 or butadiene; see those worksheets.