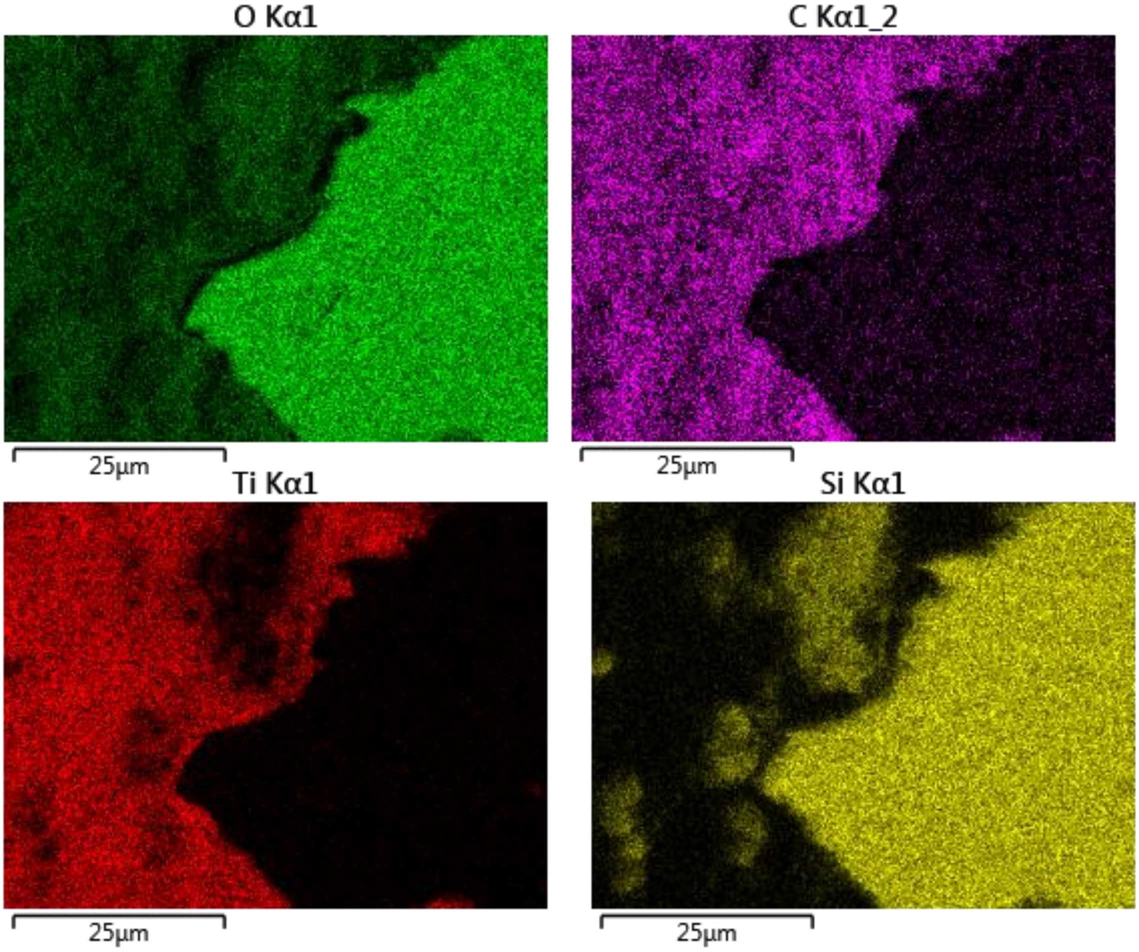
S1. FE-SEM micrograms of of the glass beads surface



S2. Photodegradation-adsorption of dyes by TiO_2/chitosan modified glass beads with flow system

1. Effect of variations in synthetic dyes

		Experimentation 1	Experimentation 2	Experimentation 3	Average	Standard deviation
MB	Absorbance 0 minutes	0,192				
	Absorbance 15 minutes	0,1797	0,181	0,1786		
	Efficiency (%)	6,41	5,73	6,98	6,37	0,51
	Absorbance 30 minutes	0,1653	0,1691	0,1659		
	Efficiency (%)	13,91	11,93	13,59	13,14	0,87
	Absorbance 45 minutes	0,1520	0,1505	0,1551		
	Efficiency (%)	20,83	21,61	19,22	20,56	1,00
	Absorbance 60 minutes	0,1368	0,1372	0,1398		
	Efficiency (%)	28,75	28,54	27,19	28,16	0,69
	Absorbance 75 minutes	0,1248	0,1205	0,1229		
	Efficiency (%)	35,00	37,24	35,99	36,08	0,92
	Absorbance 90 minutes	0,1115	0,1148	0,1157		
	Efficiency (%)	41,93	40,21	39,74	40,63	0,94
	Absorbance 105 minutes	0,1011	0,0998	0,1020		
	Efficiency (%)	47,34	48,02	46,88	47,41	0,47
	Absorbance 120 minutes	0,0769	0,0785	0,0812		
	Efficiency (%)	59,95	59,11	57,71	58,92	0,92
	Absorbance 135 minutes	0,0093	0,0090	0,0091		
	Efficiency (%)	98,42	98,47	98,45	98,45	0,02
MO	Absorbance 0 minutes	0,0779				
	Absorbance 15 minutes	0,0082	0,0079	0,0087		
	Efficiency (%)	89,47	89,86	88,83	89,39	0,42
	Absorbance 30 minutes	0,0076	0,008	0,0071		
	Efficiency (%)	90,24	89,73	90,89	90,29	0,47
	Absorbance 45 minutes	0,0062	0,0054	0,0059		
	Efficiency	92,04	93,07	92,43	92,51	0,42

	(%)					
	Absorbance 60 minutes	0,0045	0,005	0,0057		
	Efficiency (%)	94,22	93,58	92,68	93,50	0,63
	Absorbance 75 minutes	0,0041	0,0053	0,0049		
	Efficiency (%)	94,74	93,20	93,71	93,88	0,64
	Absorbance 90 minutes	0,0038	0,0029	0,0034		
	Efficiency (%)	95,12	96,28	95,64	95,68	0,47
	Absorbance 105 minutes	0,0029	0,0020	0,0032		
	Efficiency (%)	96,28	97,43	95,89	96,53	0,65
	Absorbance 120 minutes	0,0027	0,0021	0,0026		
	Efficiency (%)	96,53	97,30	96,66	96,83	0,34
	Absorbance 135 minutes	0,0001	0,0003	0,0005		
	Efficiency (%)	99,93	99,80	99,67	99,80	0,11
RB	Absorbance 0 minutes	0,2055				
	Absorbance 15 minutes	0,1316	0,1309	0,1354		
	Efficiency (%)	35,96	36,30	34,11	35,46	0,96
	Absorbance 30 minutes	0,1227	0,1211	0,1253		
	Efficiency (%)	40,29	41,07	39,03	40,13	0,84
	Absorbance 45 minutes	0,1096	0,1103	0,1078		
	Efficiency (%)	46,67	46,33	47,54	46,85	0,51
	Absorbance 60 minutes	0,0986	0,1032	0,1005		
	Efficiency (%)	52,02	49,78	51,09	50,97	0,92
	Absorbance 75 minutes	0,0846	0,0825	0,0872		
	Efficiency (%)	58,83	59,85	57,57	58,75	0,94
	Absorbance 90 minutes	0,0788	0,0750	0,0763		
	Efficiency (%)	61,65	63,50	62,87	62,68	0,77
	Absorbance 105 minutes	0,0601	0,0621	0,0595		
	Efficiency (%)	70,75	69,78	71,05	70,53	0,54
	Absorbance 120 minutes	0,0474	0,0456	0,0501		
	Efficiency	76,93	77,81	75,62	76,79	0,90

	(%)					
	Absorbance 135 minutes	0,0245	0,0273	0,0240		
	Efficiency (%)	96,86	96,51	96,93	96,77	0,19

2. Application in batik industry wastewater

		Experimentation 1	Experimentation 2	Experimentation 3	Average	Standard deviation
Wastewater 1	Absorbance 0 minutes	0,1048				
	Absorbance 15 minutes	0,0952	0,093	0,0931		
	Efficiency (%)	9,16	11,26	11,16	10,53	0,97
	Absorbance 30 minutes	0,0895	0,0885	0,0891		
	Efficiency (%)	14,60	15,55	14,98	15,04	0,39
	Absorbance 45 minutes	0,08	0,08	0,08		
	Efficiency (%)	22,71	20,90	23,09	22,23	0,96
	Absorbance 60 minutes	0,07	0,07	0,07		
	Efficiency (%)	32,92	33,68	31,87	32,82	0,74
	Absorbance 75 minutes	0,05	0,05	0,05		
	Efficiency (%)	51,15	51,72	50,48	51,11	0,51
	Absorbance 90 minutes	0,04	0,04	0,04		
	Efficiency (%)	62,17	61,07	60,59	61,28	0,66
	Absorbance 105 minutes	0,03	0,03	0,03		
	Efficiency (%)	72,42	72,04	70,52	71,66	0,82
	Absorbance 120 minutes	0,0202	0,0209	0,02103		
	Efficiency (%)	80,73	80,06	79,93	80,24	0,35
	Absorbance 135 minutes	0,0185	0,01984	0,02031		
	Efficiency (%)	82,35	81,07	80,62	81,35	0,73
Wastewater 2	Absorbance 0 minutes	0,2149				
	Absorbance 15 minutes	0,214	0,2131	0,2139		
	Efficiency (%)	0,42	0,84	0,47	0,57	0,19
	Absorbance 30 minutes	0,21018	0,2095	0,2125		
	Efficiency (%)	2,20	2,51	1,12	1,94	0,60

	Absorbance 45 minutes	0,20	0,21	0,20		
	Efficiency (%)	5,21	3,30	4,79	4,44	0,82
	Absorbance 60 minutes	0,19	0,19	0,19		
	Efficiency (%)	10,24	9,59	11,31	10,38	0,71
	Absorbance 75 minutes	0,18	0,18	0,19		
	Efficiency (%)	15,17	14,10	13,59	14,29	0,66
	Absorbance 90 minutes	0,17	0,17	0,17		
	Efficiency (%)	21,08	20,71	19,96	20,58	0,46
	Absorbance 105 minutes	0,15	0,15	0,15		
	Efficiency (%)	29,08	30,34	28,39	29,27	0,81
	Absorbance 120 minutes	0,1432	0,1419	0,1439		
	Efficiency (%)	33,36	33,97	33,04	33,46	0,39
	Absorbance 135 minutes	0,1225	0,1216	0,1255		
	Efficiency (%)	43,00	43,42	41,60	42,67	0,78

S3. Kinetic data of photodegradation-adsorption of dyes by TiO_2/chitosan modified glass beads with flow system

a. MB

Time	Initial concentration	Initial absorbance	Final absorbance	Efficiency	Final concentration
20	5	0,192	0,1664	13,33	4,333333333
40			0,1431	25,47	3,7265625
60			0,1069	44,32	2,783854167
80			0,0825	57,03	2,1484375
100			0,0611	68,18	1,591145833
120			0,0493	74,32	1,283854167

- Pseudo first order kinetic model

Time (minutes)	ln $[MB]_t$
20	1,466337069
40	1,315486227
60	1,023836358
80	0,764740834
100	0,464454407
120	0,249866621

The first-order kinetics model can be obtained by plotting the value of ln [MB]t with time so that the regression equation is y = -0.01271x + 1.77024 with an R^2 of 0.99234.

- Pseudo second order kinetic model

Time (minutes)	$1/[MB]_t$
20	0,230769231
40	0,268343816
60	0,359214219
80	0,465454545
100	0,628477905

120	0,778904665

The second order kinetic model can be obtained by plotting the value of 1/[RB]t with Time so that the regression equation is obtained y = 0.00561x + 0.06246 with an R^2 of 0.95057.

b. MO

Time	Initial concentration	Initial absorbance	Final absorbance	Adsorption efficiency	Final concentration
20	5	0,0779	0,0755	3,08	4,845956354
40			0,054093	30,56	3,47195122
60			0,04627	40,60	2,969833119
80			0,03325	57,32	2,134146341
100			0,02512	67,75	1,612323492
120			0,0174	77,66	1,116845956

- Pseudo first order kinetic model

Time (minutes)	ln $[MO]_t$
20	1,578144616
40	1,244716747
60	1,088505762
80	0,758066727
100	0,477676301
120	0,110508602

The first-order kinetics model can be obtained by plotting the value of ln [MB]t with time so that the regression equation is y = -0,01424x + 1,87324 with an R^2 of 0,9889.

- Pseudo second order kinetic model

Time (minutes)	$1/[MO]_t$
20	0,206357616
40	0,28802248
60	0,336719257

80	0,468571429
100	0,62022293
120	0,895378628

The second order kinetic model can be obtained by plotting the value of 1/[RB]t with Time so that the regression equation is obtained y = 0,00653x + 0,01186 with an R^2 of 0,90322.

c. RB

Time	Initial concentration	Initial absorbance	Final absorbance	Adsorption efficiency	Final concentration
20	5	0,2055	0,1476	28,18	3,591240876
40			0,1358	33,92	3,304136253
60			0,1238	39,76	3,01216545
80			0,1111	45,94	2,703163017
100			0,1002	51,24	2,437956204
120			0,0929	54,79	2,260340633

- Pseudo first order kinetic model

Time (minutes)	ln $[RB]_t$
20	1,278497791
40	1,195175094
60	1,102659239
80	0,994422575
100	0,891160067
120	0,815515524

The first-order kinetics model can be obtained by plotting the value of ln [MB]t with time so that the regression equation is y = -0,00476x + 1,37976 with an R^2 of 0,9971.

- Pseudo second order kinetic model

Time (minutes)	$1/[RB]_t$
20	0,278455285

40	0,302650957
60	0,331987076
80	0,369936994
100	0,410179641
120	0,442411195

The second order kinetic model can be obtained by plotting the value of 1/[RB]t with Time so that the regression equation is obtained y = 0,00169x + 0,23791 with an R^2 of 0,99186.

S4. Determination of dye photodegradation-adsorption isotherms by TiO^2/chitosan modified glass beads with flow system

a. MB

Initial concentration	Final absorbance	Final concentration	Adsorbate volume (L)	Adsorbent mass(gr)	v/m	Qe	1/Ce	1/Qe	Log Ce	Log Qe
2	0,1329	0,225733634	0,06	0,12	0,5	0,88713	4,43	1,12723	-0,6464	0,01
4	0,1476	0,536585366	0,06	0,12	0,5	1,73171	1,86364	0,57746	-0,2704	0,23847
6	0,1953	0,921658986	0,06	0,12	0,5	2,53917	1,085	0,39383	-0,0354	0,40469
8	0,2584	1,411764706	0,06	0,12	0,5	3,29412	0,70833	0,30357	0,14976	0,51774

The Langmuir isotherm can be found by plotting the values of 1/Ce (x-axis) and 1/Qe (y-axis) to obtain a regression equation y = 0.22021x + 15532 with an R^2 value of 0.99923. As for the Freundlich isotherm, it can be obtained by plotting the values of log Ce (x-axis) and log Qe (y-axis) so that the regression equation y = 0.64233x +0.42158 with R^2 of 0.9966 is obtained.

b. MO

Initial concentration	Final absorbance	Final concentration	Adsorbate volume (L)	Adsorbent mass(gr)	v/m	Qe	1/Ce	1/Qe	Log Ce	Log Qe
2	0,0004	0,043243243	0,06	0,12	0,5	0,97838	23,125	1,0221	-1,3641	0,1253
4	0,0011	0,102564103	0,06	0,12	0,5	1,94872	9,75	0,51316	-0,989	0,28975
6	0,0017	0,146551724	0,06	0,12	0,5	2,92672	6,82353	0,34168	-0,834	0,46638

8	0,0019	0,187654321	0,06	0,12	0,5	3,90617	5,32895	0,25601	-0,7266	0,59175

The Langmuir isotherm can be found by plotting the values of 1/Ce (x-axis) and 1/Qe (y-axis) to obtain a regression equation y = 0,4206x + 0,05975 with an R^2 value of 0,98816. As for the Freundlich isotherm, it can be obtained by plotting the values of log Ce (x-axis) and log Qe (y-axis) so that we get a regression equation y = 0.70775x + 1.06078 with R^2 of 0.90306.

c. RB

Initial concentration	Final absorbance	Final concentration	Adsorbate volume (L)	Adsorbent mass(gr)	v/m	Qe	1/Ce	1/Qe	Log Ce	Log Qe
2	0,0120	0,167949615	0,06	0,12	0,5	0,91603	5,95417	1,09167	-0,7748	0,0111
4	0,0180	0,400444939	0,06	0,12	0,5	1,79978	2,49722	0,55562	-0,3975	0,25522
6	0,0235	0,765056972	0,06	0,12	0,5	2,61747	1,30709	0,38205	-0,1163	0,41788
8	0,0278	1,138760881	0,06	0,12	0,5	3,43062	0,87815	0,29149	0,05643	0,53537

The Langmuir isotherm can be found by plotting the values of 1/Ce (x-axis) and 1/Qe (y-axis) to obtain a regression equation y = 0.1556x + 0.16645 with an R^2 value of 0.99889 . As for the Freundlich isotherm, it can be obtained by plotting the values of log Ce (x-axis) and log Qe (y-axis) so that we get a regression equation y = 0.62518x + 0.49747 with R^2 of 0.99706.

S5. Determining the thermodynamics of the photodegradation-adsorption reaction of dyes by TiO2/chitosan modified glass beads with a flow system

a. MB

Temperature (K)	(Ce) (mg/L)	Qe (mg/gr)	Qe/Ce	ln Qe/Ce	1/T	ΔH (kJ/mol)	ΔS (kJ/mol.K)	ΔG (kJ/mol)
303	0,927083333	2,03646	2,196629	0,786924	0,0033	-9,38840816	-0,02445214	-1,97941001
313	1,020833333	1,98958	1,94898	0,667306	0,003195			-1,73488862
323	1,11953125	1,94023	1,733077	0,549899	0,003096			-1,49036722
333	1,205729167	1,89714	1,573434	0,453261	0,003003			-1,24584583

$$\ln\frac{Qe}{Ce} = \frac{\Delta S}{R} - \frac{\Delta H}{RT}$$

y = ax + b

y = 1129,22879x – 2,94108

Slope $= \left(-\frac{\Delta H}{RT}\right)$

ΔH $= -\frac{(slope\ .\ R)}{1000}$

ΔH $= -\frac{(1129{,}22879\ .\ R)}{1000}$

ΔH $= -\frac{\left(2063{,}3991\ .\frac{8{,}314J}{K}.mol.K\right)}{1000}$

ΔH = -9,38840816 kJ/mol

Intercept $=\frac{\Delta S}{R}$

ΔS $= \frac{(intercept\ .\ R)}{1000}$

ΔS $= \frac{\left(-2{,}94108\ .\frac{8{,}314J}{K}\right)}{1000}$

ΔS = -0,02445214 kJ/mol.K

➢ 30 °C (303°K)

$$\Delta G = -9{,}38840816\ kJ/mol - (303\ K \times -0{,}02445214\ kJ/mol.K)$$
$$\Delta G = -1{,}97941001\ kJ/mol$$

➢ 40 °C (313°K)

$$\Delta G = -9{,}38840816 \text{ kJ/mol} - (313 \text{ K} \times -0{,}02445214 \text{ kJ/mol.K})$$
$$\Delta G = -1{,}73488862 \text{ kJ/mol}$$

- 50 °C (323°K)

$$\Delta G = -9{,}38840816 \text{ kJ/mol} - (323 \text{ K} \times -0{,}02445214 \text{ kJ/mol.K})$$
$$\Delta G = -1{,}49036722 \text{ kJ/mol}$$

- 60 °C (333°K)

$$\Delta G = -9{,}38840816 \text{ kJ/mol} - (333 \text{ K} \times -0{,}02445214 \text{ kJ/mol.K})$$
$$\Delta G = -1{,}24584583 \text{ kJ/mol}$$

b. MO

Temperature (K)	(Ce) (mg/L)	Qe (mg/gr)	Qe/Ce	ln Qe/Ce	1/T	ΔH (kJ/mol)	ΔS (kJ/mol.K)	ΔG (kJ/mol)
303	0,55648267	2,22176	3,992503	1,384418	0,0033	-27,1817810	-0,0778551	-3,5916788
313	0,691912709	2,15404	3,113173	1,135642	0,003195			-2,8131275
323	0,934531451	2,03273	2,175137	0,777092	0,003096			-2,0345763
333	1,235558408	1,88222	1,523377	0,420929	0,003003			-1,2560251

$$\ln \frac{Qe}{Ce} = \frac{\Delta S}{R} - \frac{\Delta H}{RT}$$

y = ax + b

y = 3269,39872x – 9,36434

Slope $= \left(-\frac{\Delta H}{RT}\right)$

ΔH $= -\frac{(slope\ .\ R)}{1000}$

ΔH $= -\frac{\left(3269{,}39872.\frac{8{,}314J}{K}.mol.K\right)}{1000}$

ΔH = -27,1817810 kJ/mol

Intercept $=\frac{\Delta S}{R}$

ΔS $= \frac{(intercept\ .\ R)}{1000}$

ΔS $= \frac{\left(-9{,}36434.\frac{8{,}314J}{K}\right)}{1000}$

ΔS = -0,0778551 kJ/mol.K

- 30 °C (303°K)

$\Delta G = -27{,}1817810\ \text{kJ/mol} - (303\ \text{K} \times -0{,}0778551\ \text{kJ/mol.K})$
ΔG = -3,5916788 kJ/mol

- 40 °C (313°K)

$\Delta G = -27{,}1817810\ \text{kJ/mol} - (313\ \text{K} \times -0{,}0778551\ \text{kJ/mol.K})$
ΔG = -2,8131275 kJ/mol

- 50 °C (323°K)

$\Delta G = -27{,}1817810\ \text{kJ/mol} - (323\ \text{K} \times -0{,}0778551\ \text{kJ/mol.K})$
ΔG = -2,0345763 kJ/mol

- 60 °C (333°K)

$\Delta G = -27{,}1817810\ \text{kJ/mol} - (323\ \text{K} \times -0{,}0778551\ \text{kJ/mol.K})$
ΔG = -1,2560251 kJ/mol

c. RB

Temperature (K)	(Ce) (mg/L)	Qe (mg/gr)	Qe/Ce	ln Qe/Ce	1/T	ΔH (kJ/mol)	ΔS (kJ/mol.K)	ΔG (kJ/mol)
303	1,871046229	1,56448	0,836151	-0,17895	0,0033	-4,8194870	-0,0174359	0,4635821
313	1,96593674	1,51703	0,771658	-0,25921	0,003195			0,6379408
323	2,00243309	1,49878	0,748481	-0,28971	0,003096			0,8122995
333	2,087591241	1,4562	0,697552	-0,36018	0,003003			0,9866582

$\ln \frac{Qe}{Ce} = \frac{\Delta S}{R} - \frac{\Delta H}{RT}$

y = ax + b

y = 579,6833x – 2,09717

Slope $= \left(- \frac{\Delta H}{RT}\right)$

$\Delta H = -\frac{(slope\ .\ R)}{1000}$

$\Delta H = -\frac{\left(579{,}6833.\frac{8{,}314J}{K}.mol.K\right)}{1000}$
ΔH = -4,8194870 kJ/mol

Intercept $= \frac{\Delta S}{R}$

$\Delta S = \frac{(intercept\ .\ R)}{1000}$

$\Delta S = \frac{\left(-2{,}09717 \cdot \frac{8{,}314 J}{K}\right)}{1000}$

ΔS = -0,0174359 kJ/mol.K

- 30 °C (303°K)

$\Delta G = -4{,}8194870 \text{ kJ/mol} - (303 \text{ K} \times -0{,}0174359 \text{ kJ/mol.K})$

$\Delta G = 0{,}4635821$ kJ/mol

- 40 °C (313°K)

$\Delta G = -4{,}8194870 \text{ kJ/mol} - (313 \text{ K} \times -0{,}0174359 \text{ kJ/mol.K})$

$\Delta G = 0{,}6379408$ kJ/mol

- 50 °C (323°K)

$\Delta G = -4{,}8194870 \text{ kJ/mol} - (323 \text{ K} \times -0{,}0174359 \text{ kJ/mol.K})$

$\Delta G = 0{,}8122995$ kJ/mol

- 60 °C (333°K)

$\Delta G = -4{,}8194870 \text{ kJ/mol} - (333 \text{ K} \times -0{,}0174359 \text{ kJ/mol.K})$

$\Delta G = 0{,}9866582$ kJ/mol

S6. *Chemical Oxygen Demand* (COD)

FAS normality 0,1N = 0,1147 N

FAS volume for blank samples (V_b) = 21,80 mL

a. Wastewater 1 (120 minutes)

Sample volume (V_s) = 25 mL

FAS volume0,1147 N (V_c) = 10,70 mL

COD (mg O_2/L) = 407,41 mg/L

b. Wastewater 1 (0 minutes)

Sample volume (V_s) = 25 mL

FAS volume0,1147 N (V_c) = 7,05 mL

COD (mg O_2/L) = 1082,77 mg/L

c. Wastewater 2 (120 minutes)

Sample volume (V_s) = 25 mL

FAS volume0,1147 N (V_c) = 3,0 mL

COD (mg O_2/L) = 673,12 mg/L

d. Wastewater 2 (0 minutes)

Sample volume (V_s) = 25 mL

FAS volume0,1147 N (V_c) = 16,75 mL

COD (mg O_2/L) = 2316,94 mg/L

e. RB (120 minutes)

Sample volume (V_s) = 25 mL

FAS volume0,1147 N (V_c) = 21,60 mL

COD (mg O_2/L) = 7,34 mg/L

f. RB (0 minutes)

Sample volume (V_s) = 25 mL

FAS volume0,1147 N (V_c) = 19,70 mL

COD (mg O_2/L) = 77,08 mg/L

g. MO (120 minutes)
Sample volume (V_s) = 25 mL
FAS volume0,1147 N (V_c) = 21,50 mL
COD (mg O_2/L) = 11,01 mg/L

h. MO (0 minutes)
Sample volume (V_s) = 25 mL
FAS volume0,1147 N (V_c) = 19,70 mL
COD (mg O_2/L) = 77,08 mg/L

i. MB (120 minutes)
Sample volume (V_s) = 25 mL
FAS volume0,1147 N (V_c) = 21,20 mL
COD (mg O_2/L) = 22,02 mg/L

j. MB (0 minutes)
Sample volume (V_s) = 25 mL
FAS volume0,1147 N (V_c) = 20,55 mL
COD (mg O_2/L) = 45,88 mg/L

S7. Total Organic Compound (TOC)

a. Wastewater 1 (120 minutes)

Sample volume = 1 mL

$K_2Cr_2O_7$ volume = 10 mL

$FeSO_4$ volume 0,5813 N = 16,95 mL

C organik (%) = 0,0586%

% organic compound = 0,10%

b. Wastewater 1 (0 minutes)

Sample volume = 1 mL

$K_2Cr_2O_7$ volume = 10 mL

$FeSO_4$ volume 0,5813 N = 16,80 mL

C organik (%) = 0,093%

% organic compound = 0,16%

c. Wastewater 2 (120 minutes)

Sample volume = 1 mL

$K_2Cr_2O_7$ volume = 10 mL

$FeSO_4$ volume 0,5813 N = 16,95 mL

C organik (%) = 0,0586%

% organic compound = 0,10%

d. Wastewater 2 (0 minutes)

Sample volume = 1 mL

$K_2Cr_2O_7$ volume = 10 mL

$FeSO_4$ volume 0,5813 N = 16,45 mL

C organik (%) = 0,1746%

% organic compound = 0,30%

e. RB (120 minutes)

Sample volume = 1 mL

$K_2Cr_2O_7$ volume = 10 mL

$FeSO_4$ volume 0,5813 N = 17,0 mL

C organik (%) = 0,047%

% organic compound = 0,08%

f. RB (0 minutes)

Sample volume = 1 mL

$K_2Cr_2O_7$ volume = 10 mL

$FeSO_4$ volume 0,5813 N = 17,0 mL

C organik (%) = 0,047%

% organic compound = 0,08%

g. MO (120 minutes)

Sample volume = 1 mL

$K_2Cr_2O_7$ volume = 10 mL

$FeSO_4$ volume 0,5813 N = 17,10 mL

C organik (%) = 0,024%

% organic compound = 0,041%

h. MO (0 minutes)

Sample volume = 1 mL

$K_2Cr_2O_7$ volume = 10 mL

$FeSO_4$ volume 0,5813 N = 17,0 mL

C organik (%) = 0,047%

% organic compound = 0,08%

i. MB (120 minutes)

Sample volume = 1 mL

$K_2Cr_2O_7$ volume = 10 mL

$FeSO_4$ volume 0,5813 N = 17,0 mL

C organik (%s) = 0,047%

% organic compound = 0,08%

j. MB (0 minutes)

Sample volume	= 1 mL
$K_2Cr_2O_7$ volume	= 10 mL
$FeSO_4$ volume 0,5813 N	= 16,95 mL
C organik (%)	= 0,0586%
% organic compound	= 0,10%