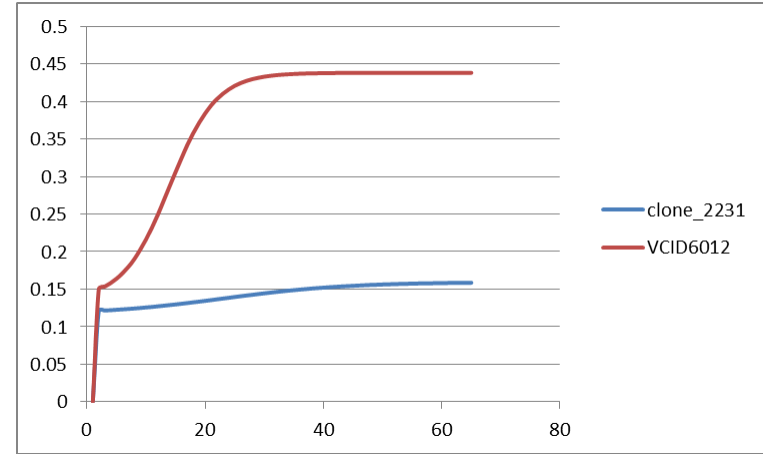
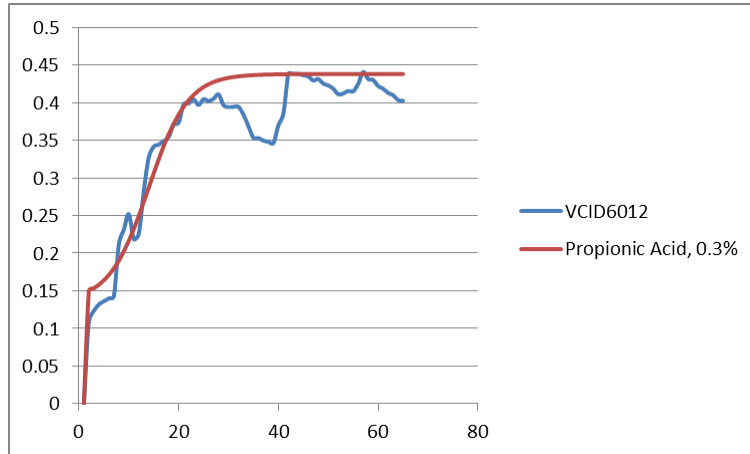
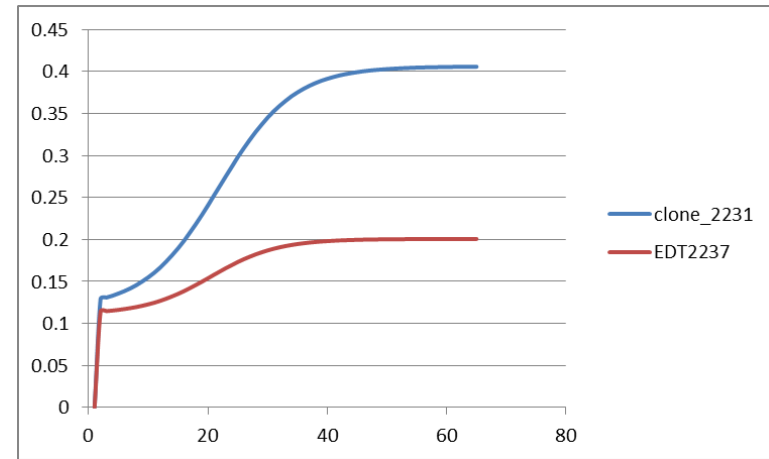
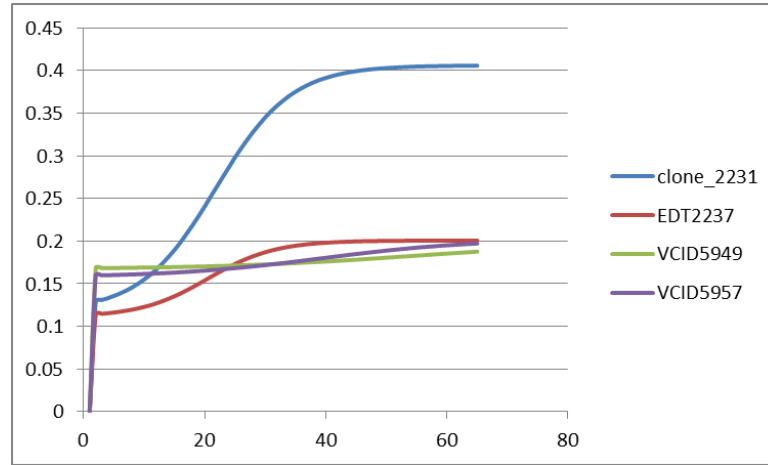
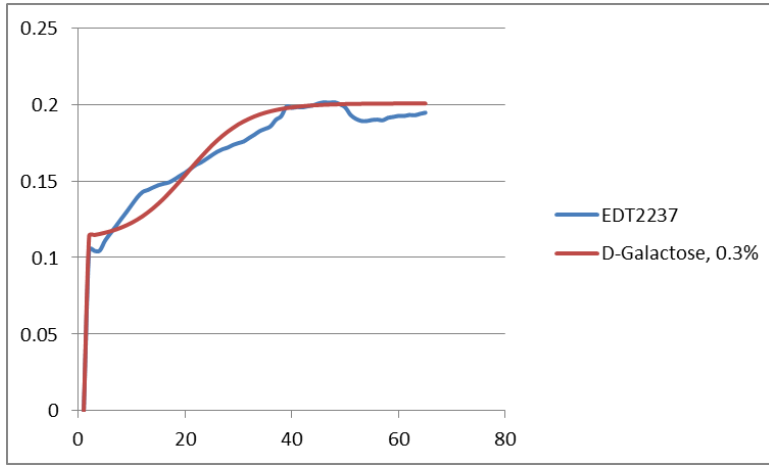


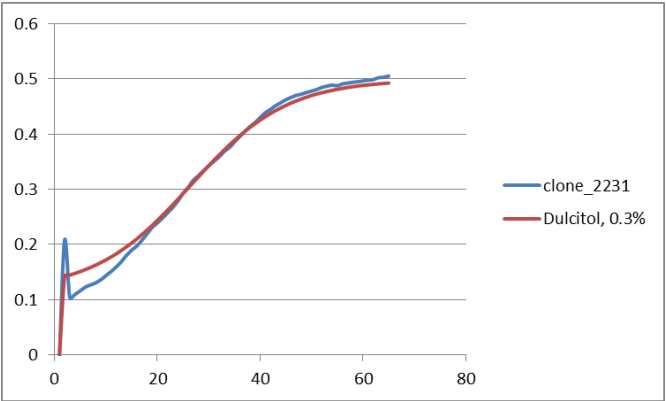
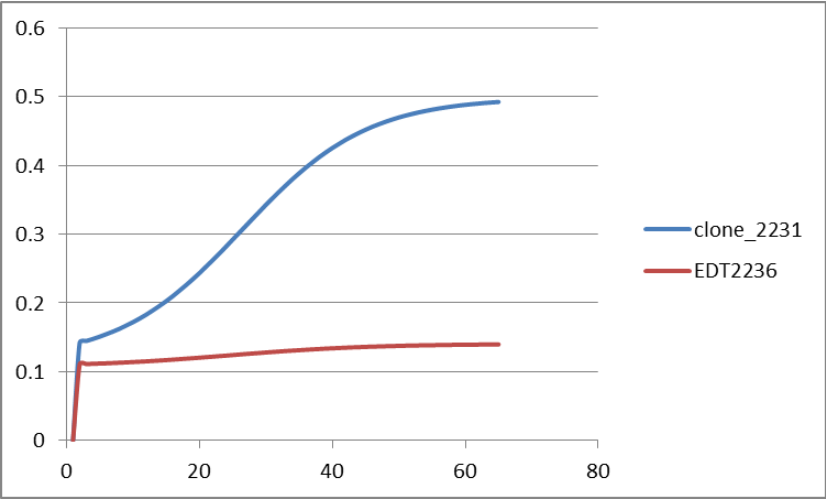
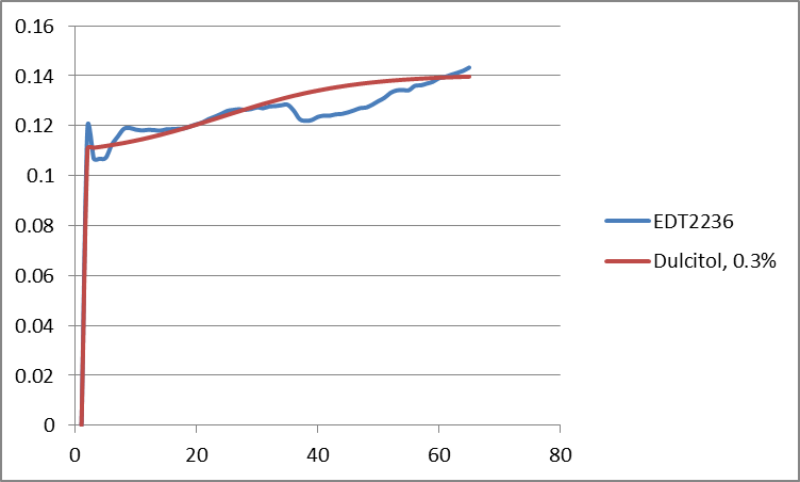
- We did the analysis of twelve clones and are filtering the data for significant differences.



Clone	Growth Condition	Lag Phase	Maximum Growth Rate	Asymptote	Model Stdev	Ratio	Score	Predicted Performance
clone_2231	Propionic Acid, 0.3%	0	0.0005	0.1594	0.0023	1.0000	0	equal
VCID6012	Propionic Acid, 0.3%	125	0.0037	0.4380	0.0136	0.3965	4	better



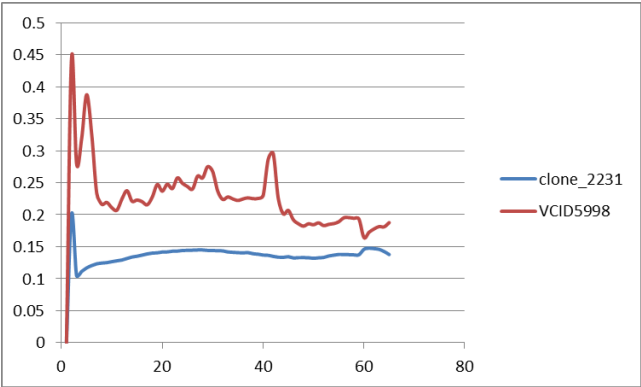
Clone	Growth Condition	Lag Phase	Maximum Growth Rate	Asymptote	Model Stdev	Ratio	Score	Predicted Performance
clone_2231	D-Galactose, 0.3%	225	0.0022	0.4060	0.0083	1.0000	0	equal
EDT2237	D-Galactose, 0.3%	225	0.0012	0.2006	0.0035	1.7155	-4	worst
VCID5949	D-Galactose, 0.3%	625	0.0004	0.1974	0.0114	1.6695	-4	worst
VCID5957	D-Galactose, 0.3%	375	0.0005	0.2023	0.0080	1.6629	-4	worst



clone_2231	Dulcitol, 0.3%	175	0.0018	0.4983	0.0058	1.0000	0	equal
EDT2236	Dulcitol, 0.3%	25	0.0004	0.1404	0.0021	2.5071	-4	worst

Problems with some of the data has pointed to some questions about the scoring methodology:

- Should we adjust the scoring with some kind of penalty, such as for a high standard deviation and low rate of growth?
- Is there a experiment-specific variation? Should we train the data with information for a negative and positive control on each experiment?



clone_2231	L-Glutamate, 0.3%	0	0.0006	0.1459	0.0039	1.0000	0	equal
VCID5998	L-Glutamate, 0.3%	0	0.0010	0.3185	0.0584	0.4009	4	better

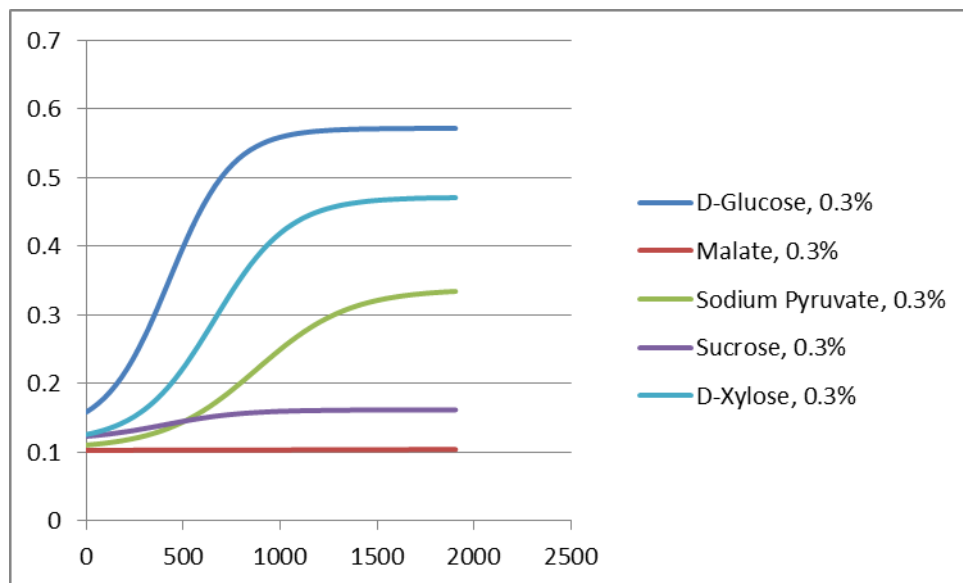
Classifying the growth conditions into 5 different classes. For this classification, the harmonic mean of the selected model, weighted by the asymptote is showing to work in discriminating well the data.

EDT2236	D-Glucose-6-phosphate, 0.3%	1.049401514	Class A
EDT2236	Cytidine, 0.3% - Nitro	1.49875916	Class A
EDT2236	D-Glucose, 0.3%	0.871405513	Class B
EDT2236	Glycerol, 0.3%	0.755962048	Class B
EDT2236	D-Galactose, 0.3%	0.771411894	Class B
EDT2236	Alpha-D-Glucose, 0.3%	0.75709108	Class B
EDT2236	D-Fructose, 0.3%	0.757036321	Class B
EDT2236	Lactate, 0.3%	0.78670515	Class B
EDT2236	D-Glucosamine, 0.3%	0.819633934	Class B
EDT2236	L-Glutathione, 0.2% - Nitro	0.835269133	Class B

Clone	Growth Condition	Harmonic Mean	Growth Cond. Classification
clone_2231	D-Glucose, 0.3%	1.017101803	Class A
clone_2231	Dulcitol, 0.3%	0.825143614	Class B
clone_2231	Alpha-D-Glucose, 0.3%	0.924213982	Class B
clone_2231	D-Fructose, 0.3%	0.805624628	Class B
clone_2231	D-Mannose, 0.3%	0.833151123	Class B
clone_2231	D-Glucose-6-phosphate, 0.3%	0.975018747	Class B
clone_2231	D-Xylose, 0.3%	0.794249326	Class B
clone_2231	D-Glucosamine, 0.3%	0.817597284	Class B

EDT2235	D-Glucose-6-phosphate, 0.3%	1.12675375	Class A
EDT2235	Cytidine, 0.3% - Nitro	1.519006912	Class A
EDT2235	D-Glucose, 0.3%	0.882980441	Class B
EDT2235	Alpha-D-Glucose, 0.3%	0.763238875	Class B
EDT2235	L-Glutathione, 0.2% - Nitro	0.947285027	Class B

VCID5945	D-Glucose-6-phosphate, 0.3%	1.151978181	Class A
VCID5945	Lactate, 0.3%	0.753806994	Class B
VCID5945	D-Mannose, 0.3%	0.824996998	Class B
VCID5945	D-Ribose, 0.3%	0.781000649	Class B
VCID5945	D-Xylose, 0.3%	0.894226776	Class B
VCID5945	D-Glucosamine, 0.3%	0.79243667	Class B
VCID5945	Cytidine, 0.3% - Nitro	0.819830855	Class B
VCID5945	Adenosine, 0.2% - Nitro	0.895621795	Class B



Clone	Growth Condition	Harmonic Mean	Growth Cond. Classification
clone_2231	D-Glucose, 0.3%	1.017101803	Class A
clone_2231	D-Xylose, 0.3%	0.794249326	Class B
clone_2231	Sodium Pyruvate, 0.3%	0.554079362	Class C
clone_2231	Sucrose, 0.3%	0.31284771	Class D
clone_2231	Malate, 0.3%	0.209399447	Class E

Modified Dice Coefficient/UPGMA to build a similarity tree (still working on the tree).

I	A	A
	B	B
	C	C
	D	D
	E	E
II	A	B
	B	C
	C	D
	D	E
III	A	C
	B	D
	C	E

$$AXB = \frac{2 * \sum I + \sum II + 0.5 * \sum III}{N_A + N_B}$$

	2231	EDT2235	EDT2236	EDT2237	VCID5945	VCID5949
EDT2235	0.792					
EDT2236	0.829	0.895				
EDT2237	0.803	0.916	0.892			
VCID5945	0.671	0.647	0.687	0.684		
VCID5949	0.703	0.726	0.726	0.737	0.863	
VCID6012	0.776	0.766	0.845	0.803	0.663	0.639