



Appendix A: “Digest” Help pages



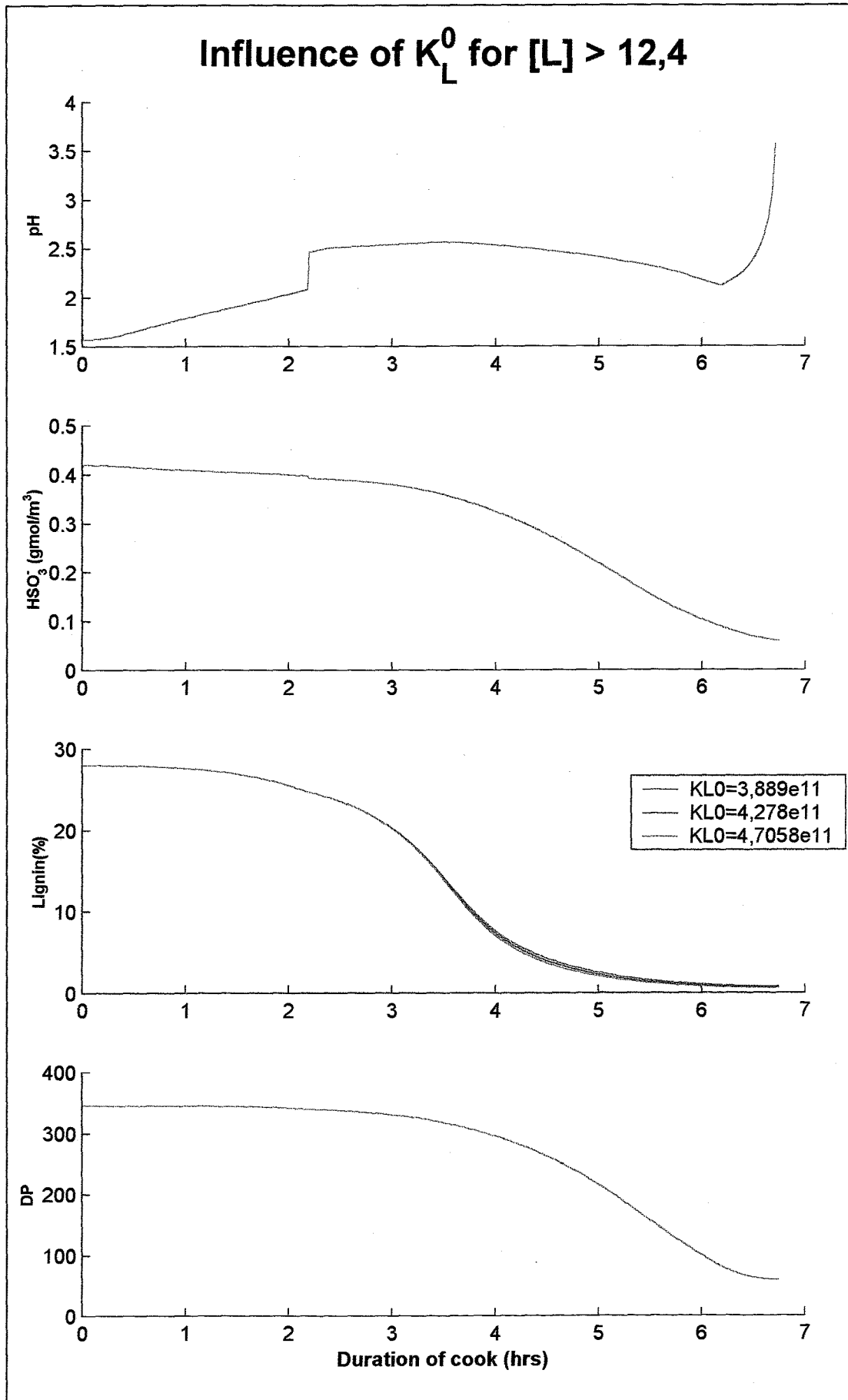
Appendix B:

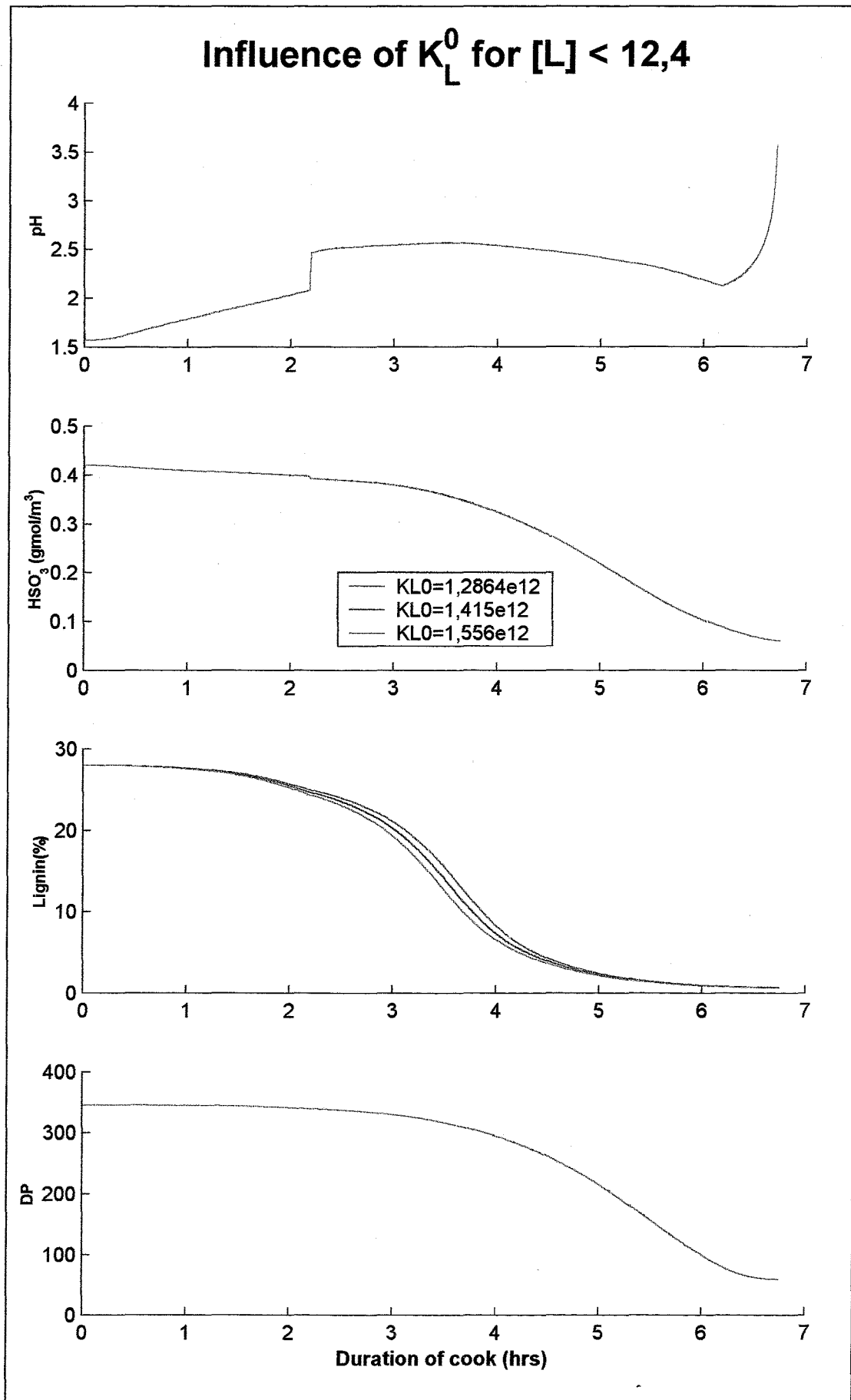
Influence of parameters in fundamental model

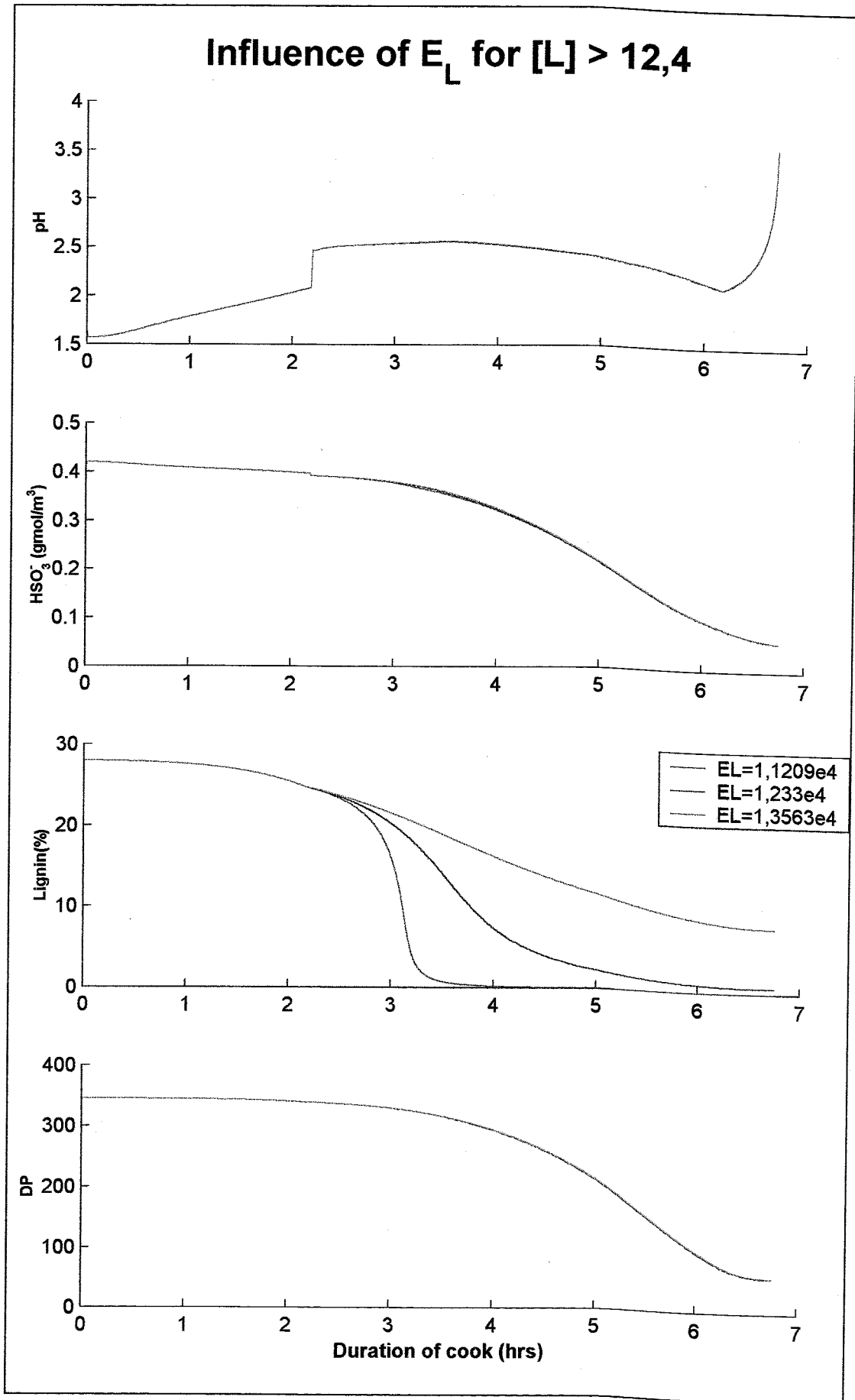
The influence of the different parameters in the model was investigated by using the “Digest” package. This was done by changing each of the different parameters individually and then saving the cook data as a separate file. Three different values were saved for each of the parameters and the three different cooks were simulated simultaneously by using the comparison tool in the package, as was discussed in Appendix A.

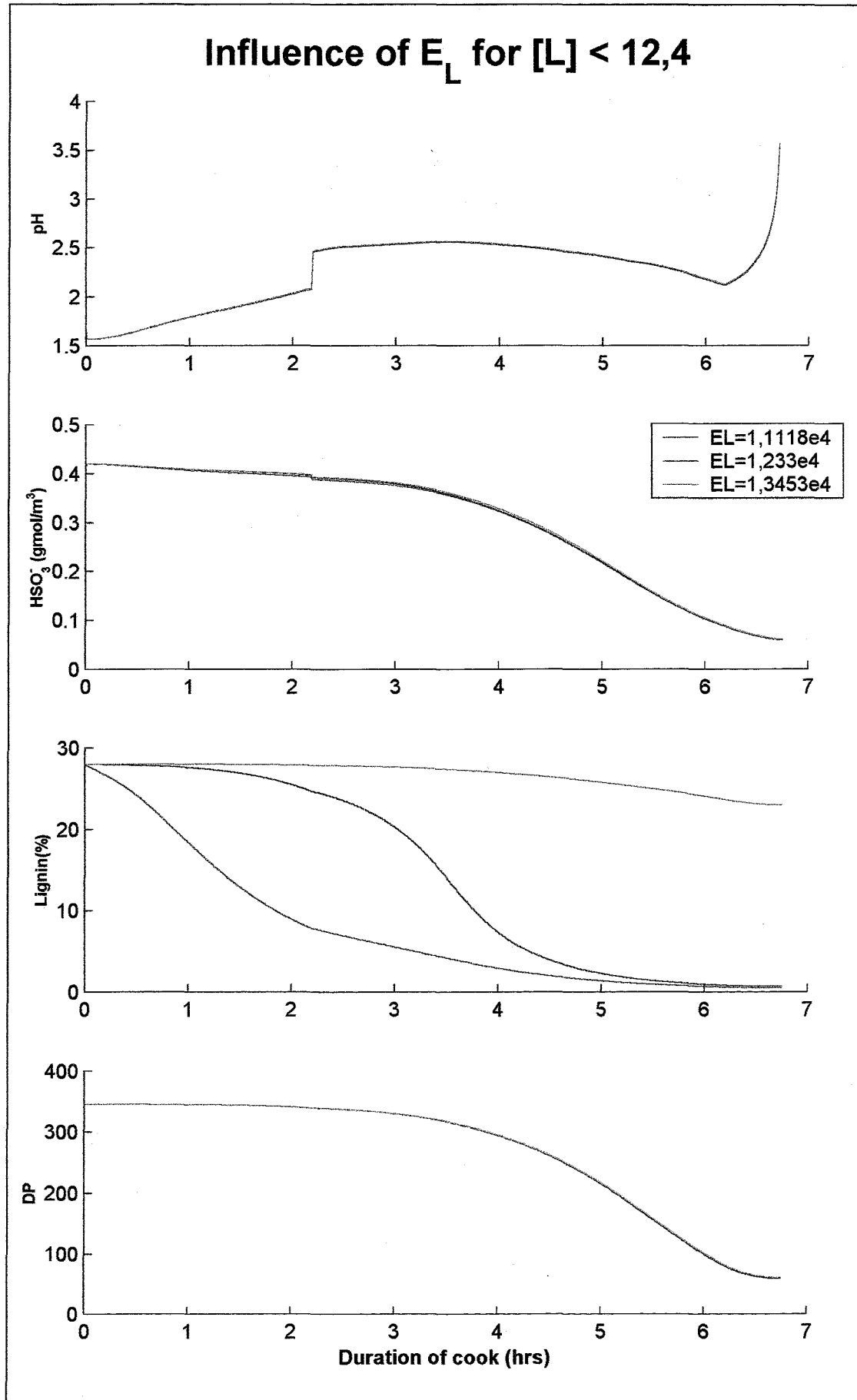
Different symbols from the ones used in the model were used in the package, since the Greek symbols were difficult to program. A description of the symbols is given in the table below. The model was summarised in Chapter 12 and the meanings of the original symbols can be seen there.

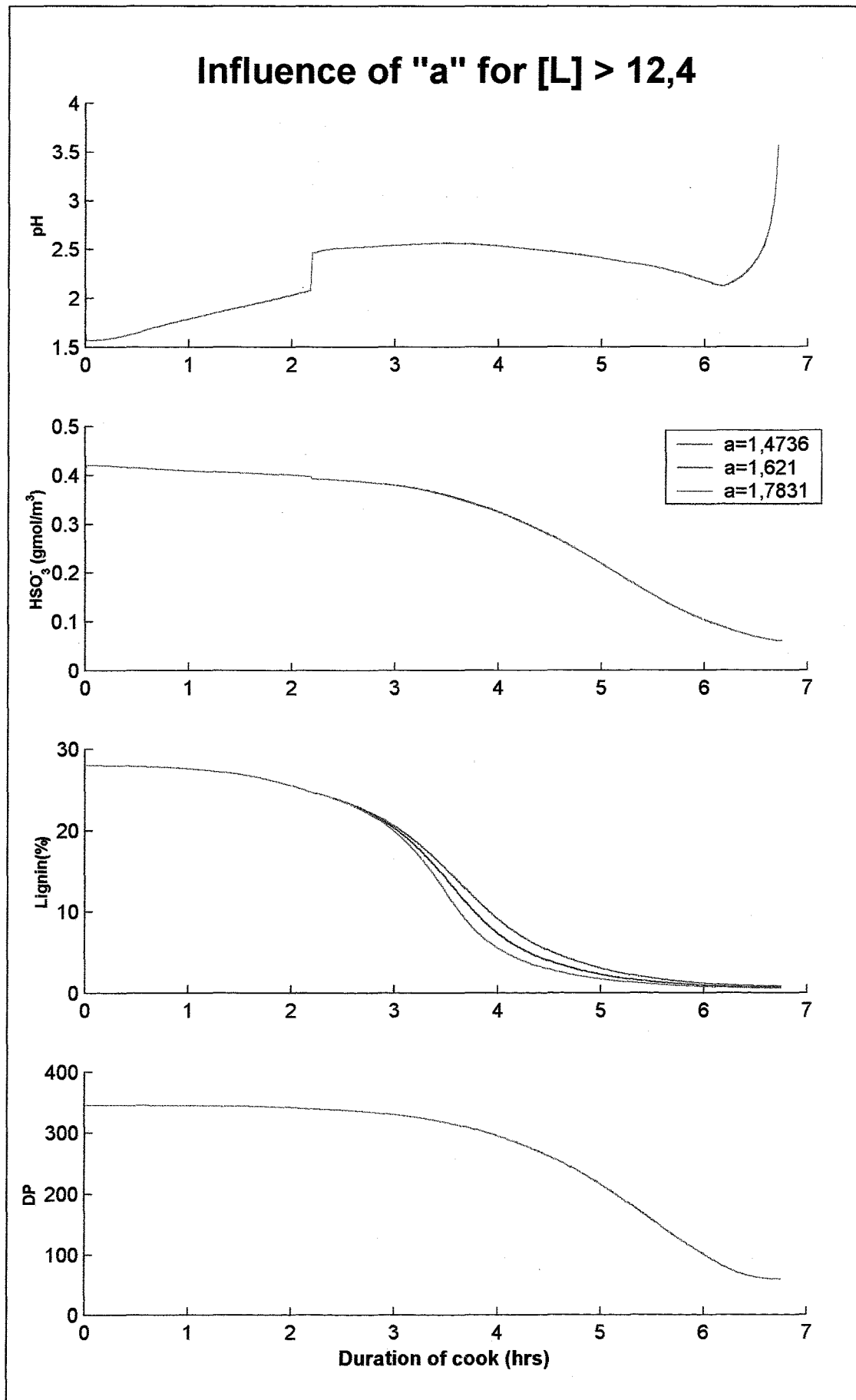
Program symbol	Original symbol in model	Description
a	a	Lignin reaction order in lignin reactions
b	α	Bisulfite reaction order in lignin reactions
c	β	Hydrogen reaction order in lignin reactions
d	d	Hemicellulose reaction order in hemicellulose reactions
e	γ	Hydrogen reaction order in hemicellulose reactions
f	q	Lignin reaction order in strong acid reactions
g	g	Additional parameter in strong acid reactions
h	h	Additional parameter in strong acid reactions
i	b	Bisulfite reaction order in strong acid reactions
j	c	Hydrogen reaction order in strong acid reactions
l	δ	Hydrogen reaction order in cellulose reactions

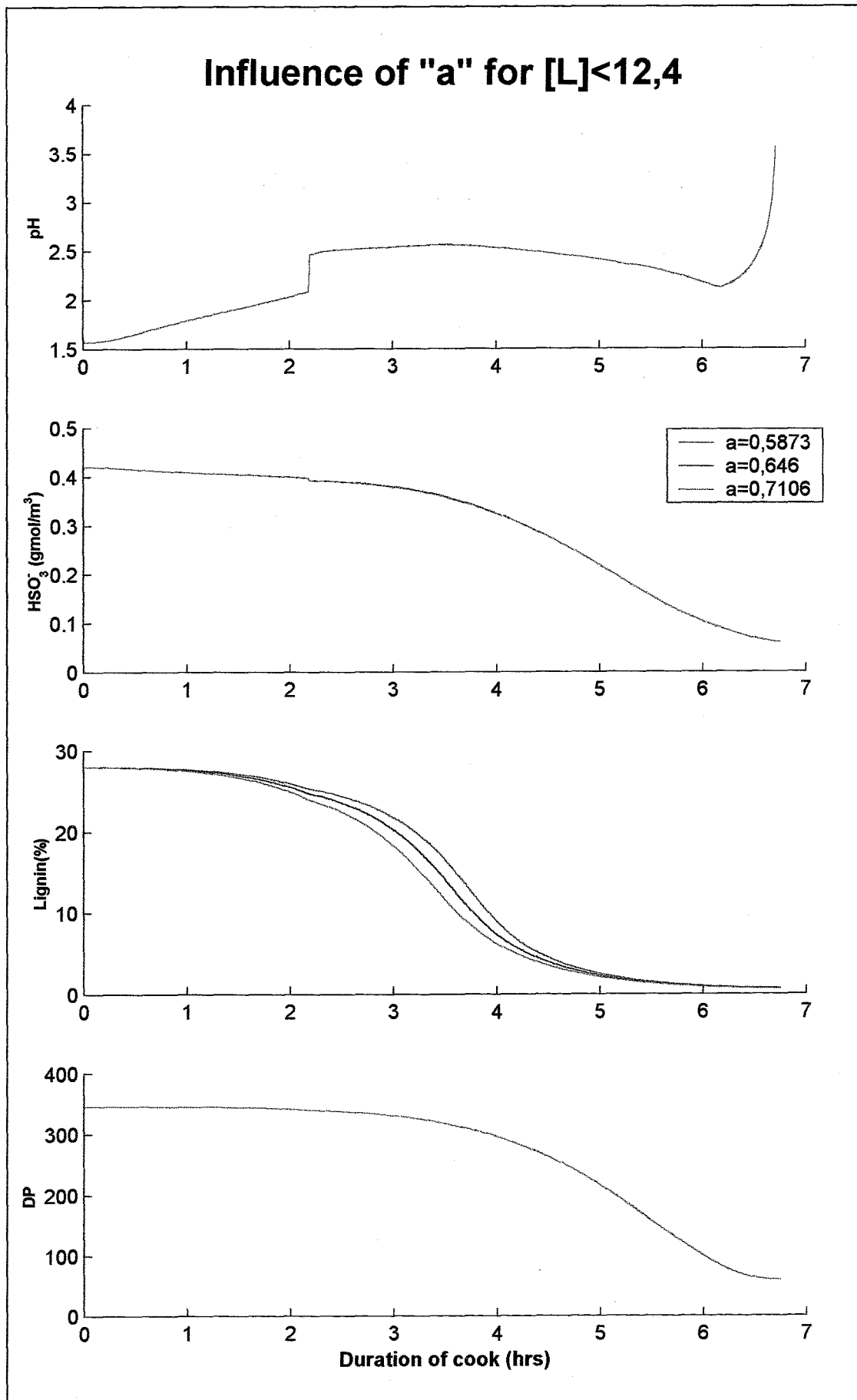


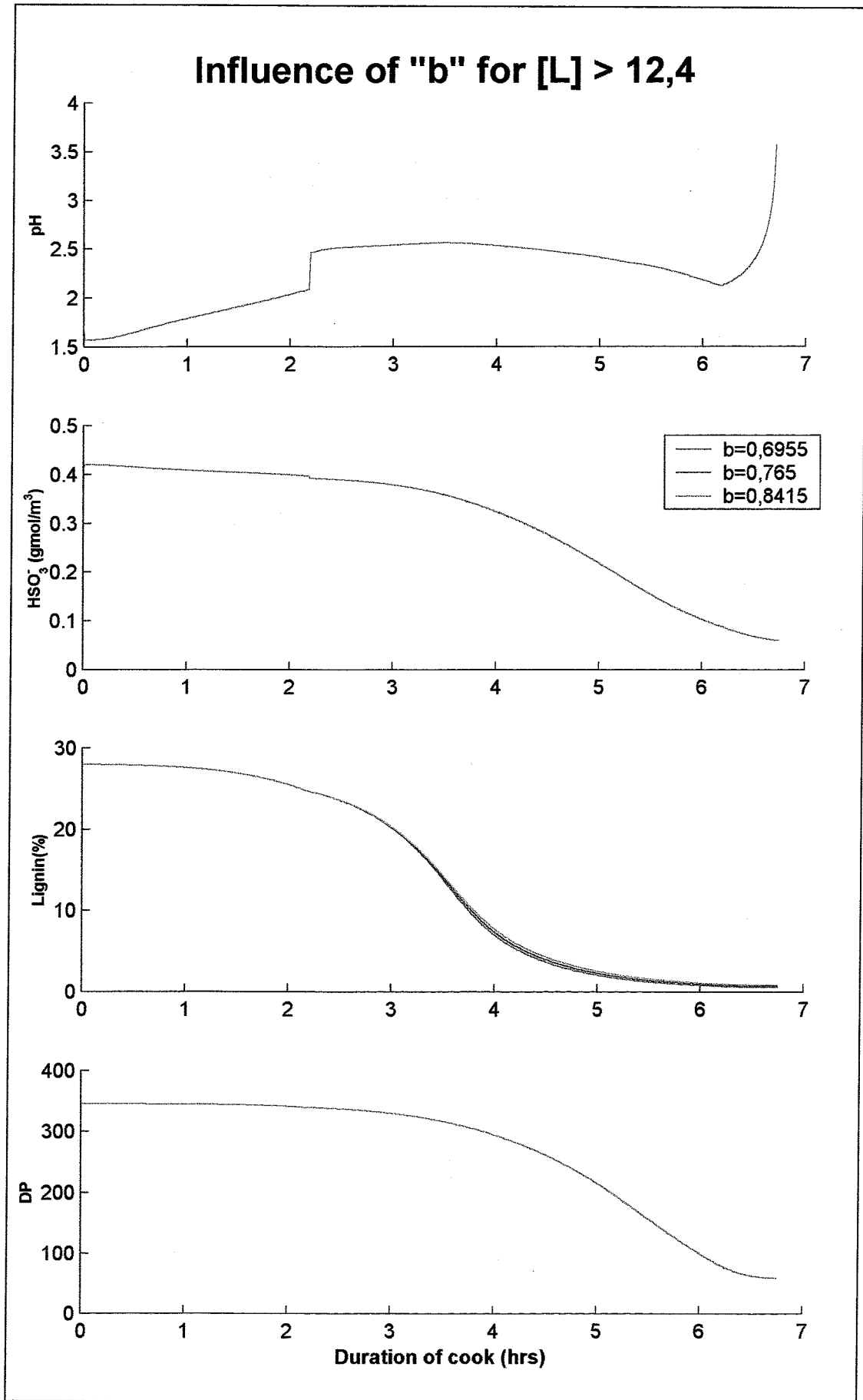


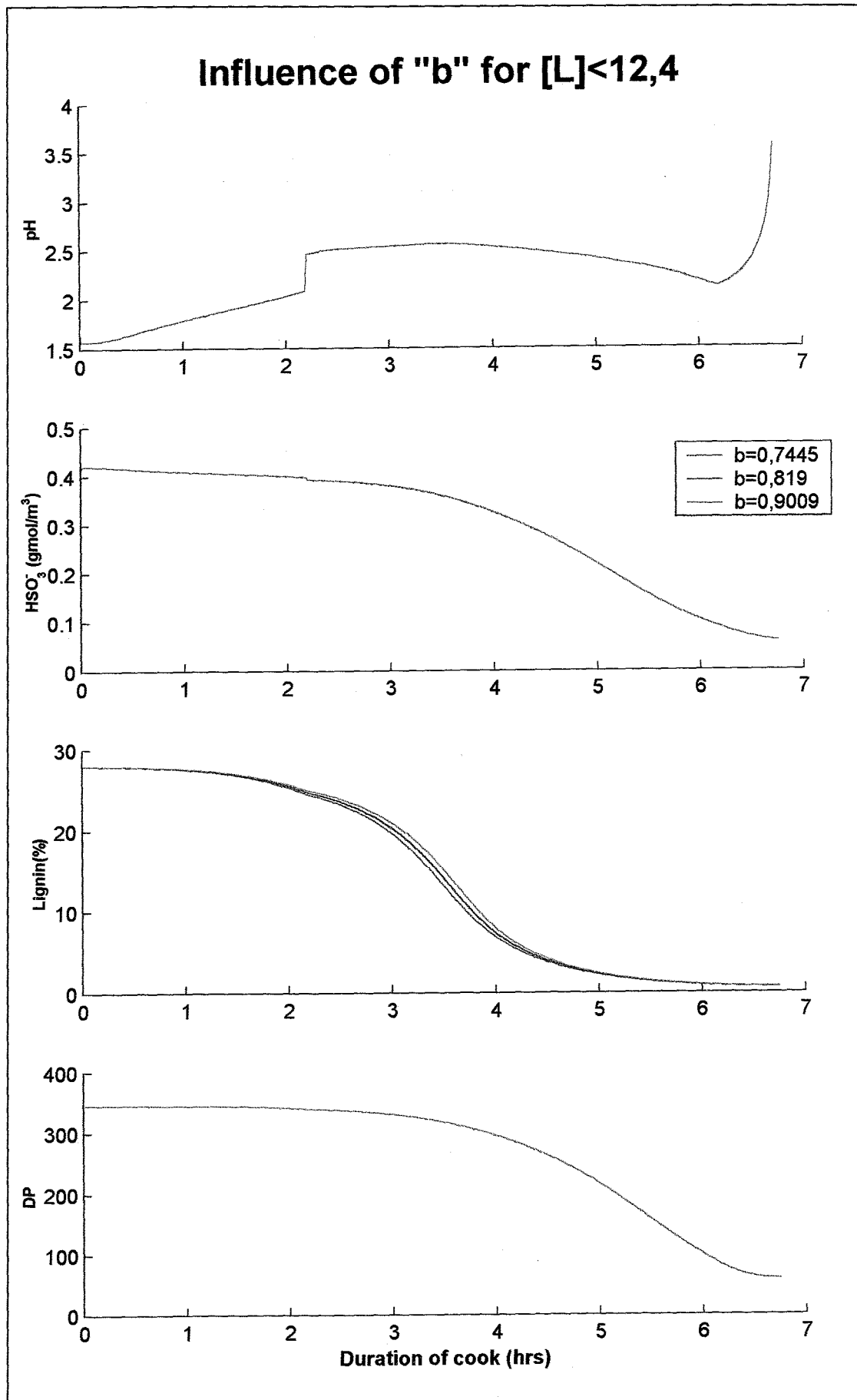


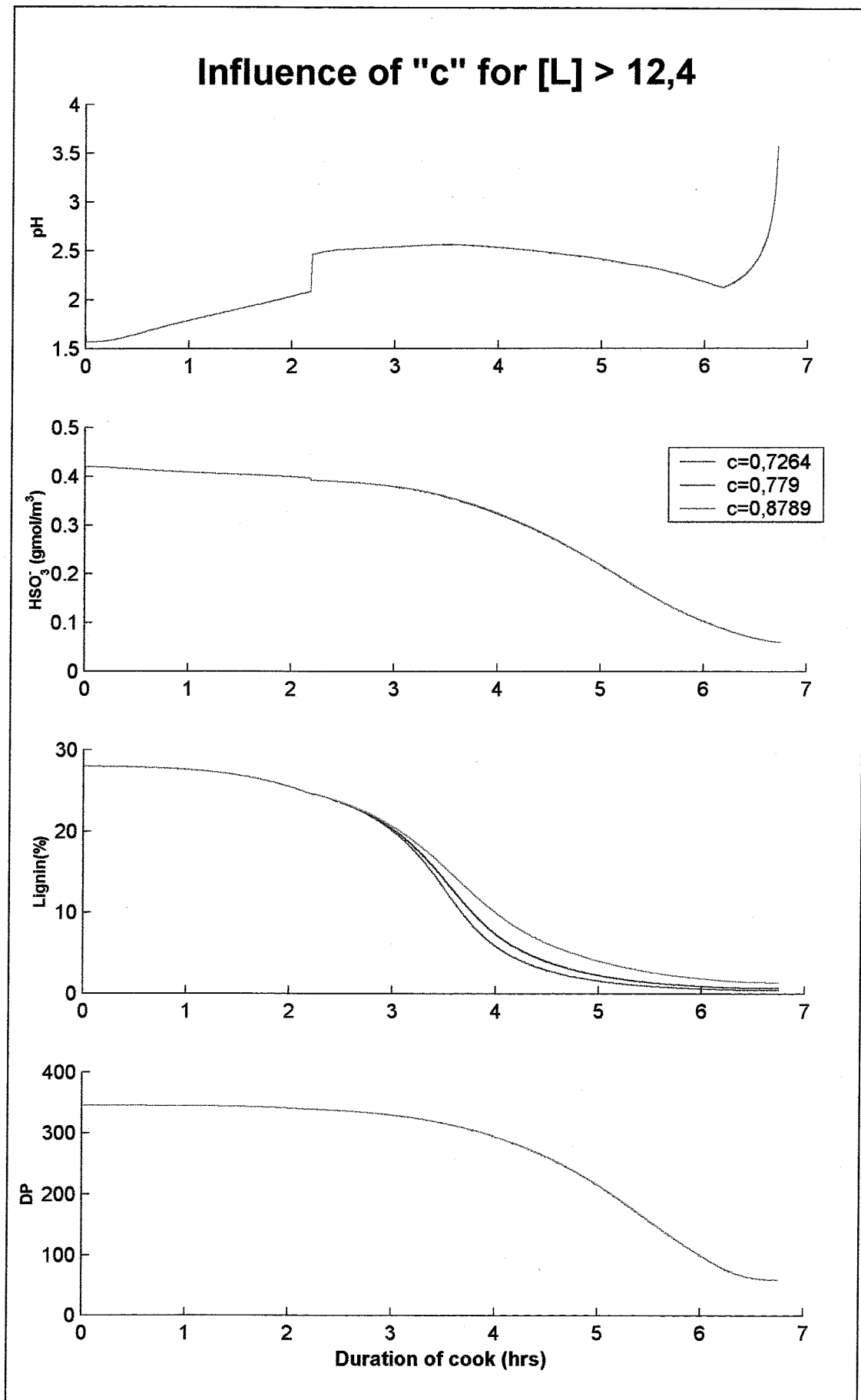


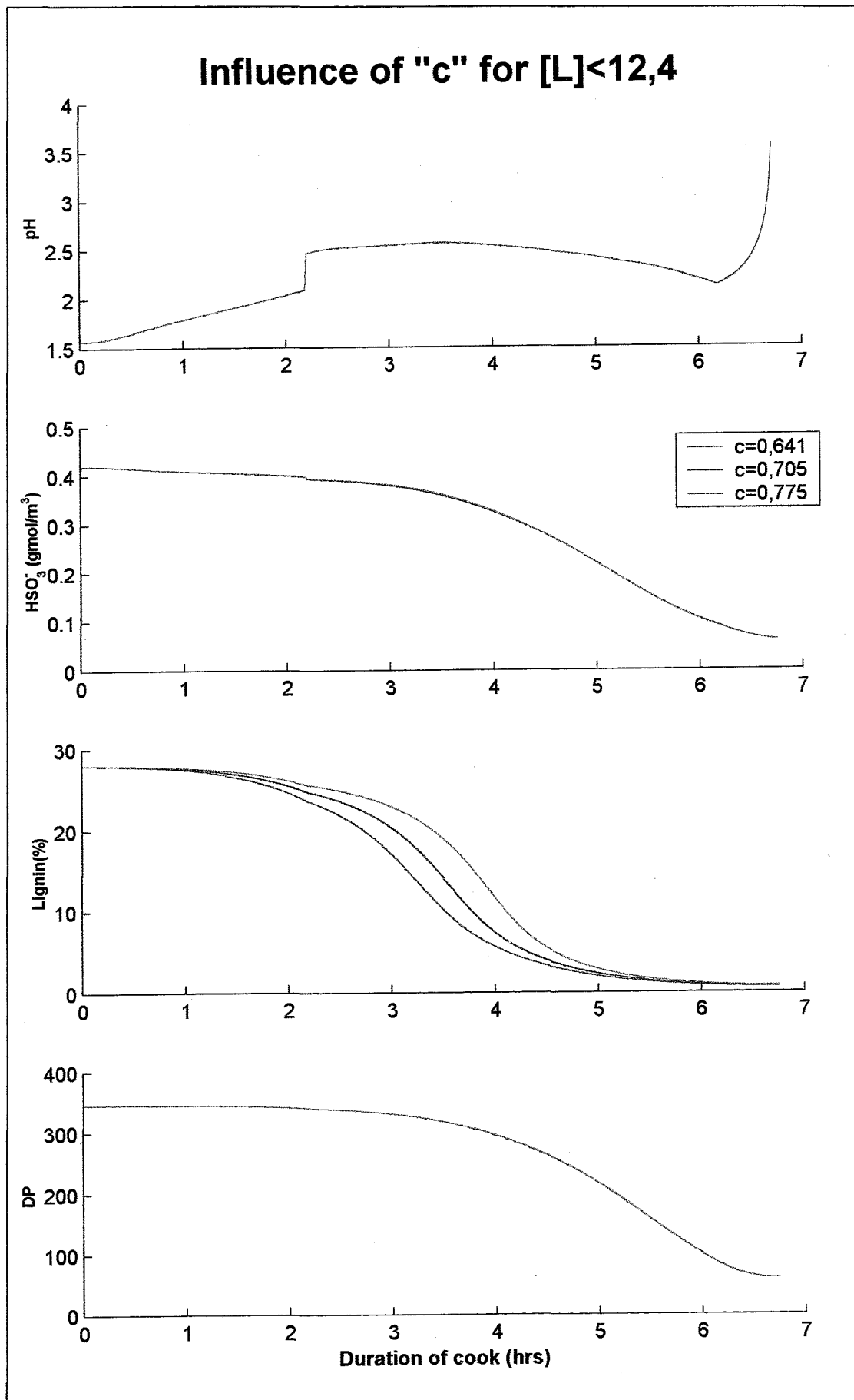


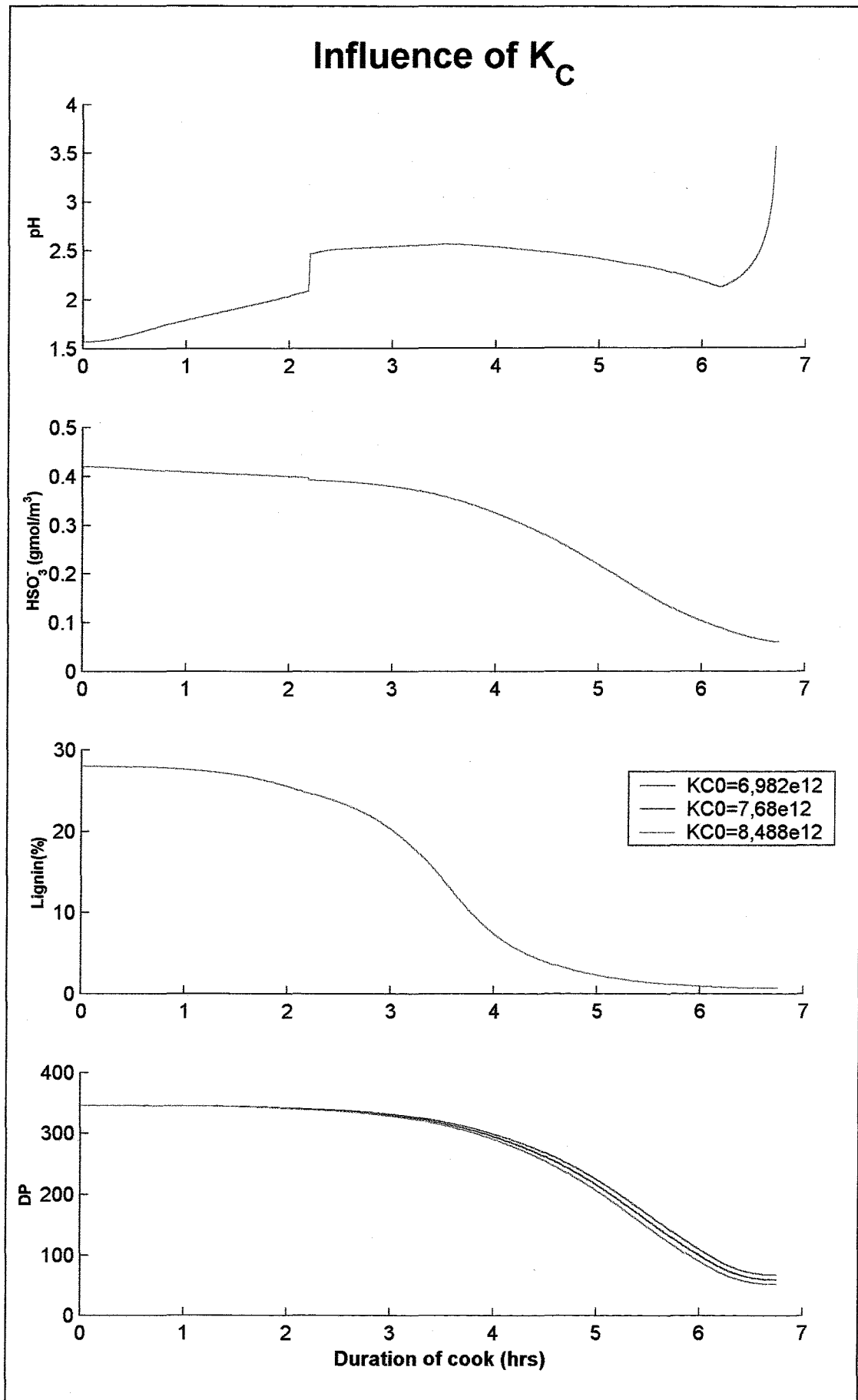


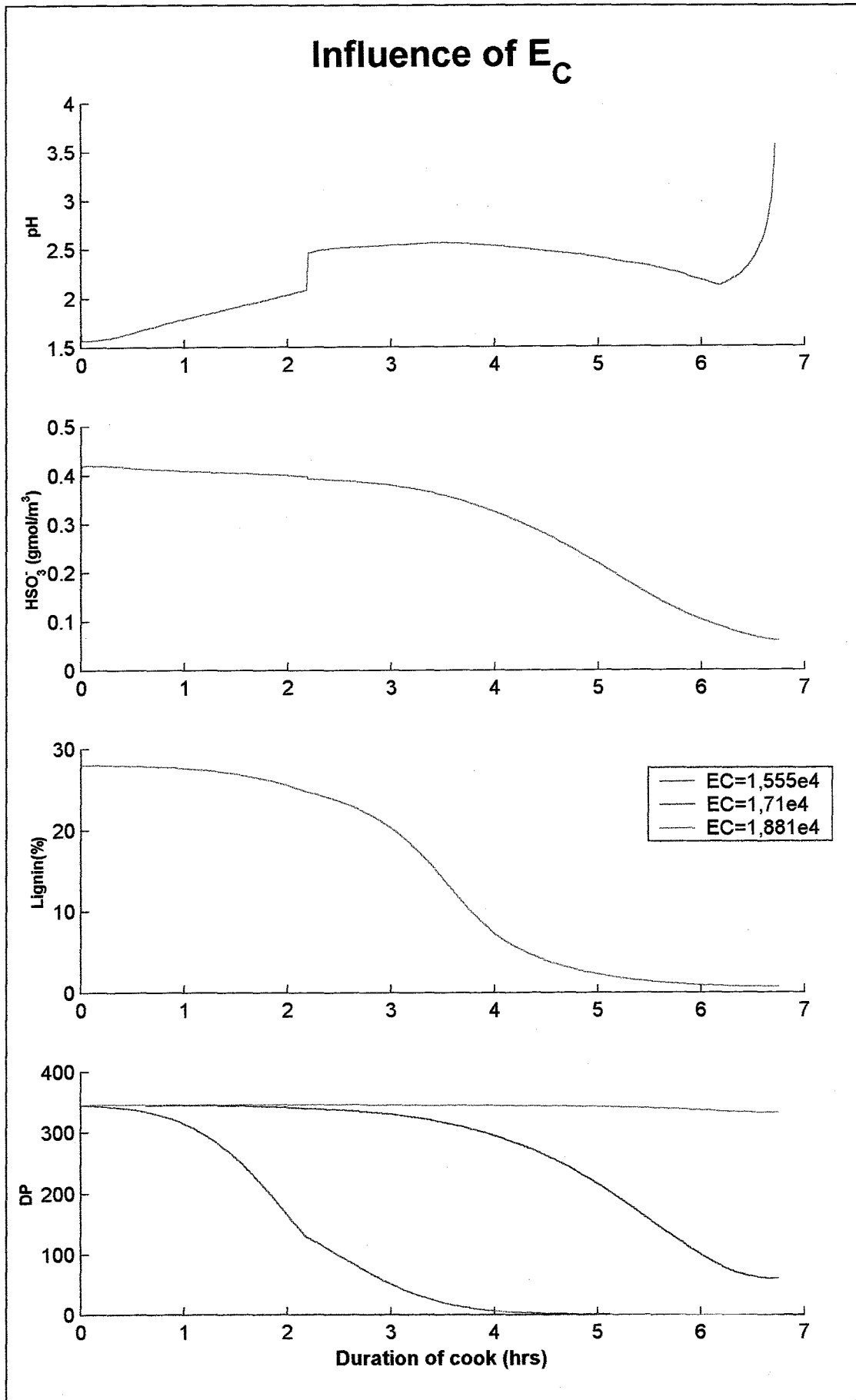


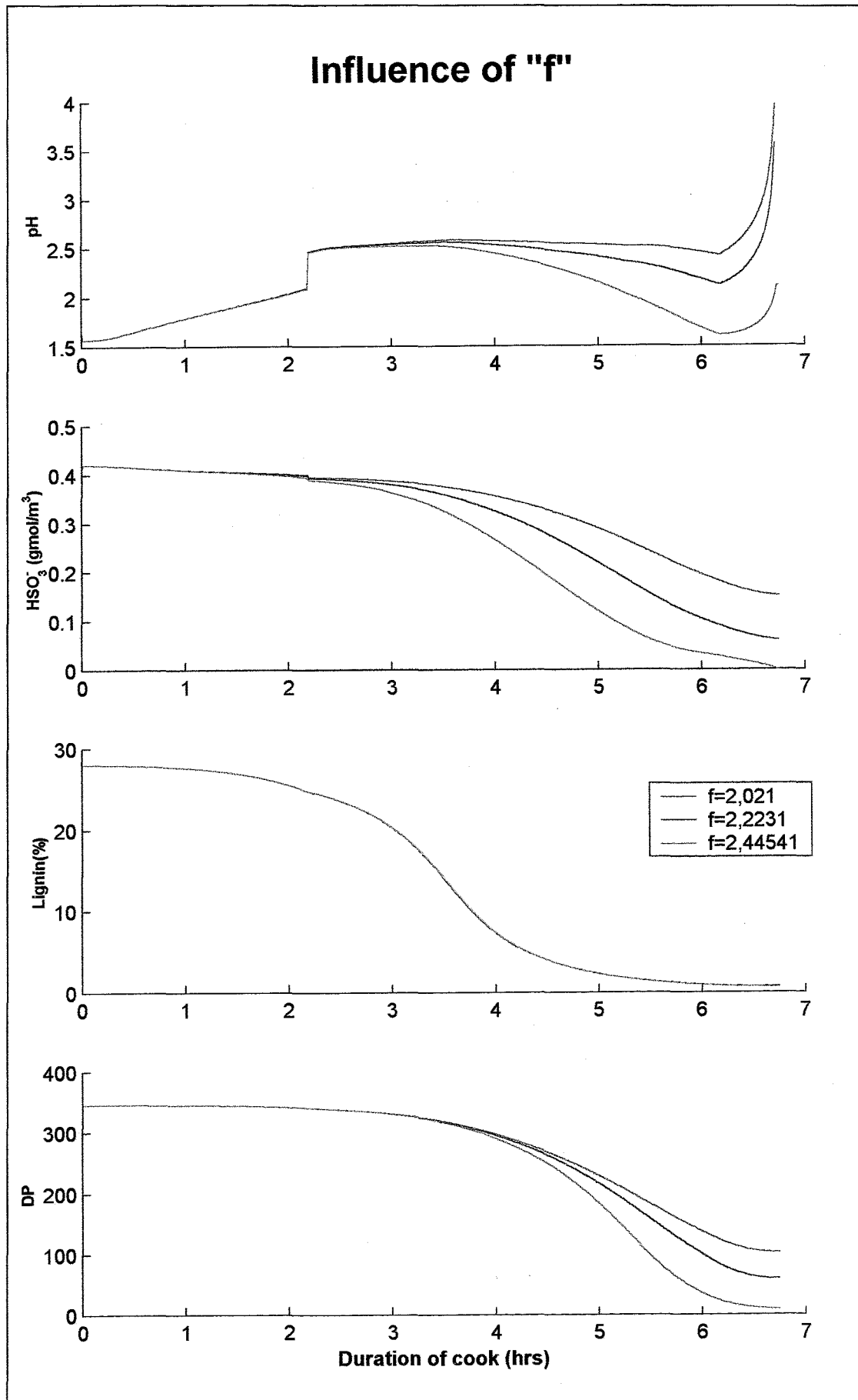


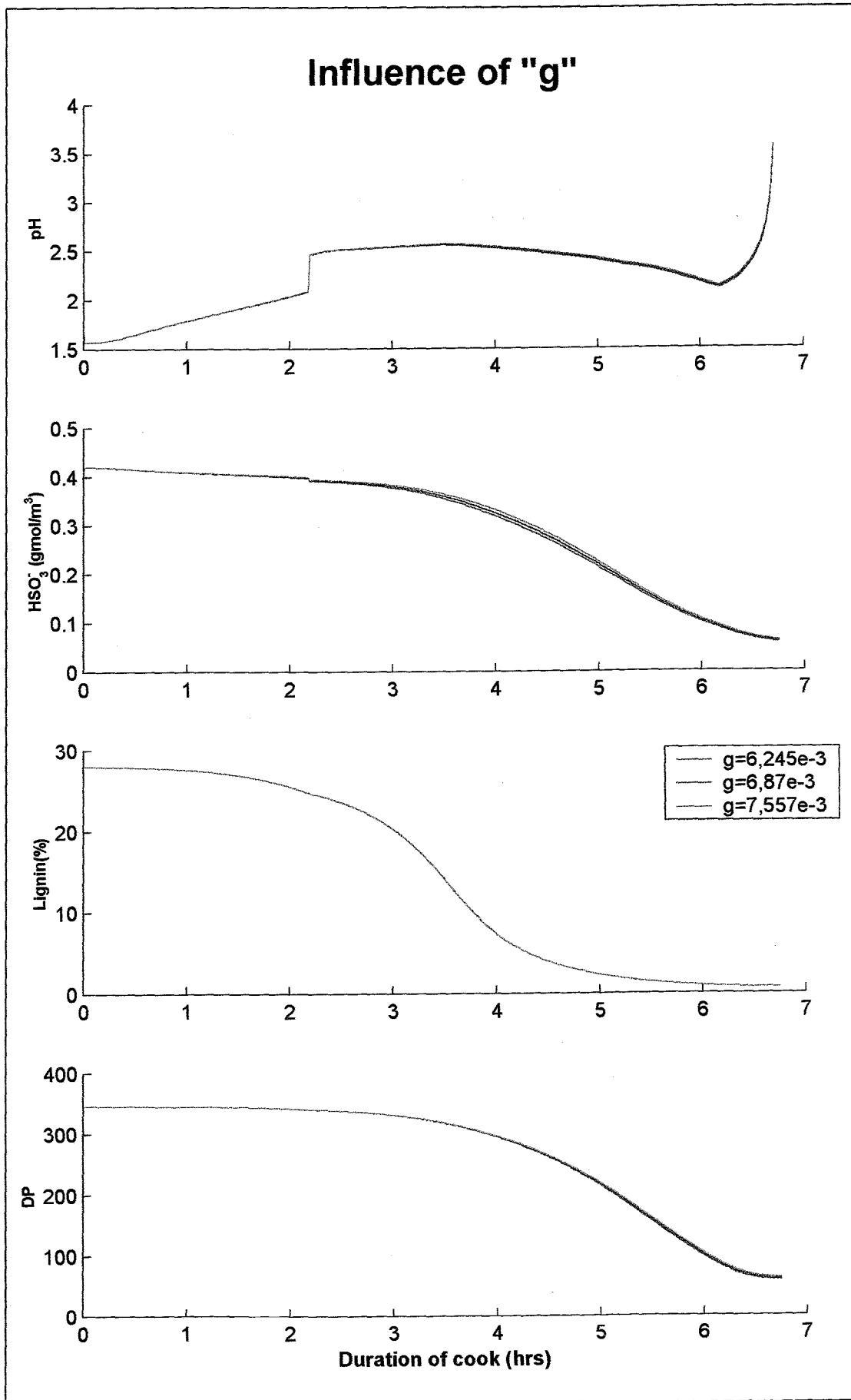


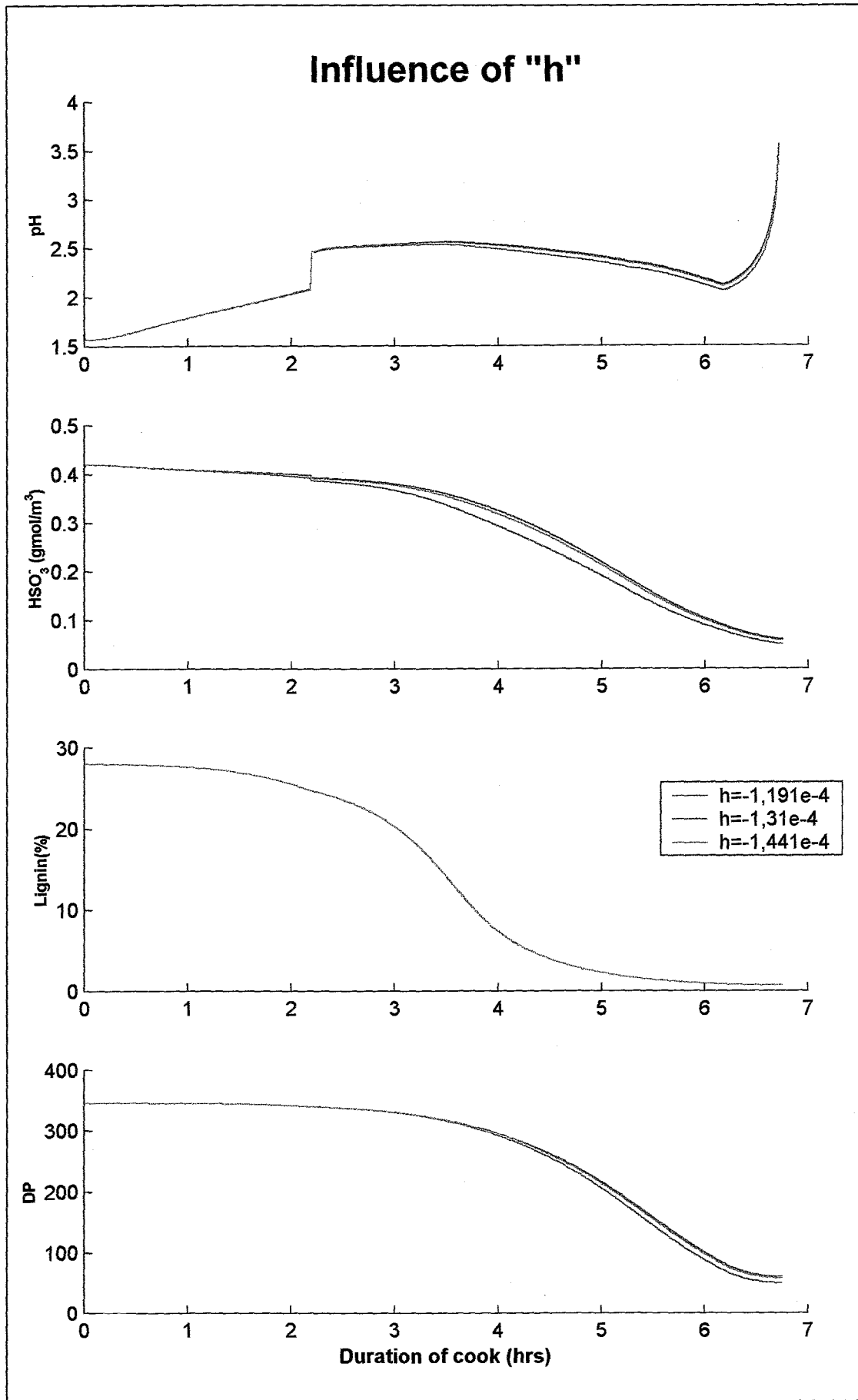


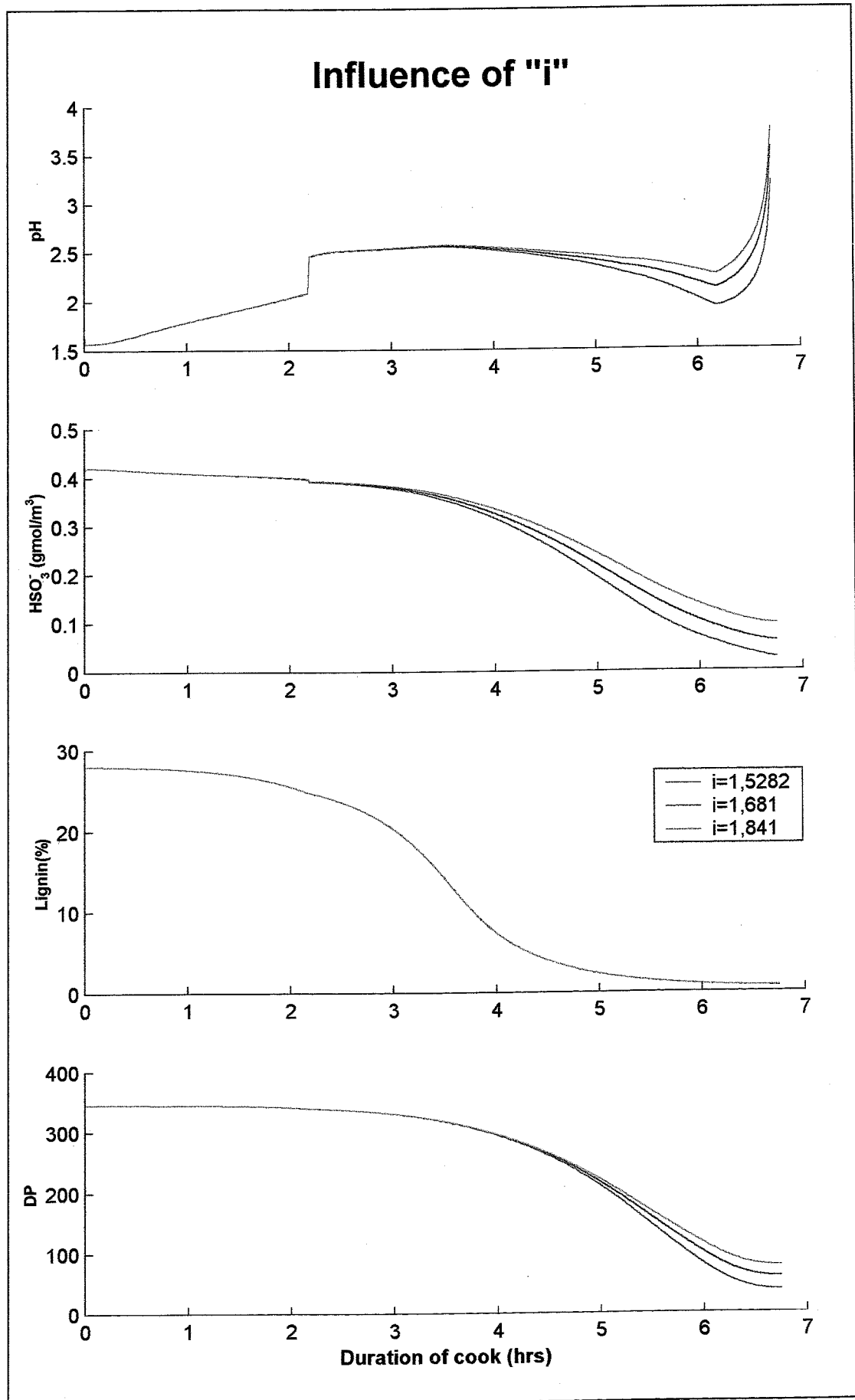


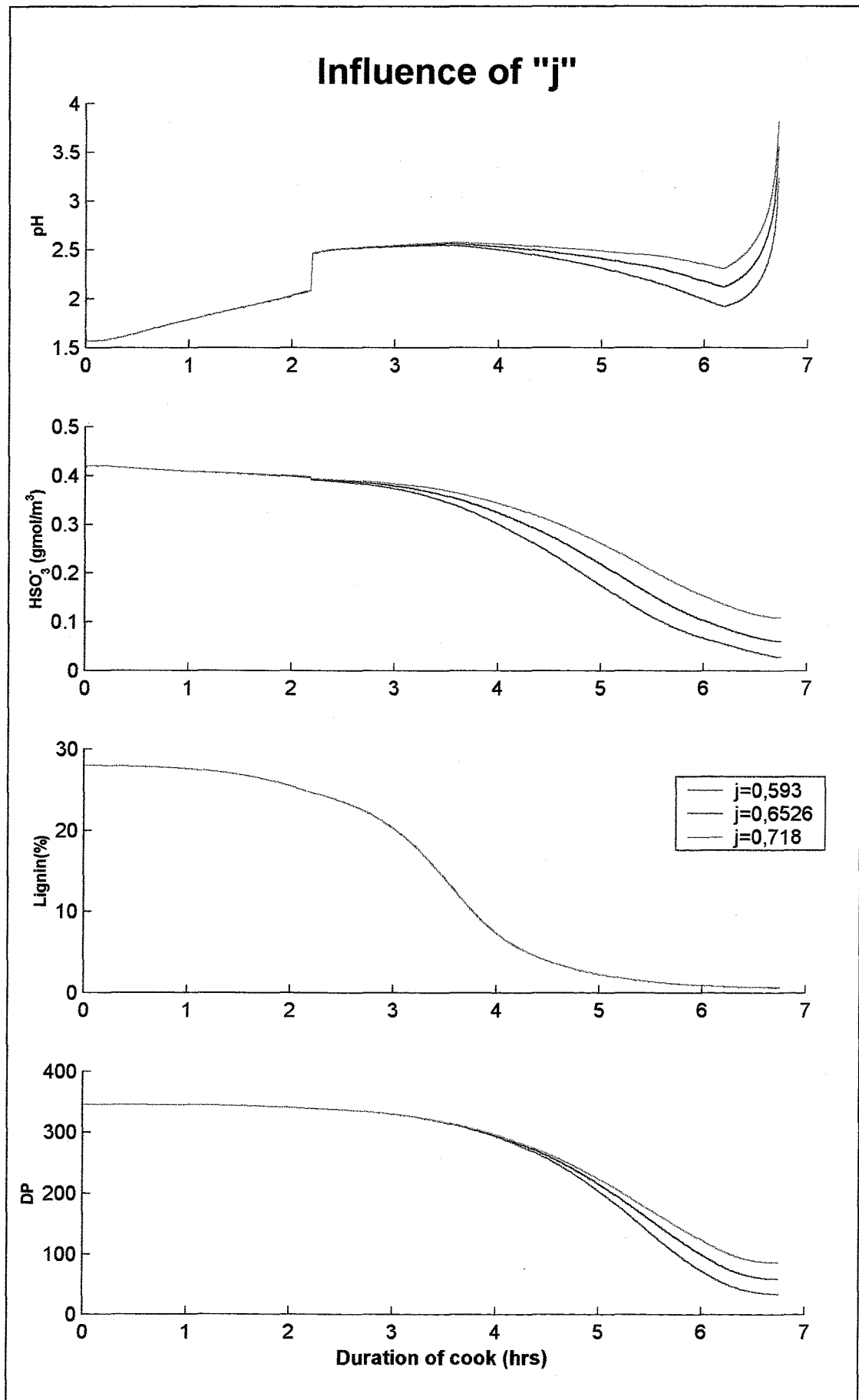






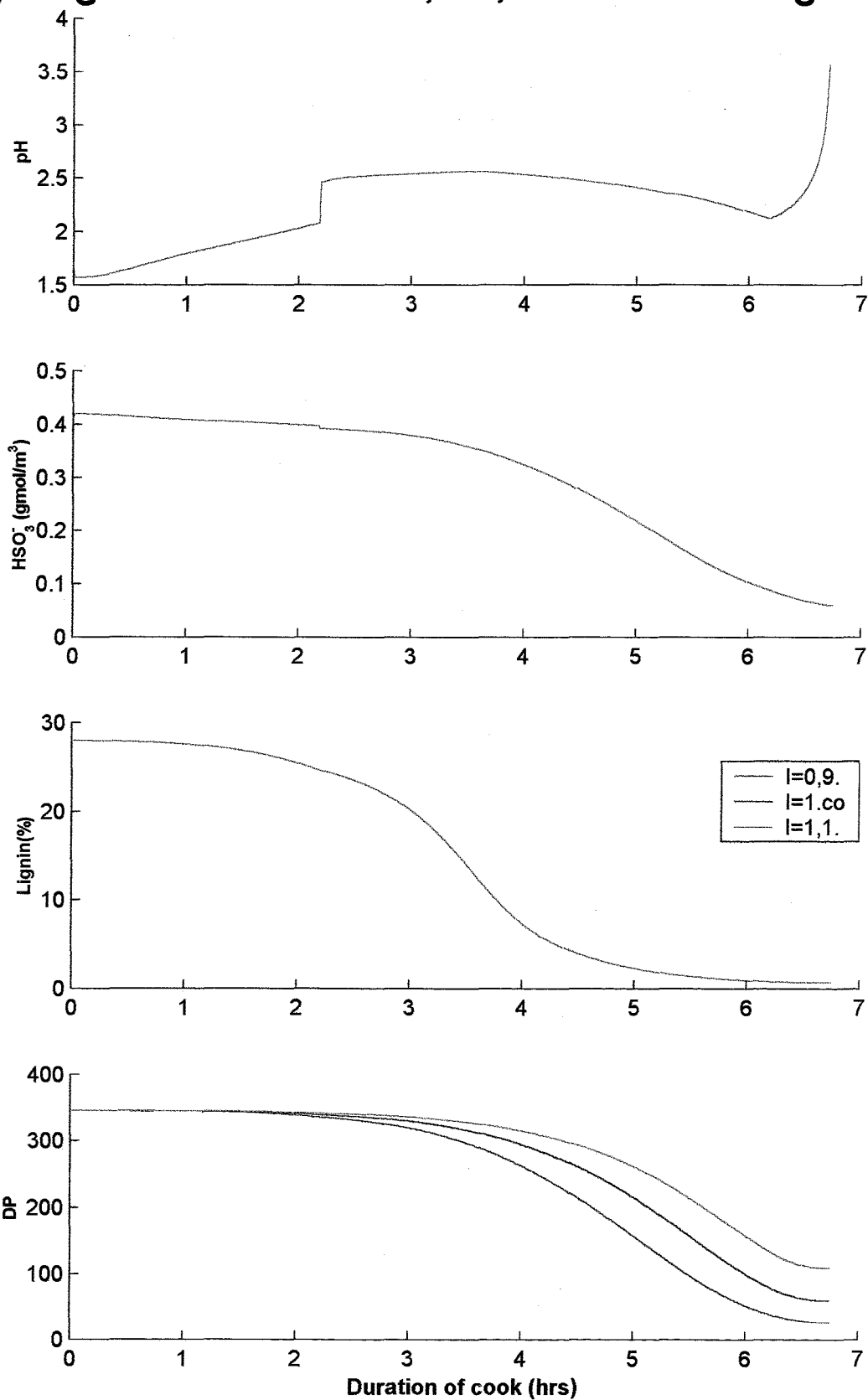




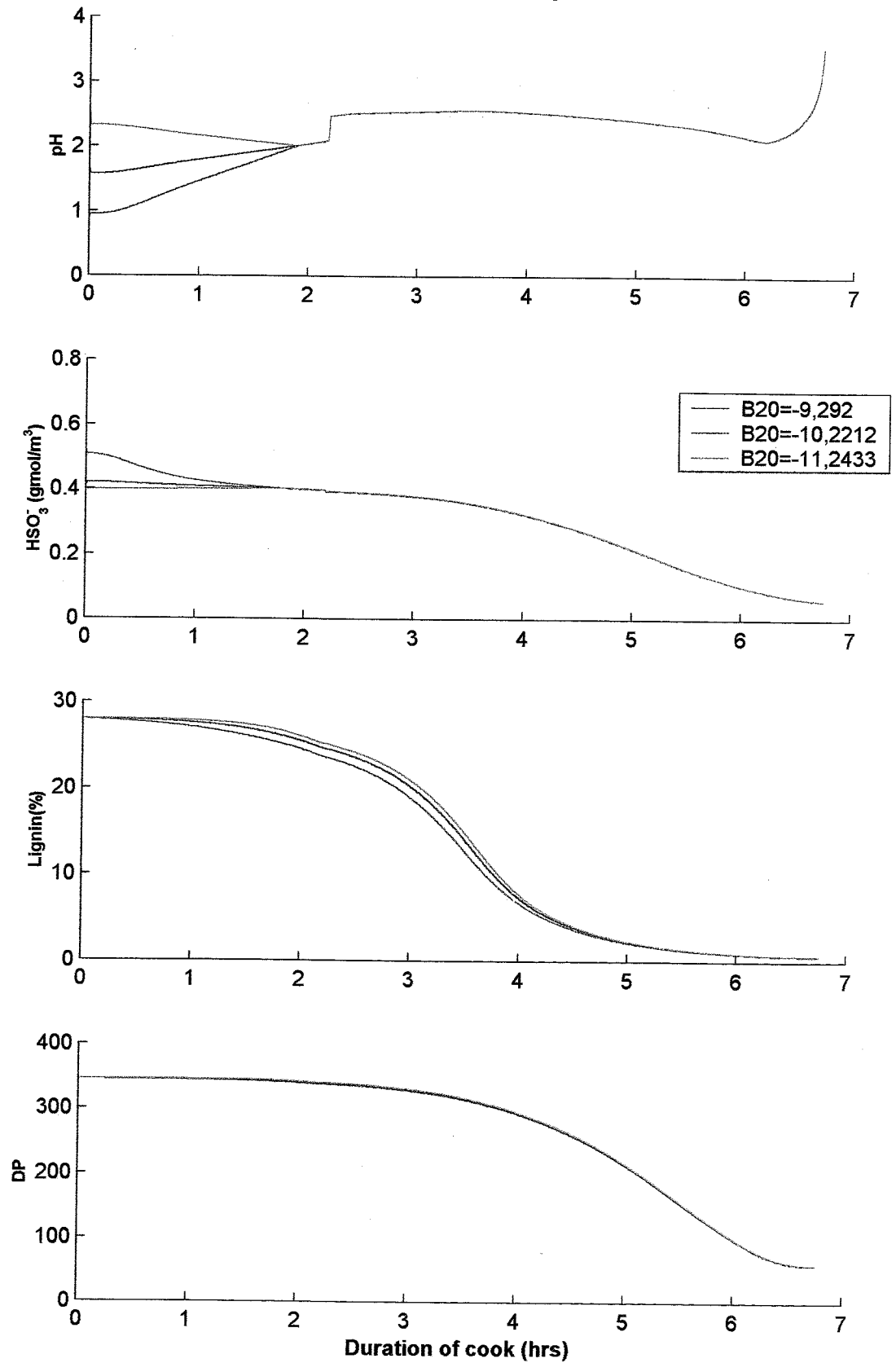




Hydrogen reaction order, "I", in cellulose degradation

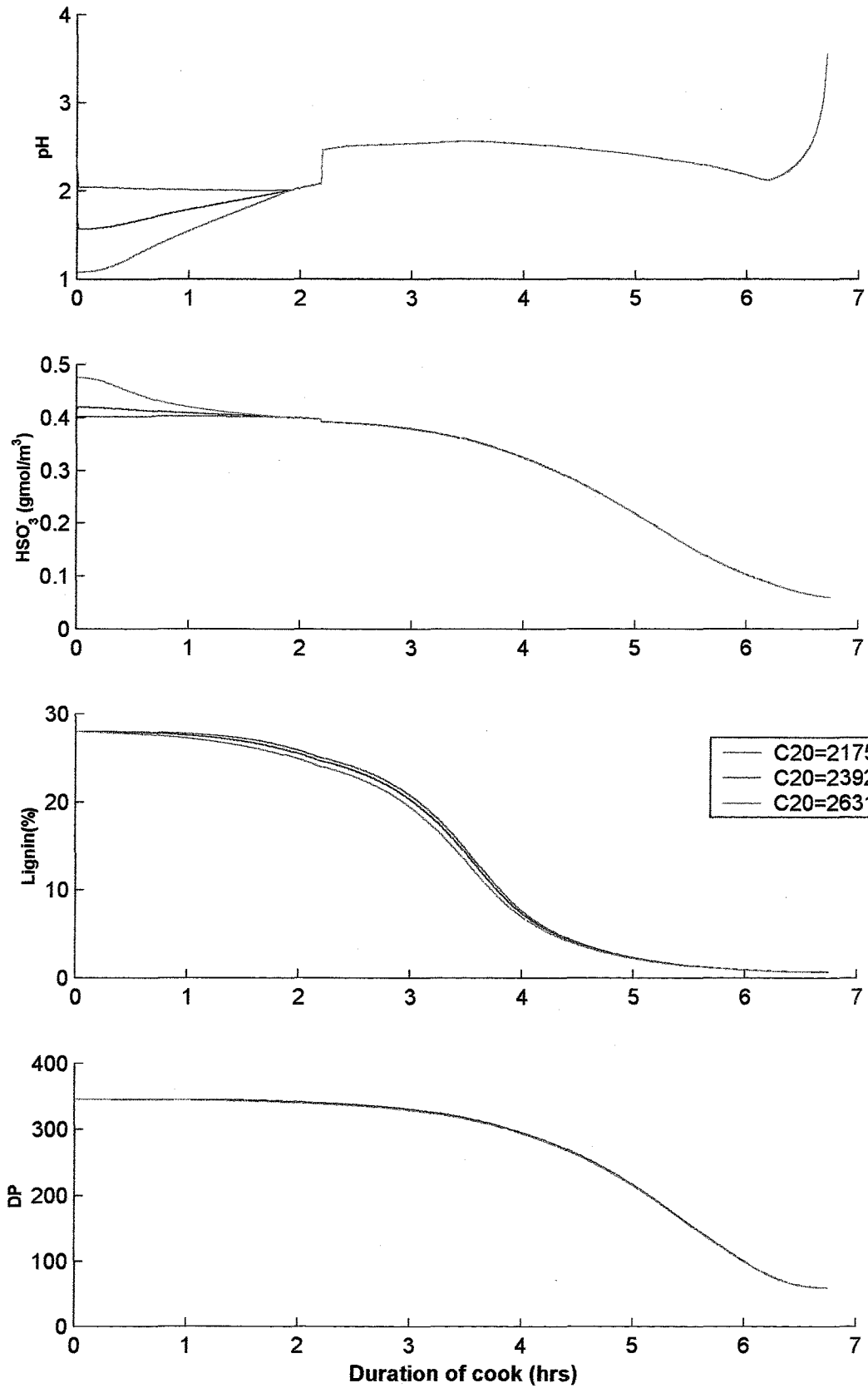


Influence of "B-factor" for K_p for $20 \leq T < 80 \text{ }^\circ\text{C}$



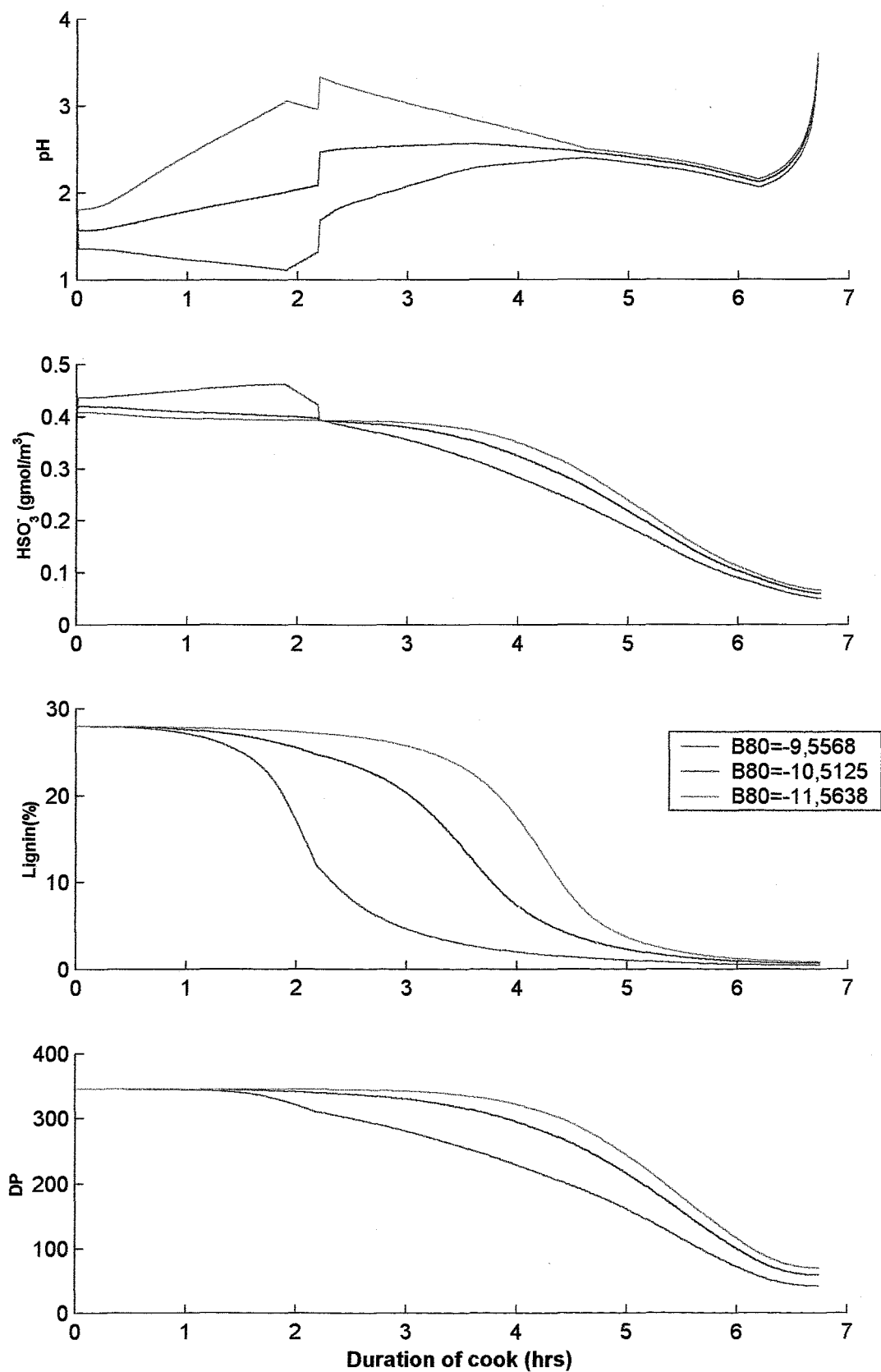


Influence of "C-Factor" for K_p for $20 \leq T < 80 \text{ }^\circ\text{C}$



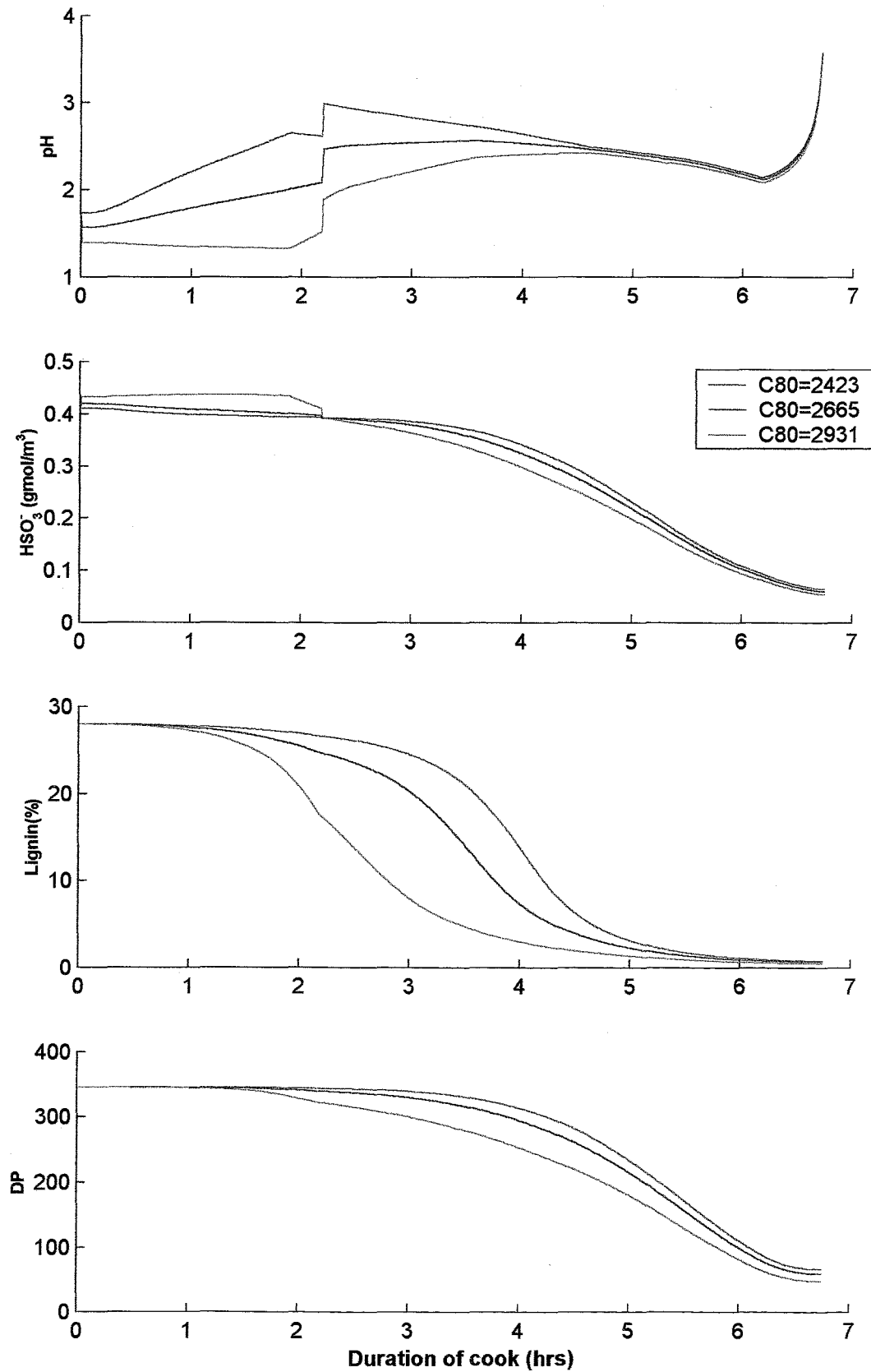


Influence of "B-Factor" for K_p for $80 \leq T < 120 \text{ }^\circ\text{C}$

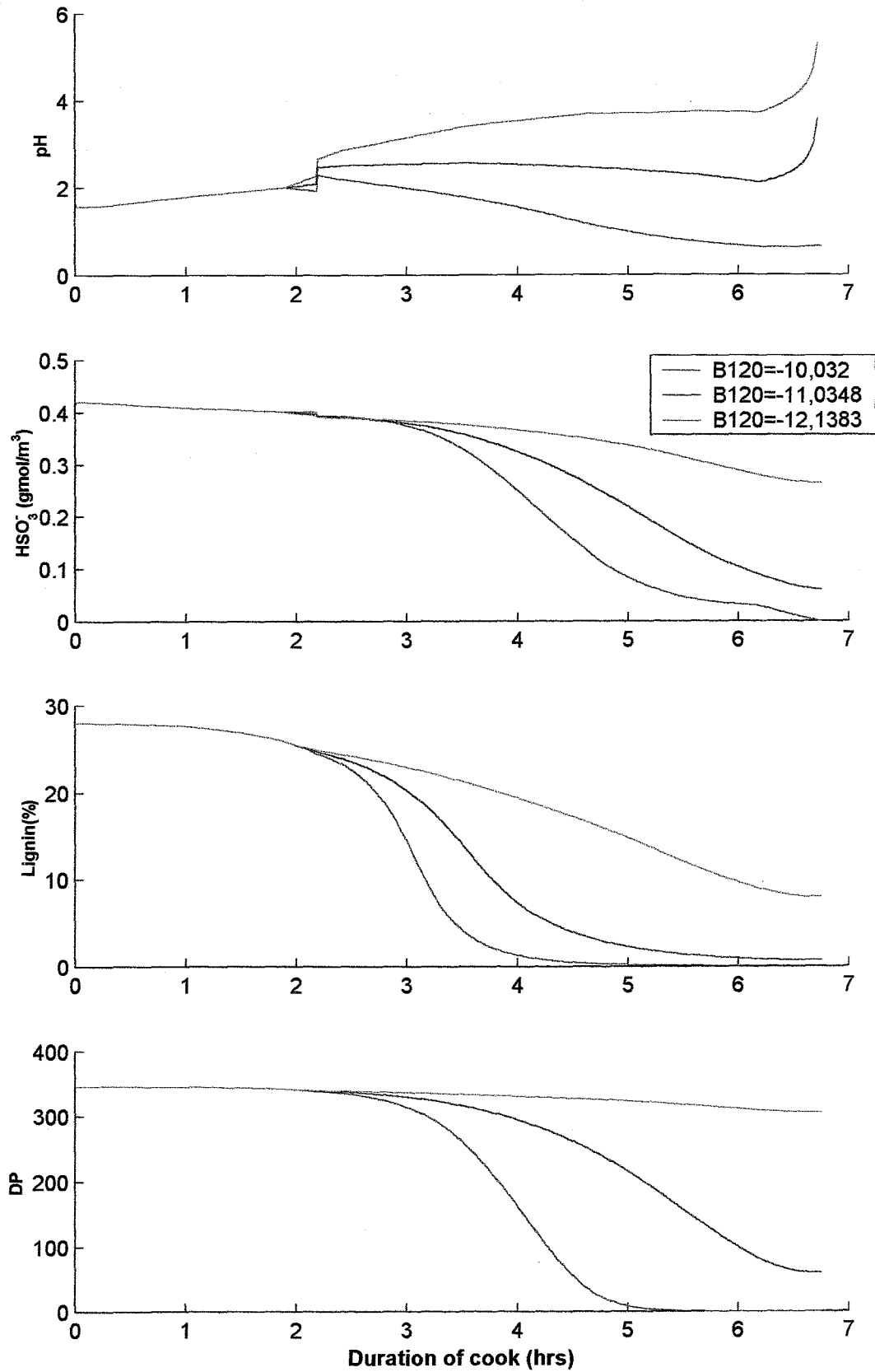




Influence of "C-Factor" for K_p for $80 \leq T < 120 \text{ }^\circ\text{C}$

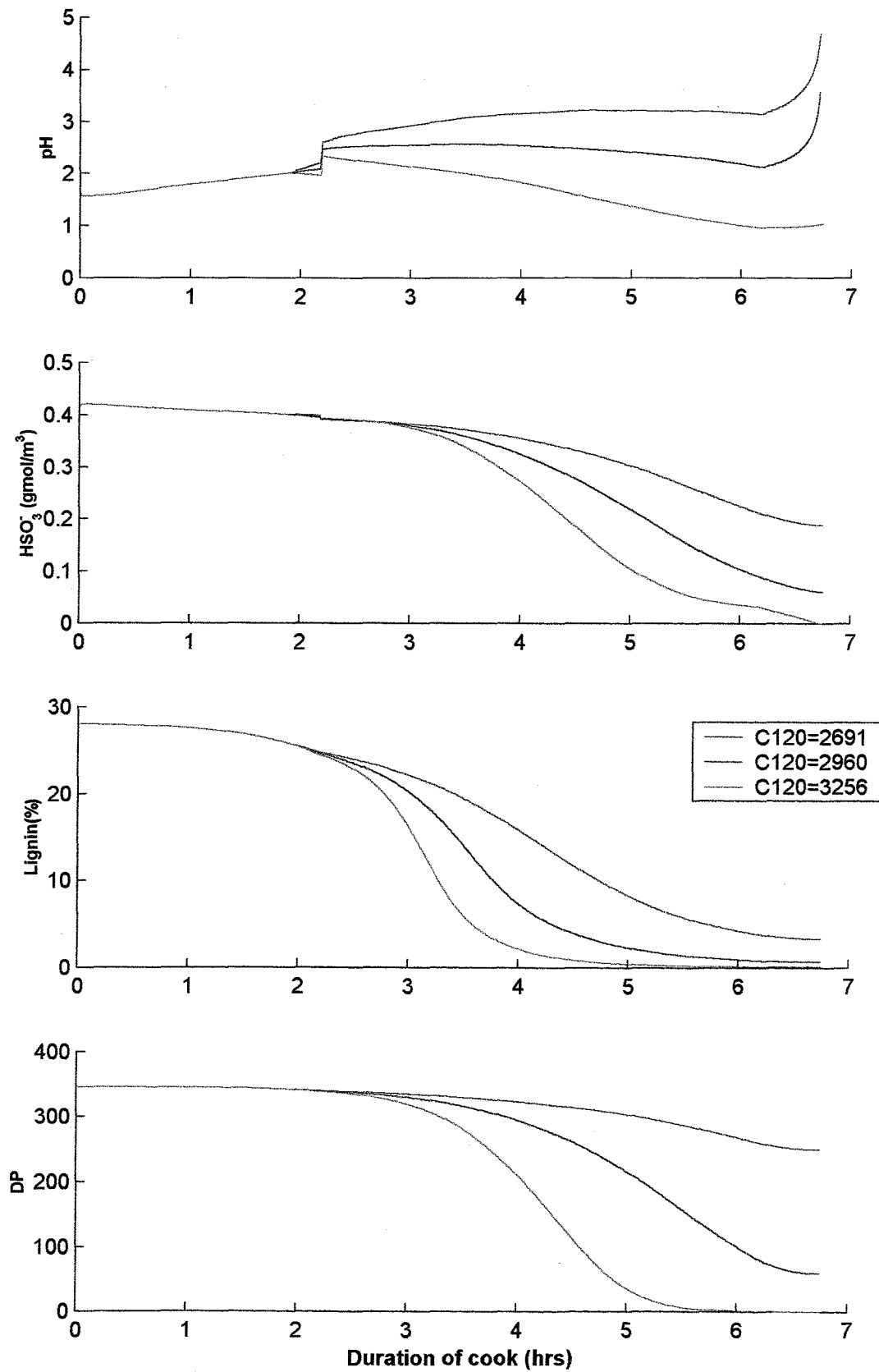


Influence of "B-Factor" for K_p for $120 \leq T < 150 \text{ }^\circ\text{C}$



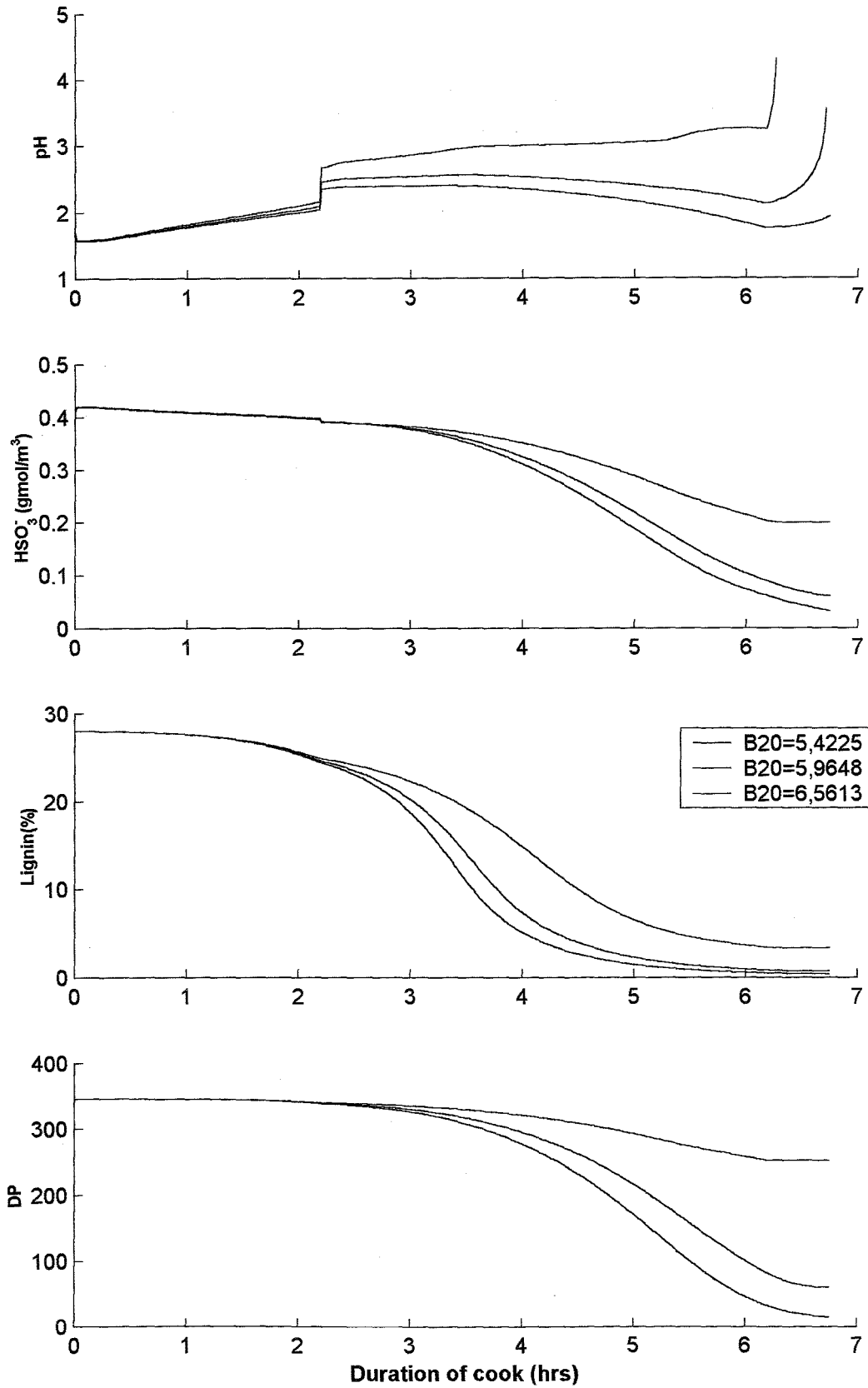


Influence of "C-Factor" for K_p for $120 \leq T < 150 \text{ }^\circ\text{C}$





Influence of "B-Factor" for K_{H_2O} for $20 \leq T < 150 \text{ }^\circ\text{C}$



Influence of "C-Factor" for K_{H_2O} for $20 \leq T < 150 \text{ }^\circ\text{C}$

