

# Discoloration Trends on Untreated Wafers

Salts?

pH?

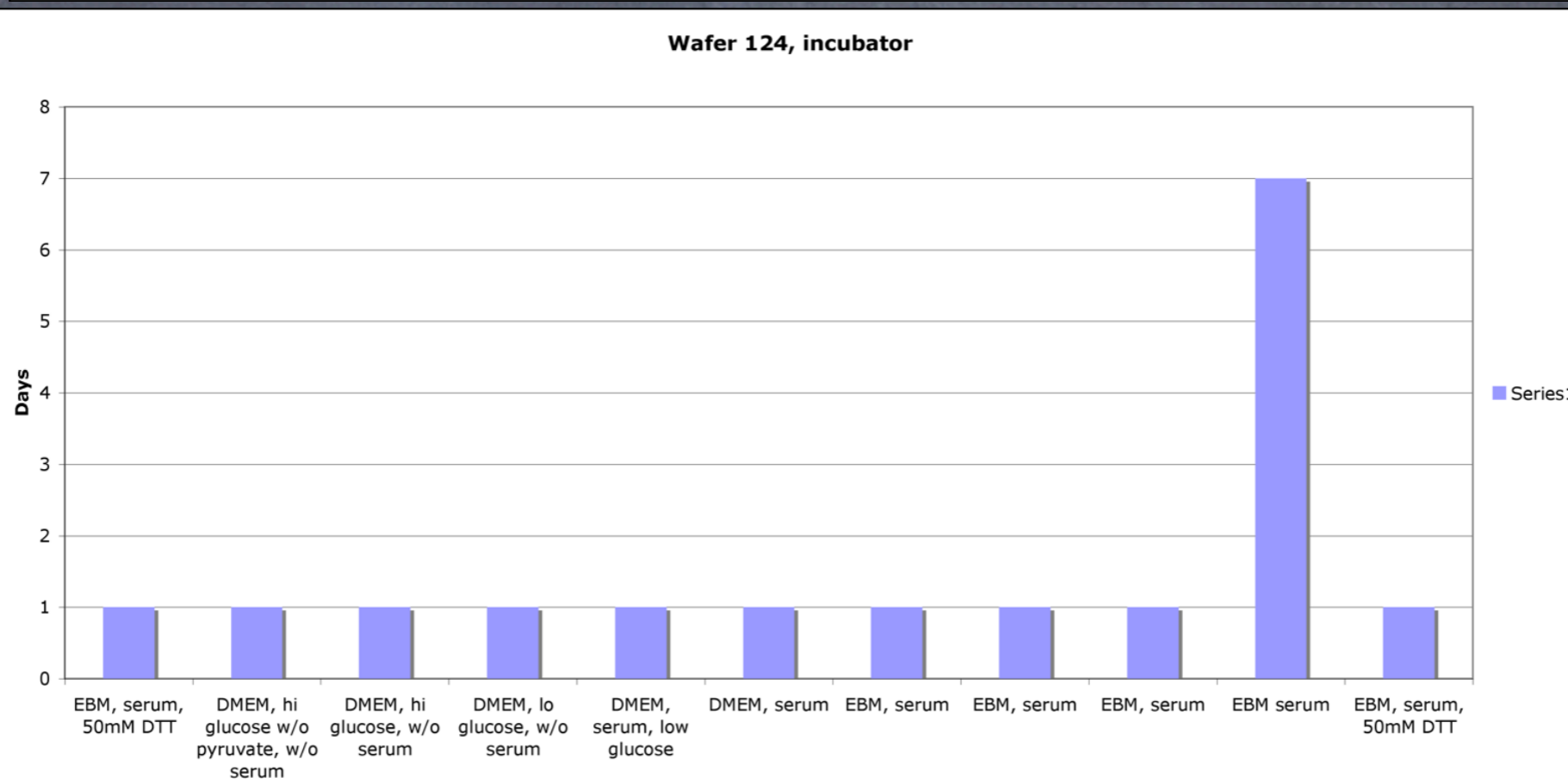
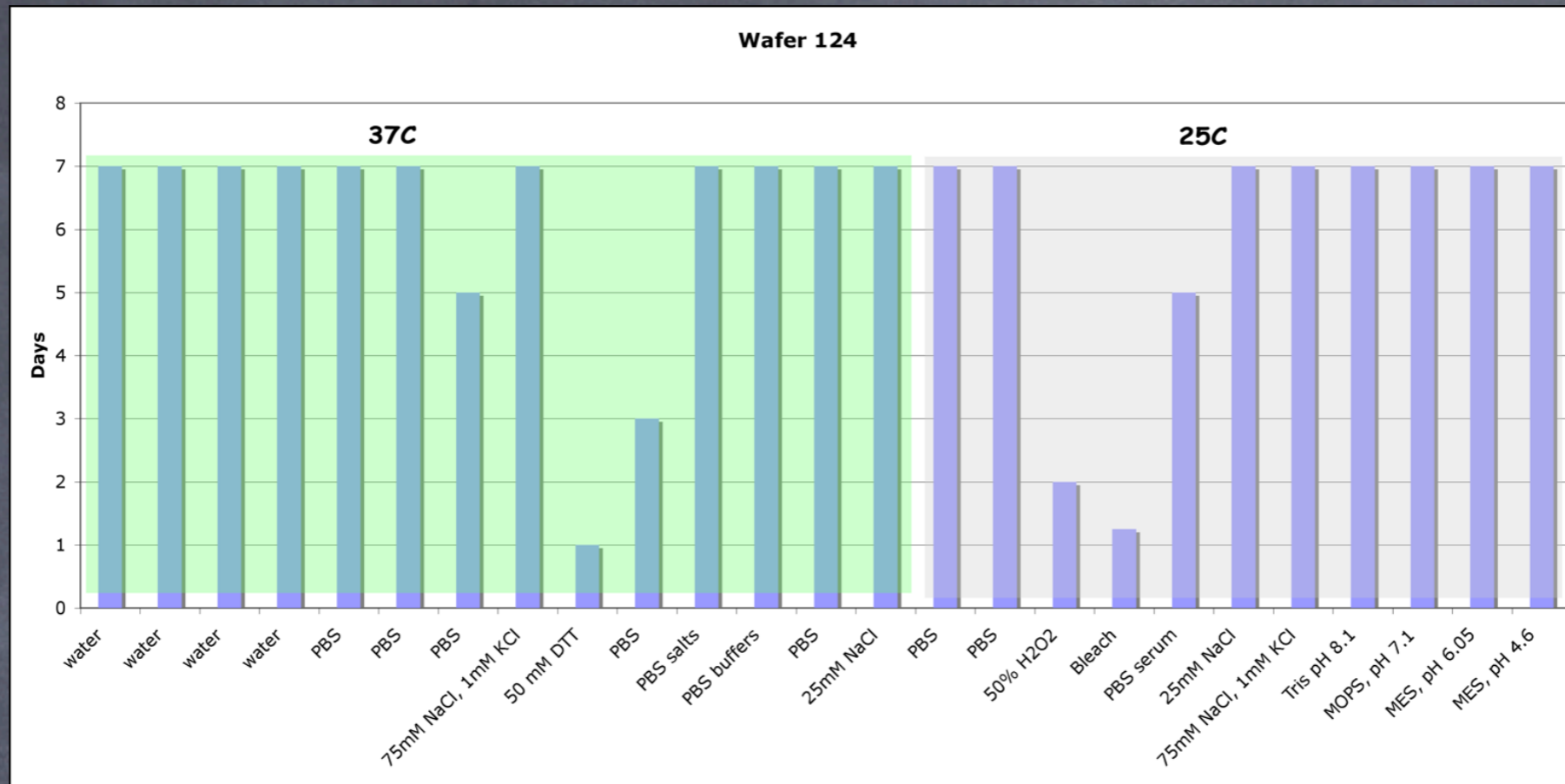
bicarbonate?

incubator vs. benchtop/oven?

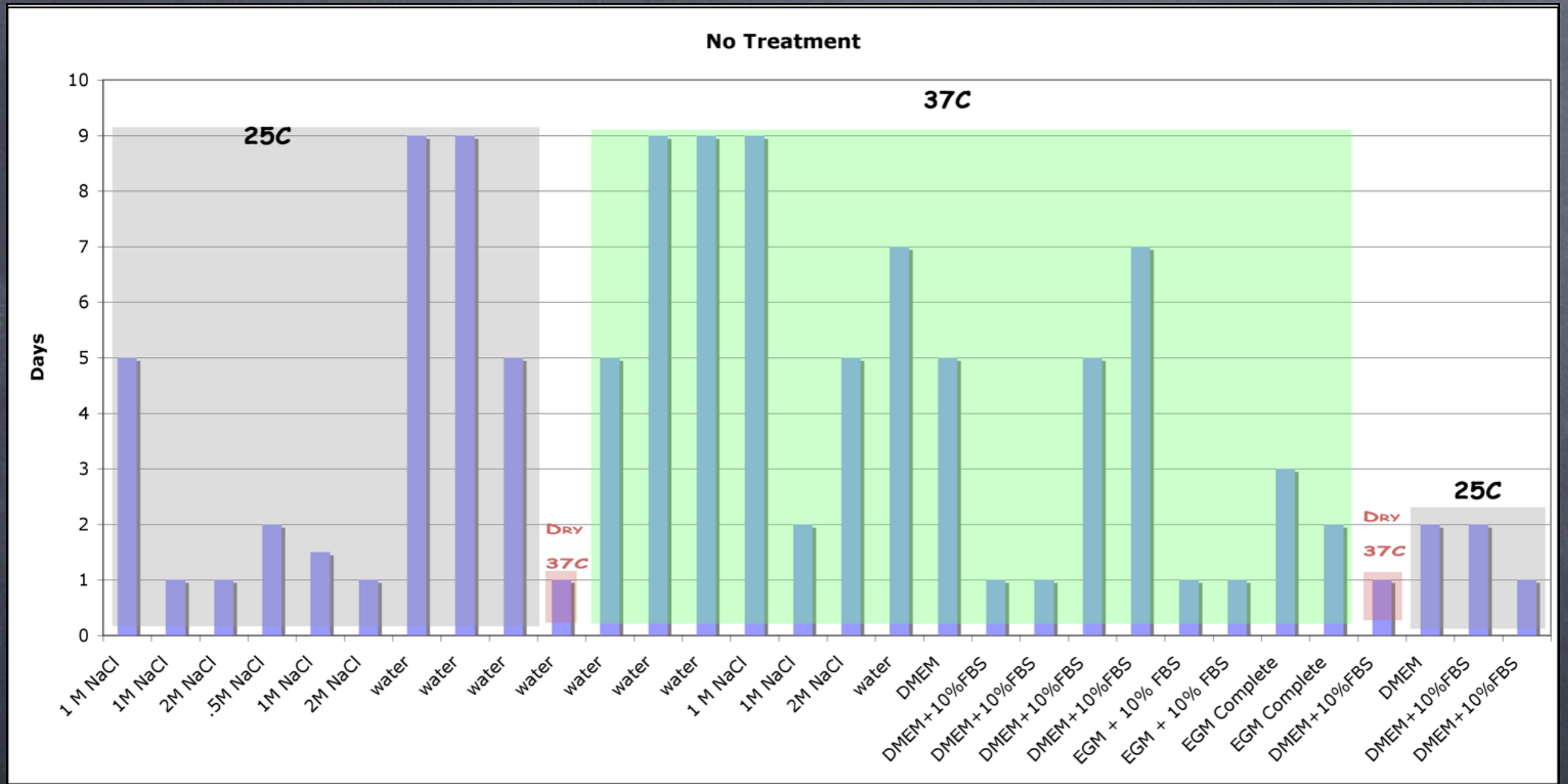
wafer numbers?

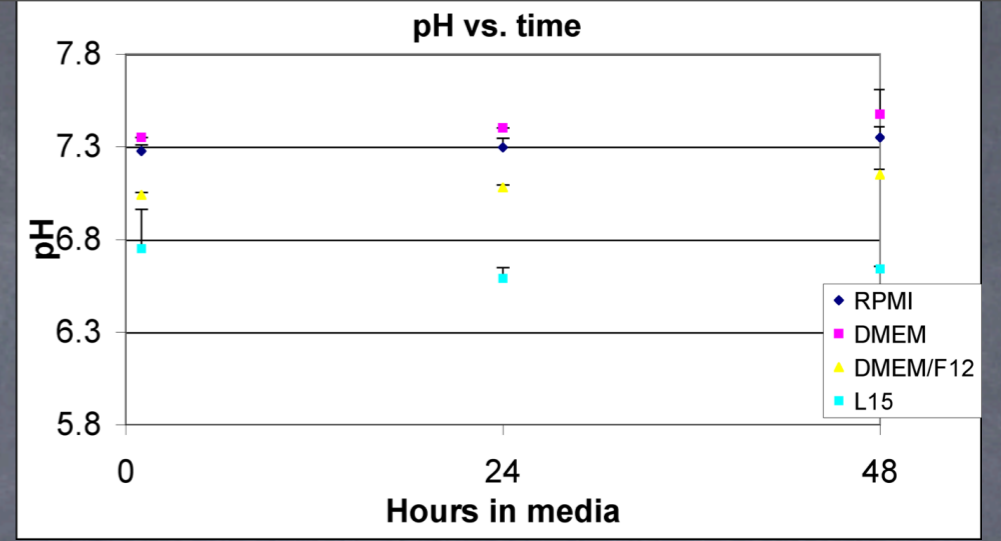
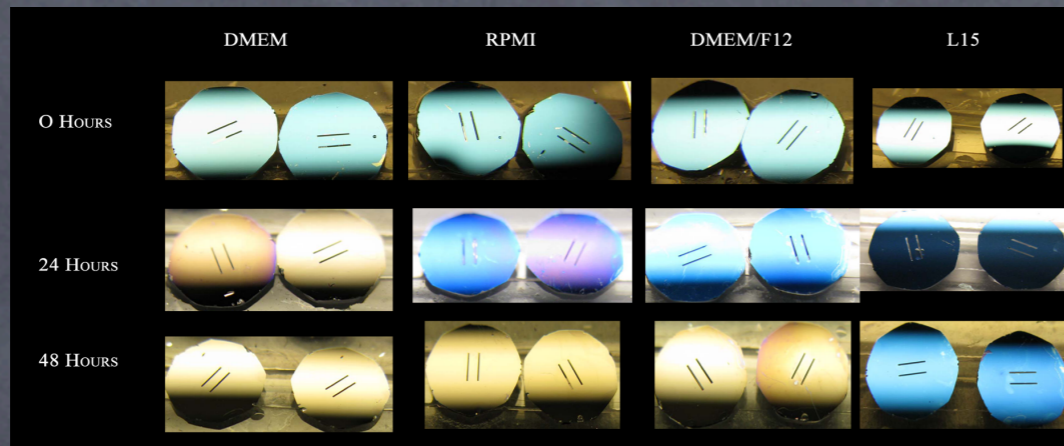
# Discoloration - history

Joe's  
work

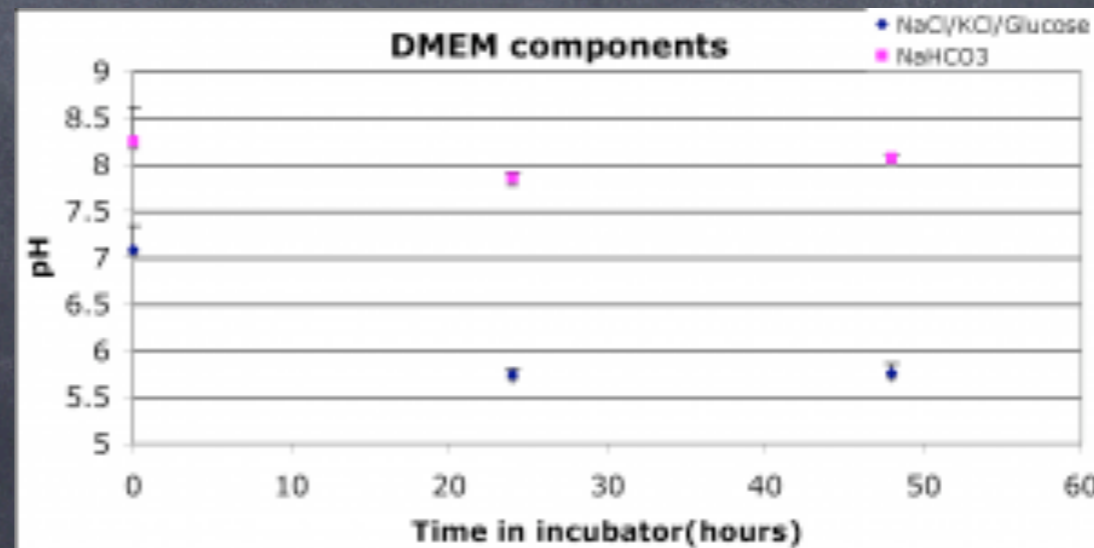
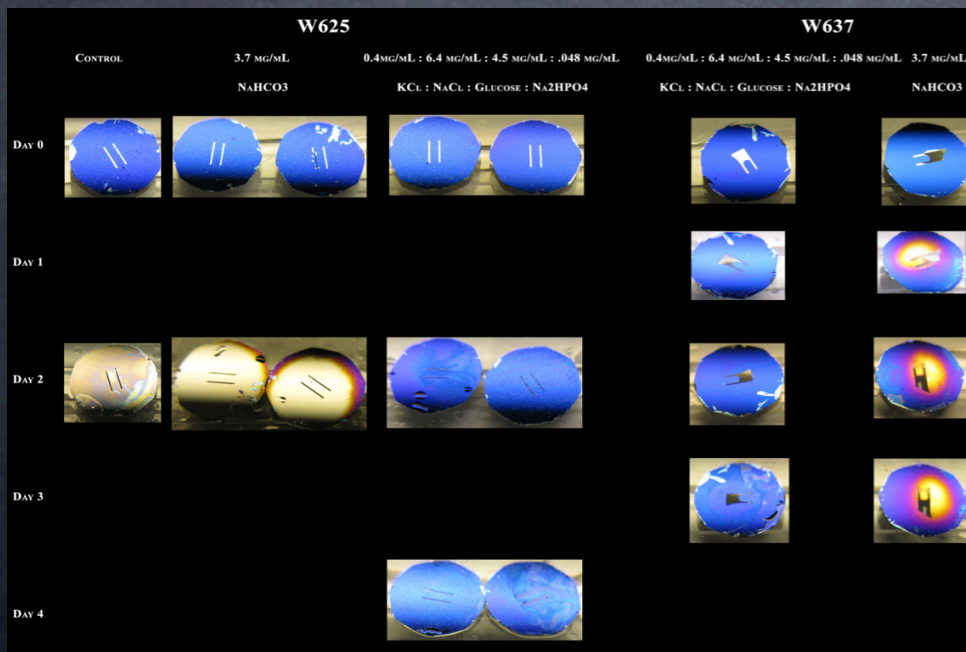


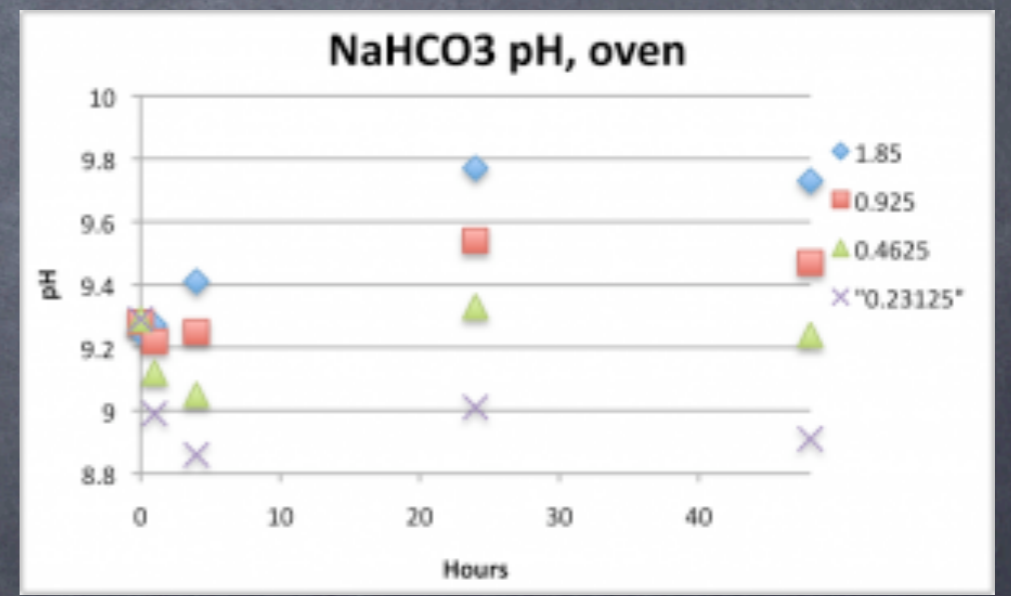
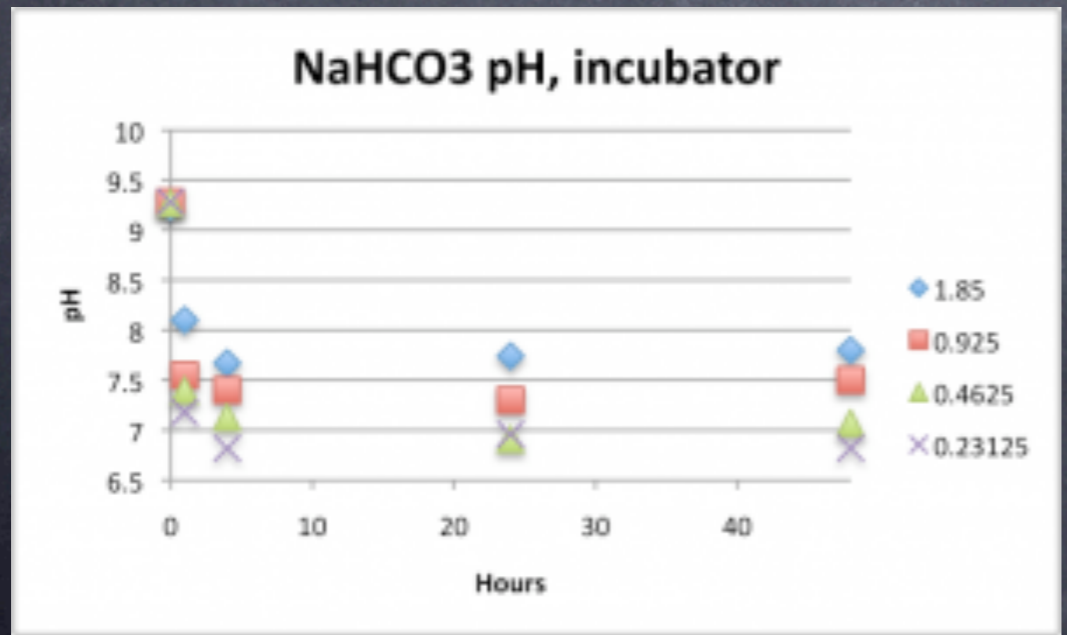
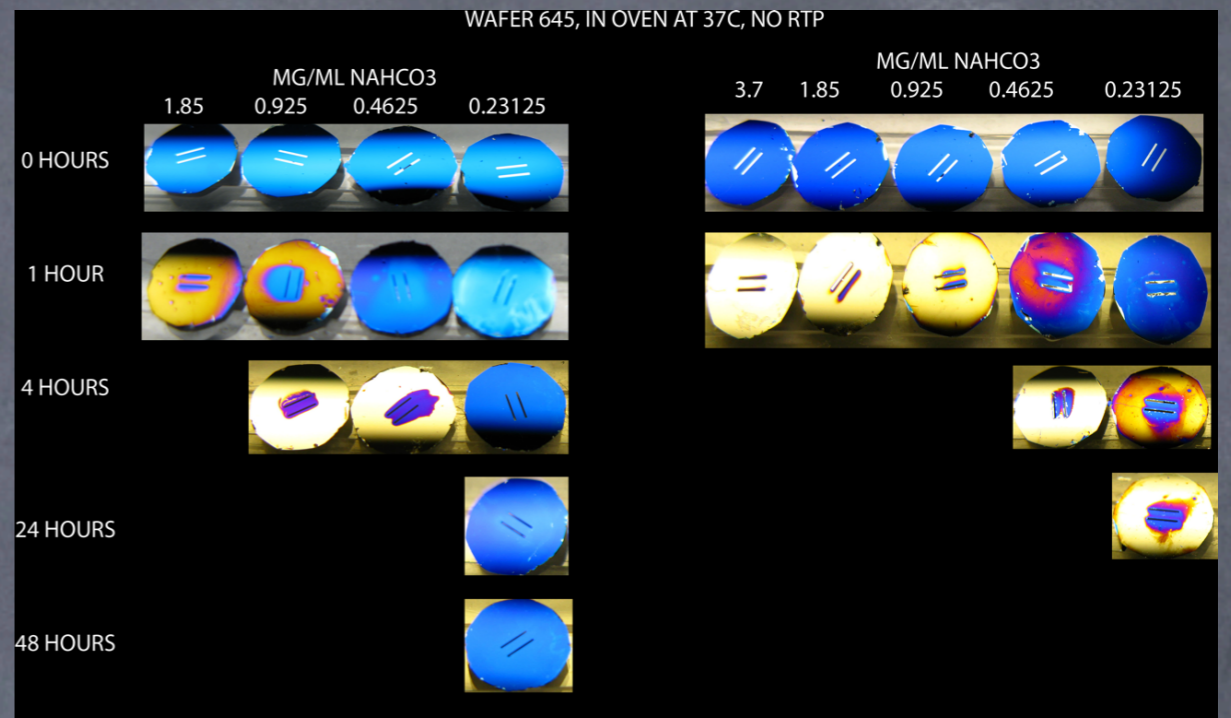
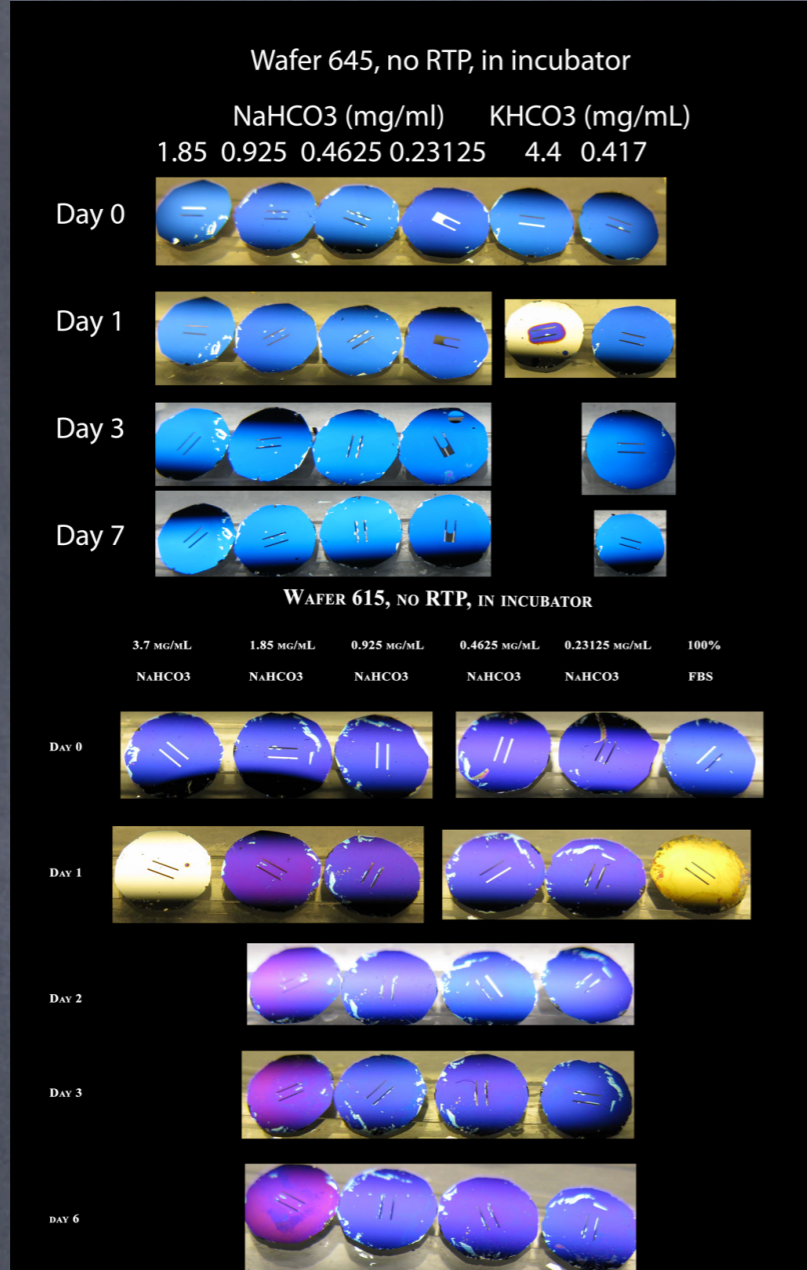
# Discoloration - History



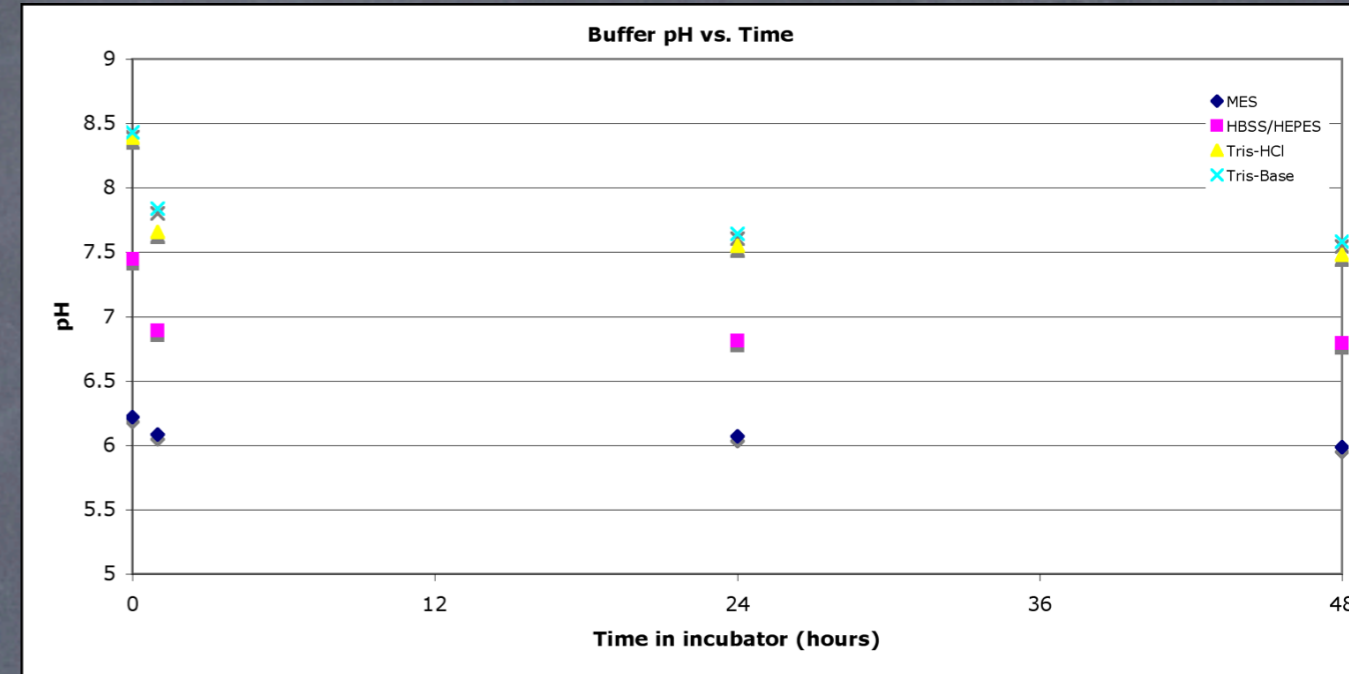
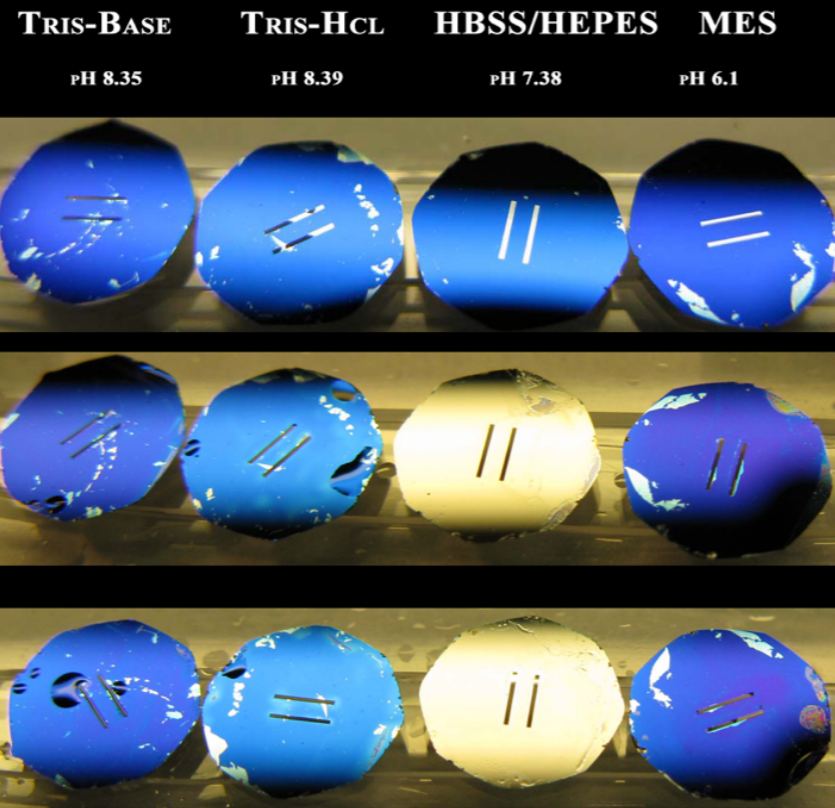


	DMEM		L15		RPMI		DMEM/F12		HBSS	
	mg/L		mg/L		mg/L		mg/L		mg/L	
1										
2										
3	Glycine	30	Glycine	200	Glycine	10	Glycine	18.75		
4				L-Alanine	225		L-Alanine	4.45		
5	L-Arginine hydrochloride	84	L-Arginine	500	L-Arginine	200	L-Arginine hydrochloride	147.5		
6				L-Asparagine	250		L-Asparagine-H2O	7.5		
7				L-Aspartic acid	20		L-Aspartic acid	6.65		
8				L-Cysteine	120		L-Cysteine hydrochloride-H2O	17.56		
9	L-Cystine 2HCl	63			L-Cystine 2HCl	65	L-Cystine 2HCl	31.29		
10					L-Glutamic Acid	20	L-Glutamic Acid	7.35		
11	L-Glutamine	584	L-Glutamine	300	L-Glutamine	300	L-Glutamine	365		
12	L-Histidine hydrochloride-H2O	42	L-Histidine	250	L-Histidine	15	L-Histidine hydrochloride-H2O	31.48		
13	L-Isoleucine	105	L-Isoleucine	250	L-Isoleucine	50	L-Isoleucine	54.47		
14	L-Leucine	105	L-Leucine	125	L-Leucine	50	L-Leucine	69.05		
15	L-Lysine hydrochloride	148	L-Lysine	75	L-Lysine hydrochloride	40	L-Lysine hydrochloride	91.25		
16	L-Methionine	30	L-Methionine	75	L-Methionine	15	L-Methionine	17.24		
17	L-Phenylalanine	66	L-Phenylalanine	125	L-Phenylalanine	15	L-Phenylalanine	35.48		
18					L-Proline	20	L-Proline	17.25		
19	L-Serine	42	L-Serine	200	L-Serine	30	L-Serine	26.25		
20	L-Threonine	95	L-Threonine	300	L-Threonine	20	L-Threonine	53.45		
21	L-Tryptophan	16	L-Tryptophan	20	L-Tryptophan	5	L-Tryptophan	9.02		
22	L-Tyrosine disodium salt dihydrate	104	L-Tyrosine	300	L-Tyrosine disodium salt dihydrate	29	L-Tyrosine disodium salt dihydrate	55.79		
23	L-Valine	94	L-Valine	100	L-Valine	20	L-Valine	52.85		
24					L-Hydroxyproline	20				
25					Biotin	0.2	Biotin	0.0035		
26					Choline chloride	3	Choline chloride	9.99		
27	Choline chloride	4	Choline chloride	1	D-Calcium pantothenate	0.25	D-Calcium pantothenate	2.24		
28	D-Calcium pantothenate	4	D-Calcium pantothenate	1	Folic Acid	1	Folic Acid	2.65		
29	Folic Acid	4	Folic Acid	1	Niacinamide	1	Niacinamide	2.02		
30	Niacinamide	4	Niacinamide	1	Pyridoxine hydrochloride	1	Pyridoxine hydrochloride	2		
31	Pyridoxine hydrochloride	4	Pyridoxine hydrochloride	1	Riboflavin	0.2	Riboflavin	0.219		
32	Riboflavin	0.4	Riboflavin	0.1	Thiamine hydrochloride	1	Thiamine hydrochloride	2.17		
33	Thiamine hydrochloride	4	Thiamine monophosphate	1	Vitamin B12	0.005	Vitamin B12	0.68		
34					Inositol	35	Inositol	12.6		
35	Inositol	7.2	Inositol	2	Para-Aminobenzoic Acid	1				
36										
37										
38	Calcium Chloride (CaCl2) (anhyd.)	200	Calcium Chloride (CaCl2) (anhyd.)	140	Calcium Chloride (CaCl2) (anhyd.)	140	Calcium Chloride (CaCl2) (anhyd.)	116.6		
39	Ferric Nitrate (Fe(NO3)3*9H2O)	0.1			Cupric sulfate (CuSO4*5H2O)	0.0013	Cupric sulfate (CuSO4*5H2O)	0.0013		
40					Ferric Nitrate (Fe(NO3)3*9H2O)	0.05	Ferric Nitrate (Fe(NO3)3*9H2O)	0.05		
41	Magnesium Sulfate (MgSO4) (anhyd.)	97.67	Magnesium Sulfate (MgSO4) (anhyd.)	97.67	Magnesium Sulfate (MgSO4) (anhyd.)	48.84	Magnesium Sulfate (MgSO4) (anhyd.)	48.84		
42					Potassium Chloride (KCl)	400	Potassium Chloride (KCl)	311.8	Potassium Chloride (KCl)	400
43	Potassium Chloride (KCl)	400	Potassium Chloride (KCl)	400	Calcium nitrate (Ca(NO3)2*4H2O)	100	Calcium nitrate (Ca(NO3)2*4H2O)	100		
44	Sodium Bicarbonate (NaHCO3)	3700	Sodium Bicarbonate (NaHCO3)	3700	Potassium Chloride (KCl)	400	Sodium Bicarbonate (NaHCO3)	1200	Sodium Bicarbonate (NaHCO3)	350
45	Sodium Chloride (NaCl)	6400	Sodium Chloride (NaCl)	8000	Sodium Chloride (NaCl)	6000	Sodium Chloride (NaCl)	6995.5	Sodium Chloride (NaCl)	8000
46					Sodium Phosphate dibasic (Na2HPO4)	190	Sodium Phosphate dibasic (Na2HPO4) anhydrous	800	Sodium Phosphate dibasic (Na2HPO4) anhydrous	48
47	Sodium Phosphate monobasic (NaH2PO4)	125					Sodium Phosphate monobasic (NaH2PO4-H2O)	52.5		
48							Zinc sulfate (ZnSO4*7H2O)	0.432		
49							Magnesium Chloride (anhydrous)	28.84		
50							Potassium Phosphate monobasic (KH2PO4)	60	Potassium Phosphate monobasic (KH2PO4)	60
51										
52										
53	D-Glucose (Dextrose)	4500	D-Galactose	900	D-Glucose (Dextrose)	2000	D-Glucose (Dextrose)	3151	D-Glucose (Dextrose)	1000
54							HEPES	3574.5		
55							Hypoxanthine Na	2.39		
56							Linoleic Acid	0.042		
57							Lipoic Acid	0.105		
58	Phenol Red	15			Phenol Red	5	Phenol Red	8.1		
59							Putrescine 2HCl	0.081		
60							Sodium Pyruvate	55		
61							Thymidine	0.365		
62										
63										





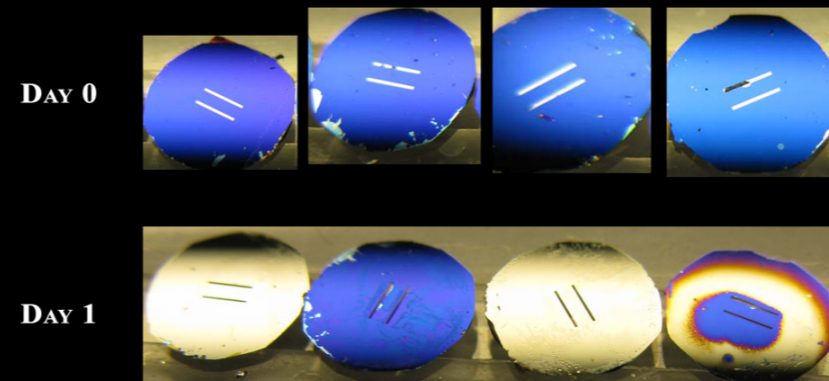
## BUFFERS (INCUBATOR)



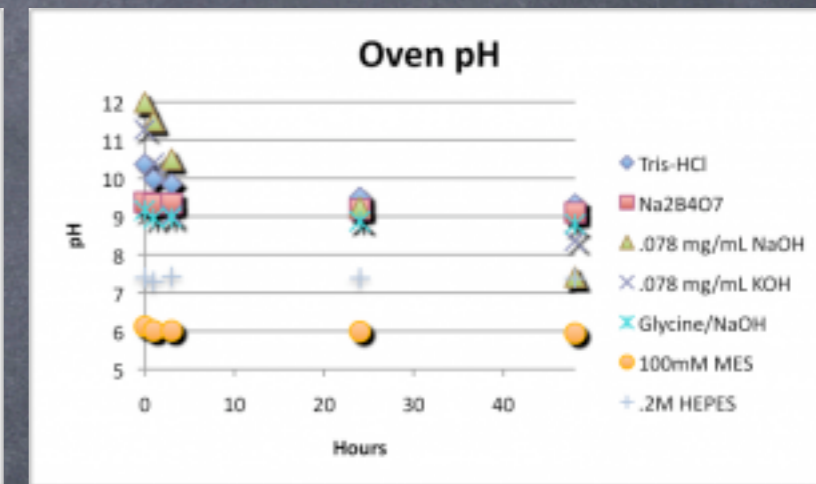
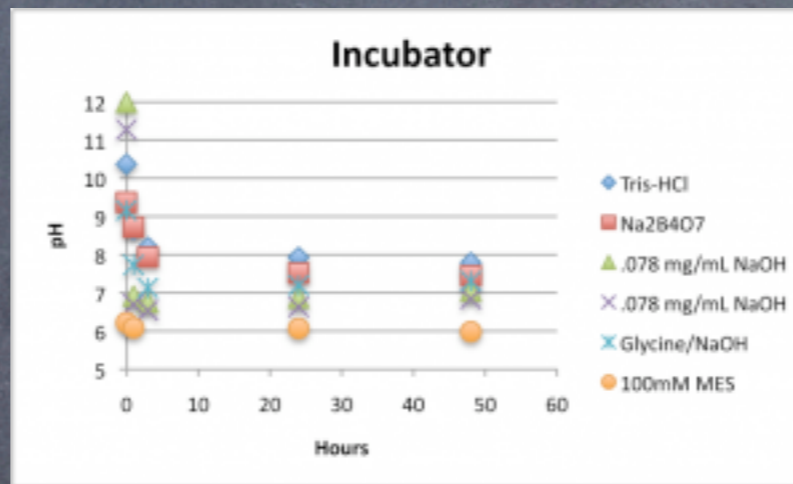
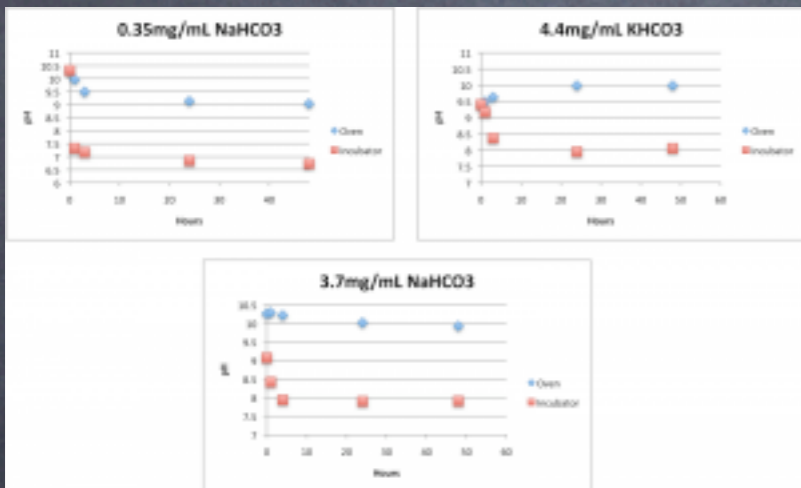
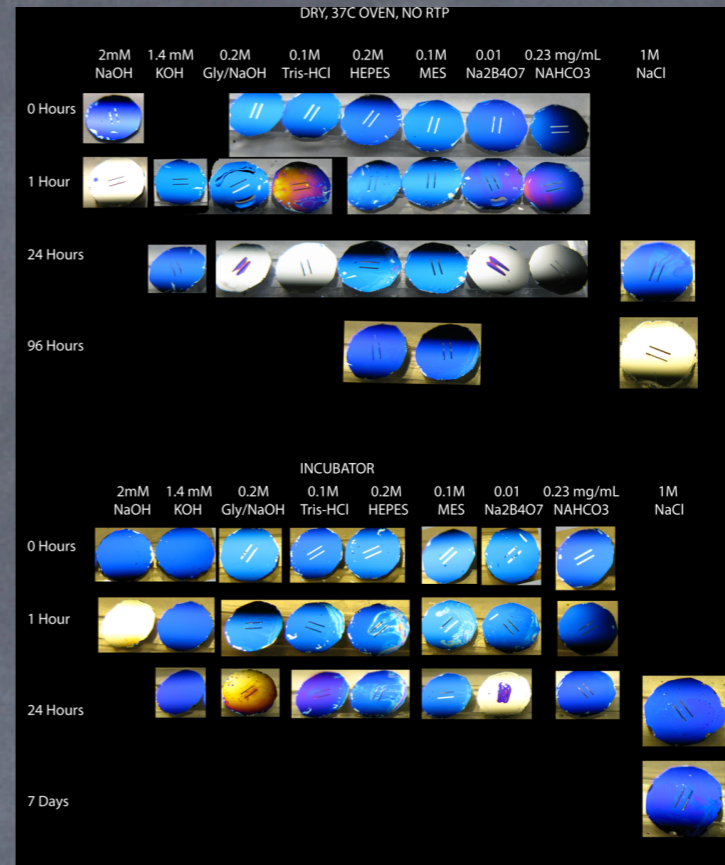
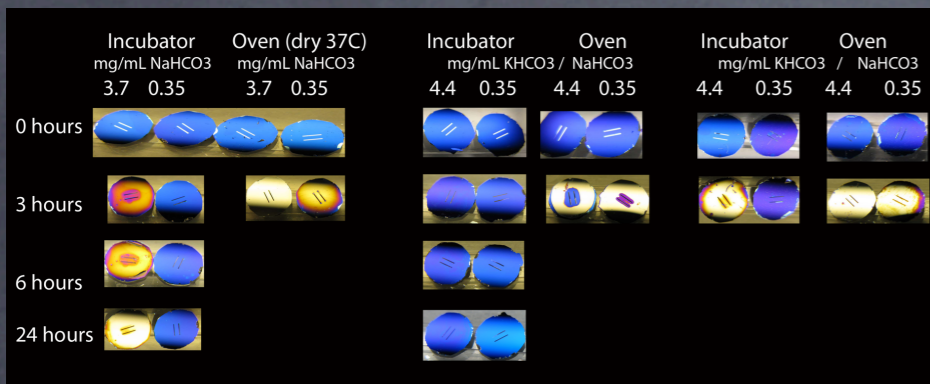
WAFER 622, NO RTP

DMEM/F12 WITH 10% FBS

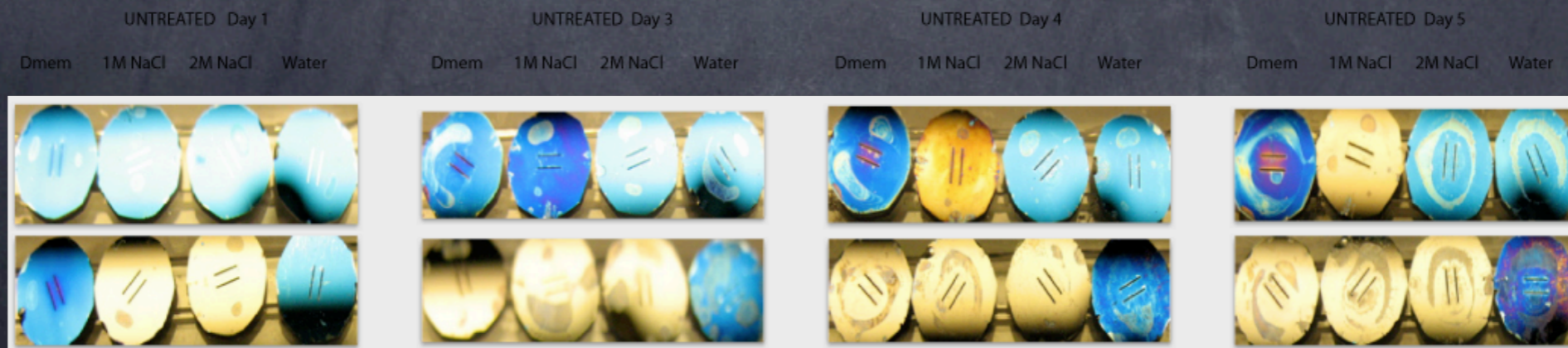
GIBCO	HOMEMADE	CELLGRO	3.7 MG/ML
HBSS	HBSS	HBSS	NAHCO3



# What about salts/buffers?

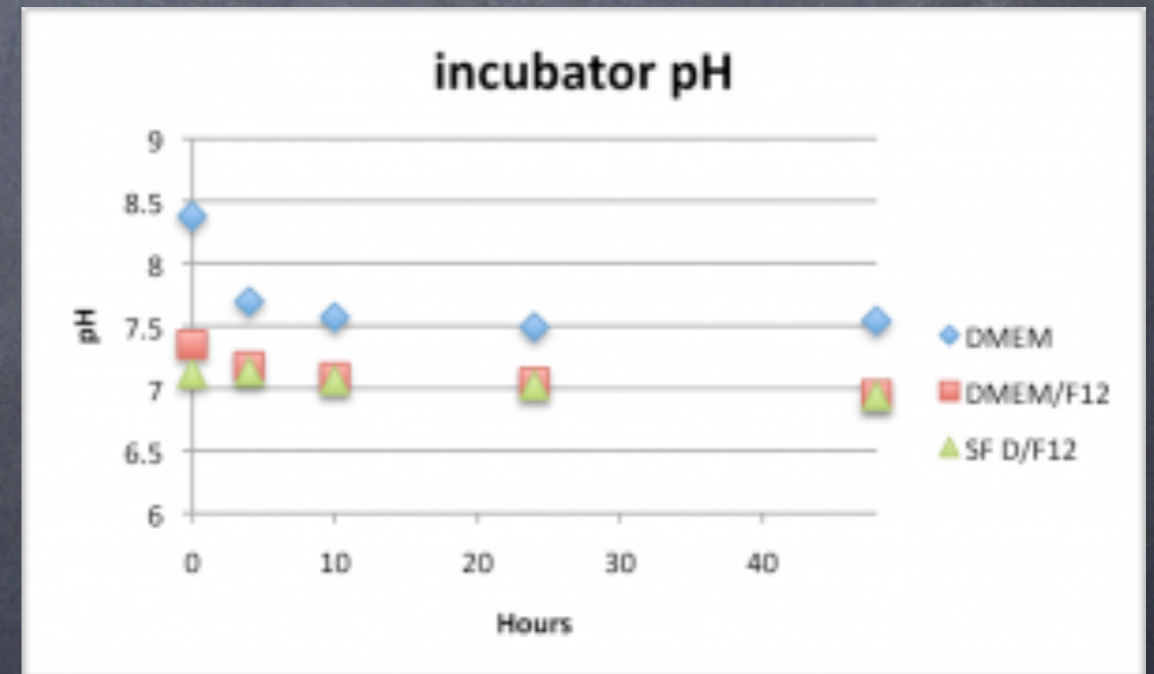
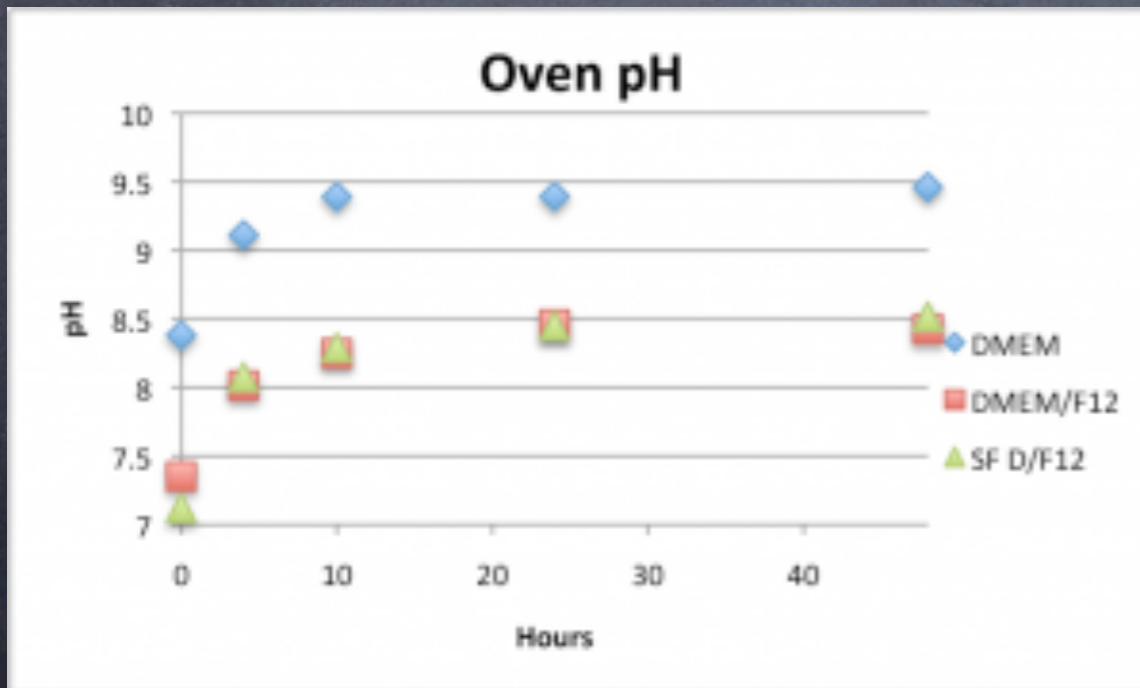
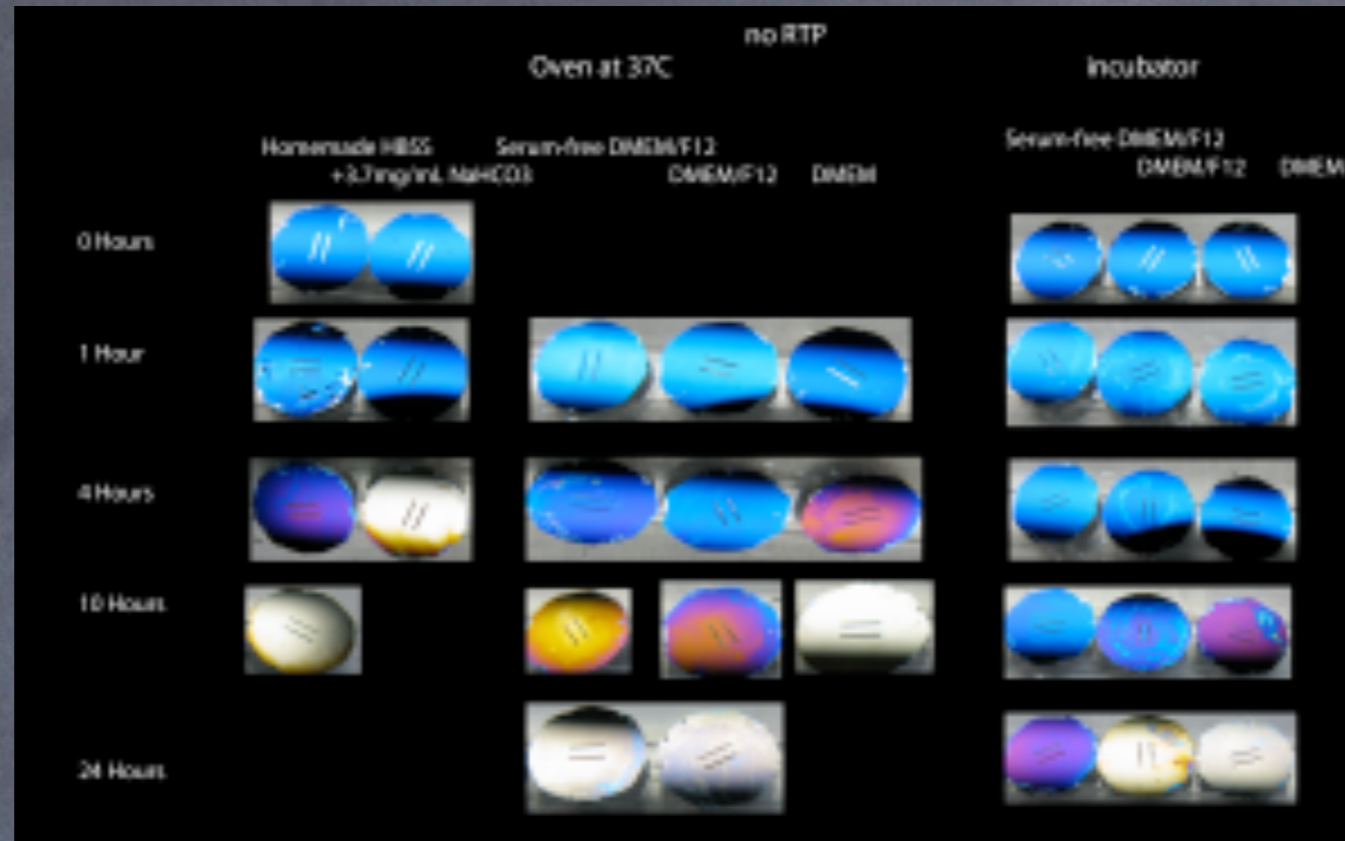


Wafers 311-313, note color



Sodium bicarbonate  
Chemistry -  
knowledge wiki

# Misc 1



# Misc 2

