ตารางวิเคราะห์ความแปรปรวนในการทดลองที่ 1 อิทธิพลของธาตุอาหารหลัก

1. จำนวนใบ

อายุ 2 เดือน

Tests of Between-Subjects Effects

Dependent Variable: NL_3

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	14.592[a]	5	2.918	6.765	.019
Intercept	476.280	1	476.280	1104.062	.000
TREAT	9.247	3	3.082	7.145	.021
BLOCK	5.345	2	2.673	6.195	.035
Error	2.588	6	.431		
Total	493.460	12			
Corrected Total	17.180	11			

a. R Squared = .849 (Adjusted R Squared = .724)

อายุ 3 เดือน

Tests of Between-Subjects Effects

Dependent Variable: NL_4

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	12.424[a]	5	2.485	5.828	.027
Intercept	550.807	1	550.807	1291.796	.000
TREAT	8.089	3	2.696	6.324	.027
BLOCK	4.335	2	2.168	5.083	.051
Error	2.558	6	.426		
Total	565.790	12			
Corrected Total	14.983	11			

a. R Squared = .829 (Adjusted R Squared = .687)

อายุ 4 เดือน

Tests of Between-Subjects Effects

Dependent Variable: NL_5

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	16.447[a]	5	3.289	8.911	.010
Intercept	763.207	1	763.207	2067.379	.000
TREAT	14.342	3	4.781	12.950	.005
BLOCK	2.105	2	1.053	2.851	.135
Error	2.215	6	.369		
Total	781.870	12			
Corrected Total	18.662	11			

a. R Squared = .881 (Adjusted R Squared = .782)

อายุ 5 เดือน

Tests of Between-Subjects Effects

Dependent Variable: NL_6

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	12.800[a]	5	2.560	2.600	.138
Intercept	1001.013	1	1001.013	1016.831	.000
TREAT	7.993	3	2.664	2.707	.138
BLOCK	4.807	2	2.403	2.441	.168
Error	5.907	6	.984		
Total	1019.720	12			
Corrected Total	18.707	11			

a. R Squared = .684 (Adjusted R Squared = .421)

2. น้ำหนักสด

น้ำหนักเริ่มต้น

Tests of Between-Subjects Effects

Dependent Variable: WEIGHT_1

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	7.864E-02[a]	5	1.573E-02	1.464	.325
Intercept	4.700	1	4.700	437.549	.000
TREAT	4.982E-02	3	1.661E-02	1.546	.297
BLOCK	2.882E-02	2	1.441E-02	1.341	.330
Error	6.445E-02	6	1.074E-02		
Total	4.843	12			
Corrected Total	.143	11			

a. R Squared = .550 (Adjusted R Squared = .174)

เดือนที่ 1

Tests of Between-Subjects Effects

Dependent Variable: WEIGHT_2

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	.257[a]	5	5.141E-02	.731	.626
Intercept	6.855	1	6.855	97.513	.000
TREAT	9.656E-02	3	3.219E-02	.458	.722
BLOCK	.161	2	8.026E-02	1.142	.380
Error	.422	6	7.030E-02		
Total	7.534	12			
Corrected Total	.679	11			

a. R Squared = .379 (Adjusted R Squared = -.139)

เดือนที่ 2

Tests of Between-Subjects Effects

Dependent Variable: WEIGHT_3

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	1.171[a]	5	.234	6.188	.023
Intercept	19.738	1	19.738	521.509	.000
TREAT	1.078	3	.359	9.499	.011
BLOCK	9.245E-02	2	4.622E-02	1.221	.359
Error	.227	6	3.785E-02		
Total	21.136	12			
Corrected Total	1.398	11			

a. R Squared = .838 (Adjusted R Squared = .702)

เดือนที่ 3

Tests of Between-Subjects Effects

Dependent Variable: WEIGHT_4

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	4.944[a]	5	.989	11.897	.005
Intercept	35.915	1	35.915	432.144	.000
TREAT	4.613	3	1.538	18.504	.002
BLOCK	.330	2	.165	1.987	.218
Error	.499	6	8.311E-02		
Total	41.357	12			
Corrected Total	5.442	11			

a. R Squared = .908 (Adjusted R Squared = .832)

เดือนที่ 4

Tests of Between-Subjects Effects

Dependent Variable: WEIGHT_5

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	4.263[a]	5	.853	5.603	.029
Intercept	59.898	1	59.898	393.598	.000
TREAT	2.895	3	.965	6.342	.027
BLOCK	1.368	2	.684	4.494	.064
Error	.913	6	.152		
Total	65.074	12			
Corrected Total	5.176	11			

a. R Squared = .824 (Adjusted R Squared = .677)

เดือนที่ 5

Tests of Between-Subjects Effects

Dependent Variable: WEIGHT_6

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	10.373^a	5	2.075	22.930	.001
Intercept	122.944	1	122.944	1358.789	.000
TREAT	7.931	3	2.644	29.218	.001
BLOCK	2.442	2	1.221	13.496	.006
Error	.543	6	9.048E-02		
Total	133.860	12			
Corrected Total	10.916	11			

a. R Squared = .950 (Adjusted R Squared = .909)

3. ความสูง

ความสูงเริ่มต้น

Tests of Between-Subjects Effects

Dependent Variable: H_1

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	7.147^a	5	1.429	.989	.494
Intercept	5482.688	1	5482.688	3792.061	.000
TREAT	6.243	3	2.081	1.439	.322
BLOCK	.905	2	.453	.313	.743
Error	8.675	6	1.446		
Total	5498.510	12			
Corrected Total	15.822	11			

a. R Squared = .452 (Adjusted R Squared = -.005)

อายุ 1 เดือน

Tests of Between-Subjects Effects

Dependent Variable: H_2

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	13.761^a	5	2.752	.304	.894
Intercept	6016.641	1	6016.641	663.987	.000
TREAT	11.829	3	3.943	.435	.736
BLOCK	1.932	2	.966	.107	.901
Error	54.368	6	9.061		
Total	6084.770	12			
Corrected Total	68.129	11			

a. R Squared = .202 (Adjusted R Squared = -.463)

อายุ 2 เดือน

Tests of Between-Subjects Effects

Dependent Variable: H_3

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	79.548[a]	5	15.910	3.232	.093
Intercept	8570.707	1	8570.707	1741.129	.000
TREAT	74.502	3	24.834	5.045	.044
BLOCK	5.045	2	2.522	.512	.623
Error	29.535	6	4.923		
Total	8679.790	12			
Corrected Total	109.083	11			

a. R Squared = .729 (Adjusted R Squared = .504)

อายุ 3 เดือน

Tests of Between-Subjects Effects

Dependent Variable: H_4

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	181.474[a]	5	36.295	4.317	.052
Intercept	13206.967	1	13206.967	1570.752	.000
TREAT	146.909	3	48.970	5.824	.033
BLOCK	34.565	2	17.283	2.055	.209
Error	50.448	6	8.408		
Total	13438.890	12			
Corrected Total	231.923	11			

a. R Squared = .782 (Adjusted R Squared = .601)

อายุ 4 เดือน

Tests of Between-Subjects Effects

Dependent Variable: H_5

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	227.552[a]	5	45.510	4.527	.047
Intercept	19699.203	1	19699.203	1959.307	.000
TREAT	179.430	3	59.810	5.949	.031
BLOCK	48.122	2	24.061	2.393	.172
Error	60.325	6	10.054		
Total	19987.080	12			
Corrected Total	287.877	11			

a. R Squared = .790 (Adjusted R Squared = .616)

อายุ 5 เดือน

Tests of Between-Subjects Effects

Dependent Variable: H_6

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	425.632[a]	5	85.126	4.802	.041
Intercept	24606.963	1	24606.963	1388.067	.000
TREAT	349.450	3	116.483	6.571	.025
BLOCK	76.182	2	38.091	2.149	.198
Error	106.365	6	17.728		
Total	25138.960	12			
Corrected Total	531.997	11			

a. R Squared = .800 (Adjusted R Squared = .633)

4. ความกว้างใบ

เริ่มต้น

Tests of Between-Subjects Effects

Dependent Variable: WL_1

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	1.768[a]	5	.354	4.258	.053
Intercept	2007.253	1	2007.253	24167.60	.000
TREAT	.987	3	.329	3.960	.071
BLOCK	.782	2	.391	4.706	.059
Error	.498	6	8.306E-02		
Total	2009.520	12			
Corrected Total	2.267	11			

a. R Squared = .780 (Adjusted R Squared = .597)

อายุ 1 เดือน

Tests of Between-Subjects Effects

Dependent Variable: WL_2

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	16.882[a]	5	3.376	2.553	.143
Intercept	2181.603	1	2181.603	1649.606	.000
TREAT	8.550	3	2.850	2.155	.195
BLOCK	8.332	2	4.166	3.150	.116
Error	7.935	6	1.322		
Total	2206.420	12			
Corrected Total	24.817	11			

a. R Squared = .680 (Adjusted R Squared = .414)

อายุ 2 เดือน

Tests of Between-Subjects Effects

Dependent Variable: WL_3

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	24.971[a]	5	4.994	9.428	.008
Intercept	3290.141	1	3290.141	6211.068	.000
TREAT	14.009	3	4.670	8.815	.013
BLOCK	10.962	2	5.481	10.347	.011
Error	3.178	6	.530		
Total	3318.290	12			
Corrected Total	28.149	11			

a. R Squared = .887 (Adjusted R Squared = .793)

อายุ 3 เดือน

Tests of Between-Subjects Effects

Dependent Variable: WL_4

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	39.855[a]	5	7.971	6.115	.024
Intercept	4617.763	1	4617.763	3542.286	.000
TREAT	30.203	3	10.068	7.723	.018
BLOCK	9.652	2	4.826	3.702	.090
Error	7.822	6	1.304		
Total	4665.440	12			
Corrected Total	47.677	11			

a. R Squared = .836 (Adjusted R Squared = .699)

อายุ 4 เดือน

Tests of Between-Subjects Effects

Dependent Variable: WL_5

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	40.298[a]	5	8.060	10.486	.006
Intercept	5918.521	1	5918.521	7700.280	.000
TREAT	29.816	3	9.939	12.931	.005
BLOCK	10.482	2	5.241	6.819	.029
Error	4.612	6	.769		
Total	5963.430	12			
Corrected Total	44.909	11			

a. R Squared = .897 (Adjusted R Squared = .812)

อายุ 5 เดือน

Tests of Between-Subjects Effects

Dependent Variable: WL_6

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	83.010[a]	5	16.602	5.596	.029
Intercept	8458.830	1	8458.830	2851.291	.000
TREAT	65.350	3	21.783	7.343	.020
BLOCK	17.660	2	8.830	2.976	.126
Error	17.800	6	2.967		
Total	8559.640	12			
Corrected Total	100.810	11			

a. R Squared = .823 (Adjusted R Squared = .676)

5. ความยาวใบ

เริ่มต้น

Tests of Between-Subjects Effects

Dependent Variable: LL_1

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	1.234[a]	5	.247	1.584	.294
Intercept	3526.041	1	3526.041	22627.00	.000
TREAT	.682	3	.227	1.460	.317
BLOCK	.552	2	.276	1.770	.249
Error	.935	6	.156		
Total	3528.210	12			
Corrected Total	2.169	11			

a. R Squared = .569 (Adjusted R Squared = .210)

อายุ 1 เดือน

Tests of Between-Subjects Effects

Dependent Variable: LL_2

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	28.944[a]	5	5.789	3.798	.068
Intercept	4066.401	1	4066.401	2667.950	.000
TREAT	17.382	3	5.794	3.802	.077
BLOCK	11.562	2	5.781	3.793	.086
Error	9.145	6	1.524		
Total	4104.490	12			
Corrected Total	38.089	11			

a. R Squared = .760 (Adjusted R Squared = .560)

อายุ 2 เดือน

Tests of Between-Subjects Effects

Dependent Variable: LL_3

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	40.968[a]	5	8.194	9.355	.008
Intercept	6034.567	1	6034.567	6890.087	.000
TREAT	23.823	3	7.941	9.067	.012
BLOCK	17.145	2	8.572	9.788	.013
Error	5.255	6	.876		
Total	6080.790	12			
Corrected Total	46.223	11			

a. R Squared = .886 (Adjusted R Squared = .792)

อายุ 3 เดือน

Tests of Between-Subjects Effects

Dependent Variable: LL_4

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	81.504[a]	5	16.301	9.975	.007
Intercept	8326.601	1	8326.601	5095.319	.000
TREAT	54.482	3	18.161	11.113	.007
BLOCK	27.022	2	13.511	8.268	.019
Error	9.805	6	1.634		
Total	8417.910	12			
Corrected Total	91.309	11			

a. R Squared = .893 (Adjusted R Squared = .803)

อายุ 4 เดือน

Tests of Between-Subjects Effects

Dependent Variable: LL_5

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	136.142[a]	5	27.228	17.520	.002
Intercept	11556.813	1	11556.813	7436.019	.000
TREAT	110.580	3	36.860	23.717	.001
BLOCK	25.562	2	12.781	8.224	.019
Error	9.325	6	1.554		
Total	11702.280	12			
Corrected Total	145.467	11			

a. R Squared = .936 (Adjusted R Squared = .882)

อายุ 5 เดือน

Tests of Between-Subjects Effects

Dependent Variable: LL_6

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	172.935[a]	5	34.587	4.164	.056
Intercept	18174.083	1	18174.083	2187.818	.000
TREAT	137.123	3	45.708	5.502	.037
BLOCK	35.812	2	17.906	2.156	.197
Error	49.842	6	8.307		
Total	18396.860	12			
Corrected Total	222.777	11			

a. R Squared = .776 (Adjusted R Squared = .590)

6. ความยาวราก

อายุ 1 เดือน

Tests of Between-Subjects Effects

Dependent Variable: LR_2

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	91.993[a]	5	18.399	.420	.820
Intercept	12163.517	1	12163.517	277.546	.000
TREAT	42.309	3	14.103	.322	.810
BLOCK	49.684	2	24.842	.567	.595
Error	262.952	6	43.825		
Total	12518.461	12			
Corrected Total	354.944	11			

a. R Squared = .259 (Adjusted R Squared = -.358)

อายุ 2 เดือน

Tests of Between-Subjects Effects

Dependent Variable: LR_3

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	11.637[a]	5	2.327	.144	.975
Intercept	32853.821	1	32853.821	2038.818	.000
TREAT	6.056	3	2.019	.125	.942
BLOCK	5.581	2	2.790	.173	.845
Error	96.685	6	16.114		
Total	32962.143	12			
Corrected Total	108.322	11			

a. R Squared = .107 (Adjusted R Squared = -.636)

อายุ 3 เดือน

Tests of Between-Subjects Effects

Dependent Variable: LR_4

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	43.100[a]	5	8.620	.704	.641
Intercept	36950.791	1	36950.791	3019.829	.000
TREAT	41.943	3	13.981	1.143	.405
BLOCK	1.157	2	.579	.047	.954
Error	73.416	6	12.236		
Total	37067.307	12			
Corrected Total	116.516	11			

a. R Squared = .370 (Adjusted R Squared = -.155)

อายุ 4 เดือน

Tests of Between-Subjects Effects

Dependent Variable: LR_5

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	42.491[a]	5	8.498	.769	.604
Intercept	39688.801	1	39688.801	3592.440	.000
TREAT	23.176	3	7.725	.699	.586
BLOCK	19.316	2	9.658	.874	.464
Error	66.287	6	11.048		
Total	39797.580	12			
Corrected Total	108.779	11			

a. R Squared = .391 (Adjusted R Squared = -.117)

อายุ 5 เดือน

Tests of Between-Subjects Effects

Dependent Variable: LR_6

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	333.726[a]	5	66.745	3.298	.089
Intercept	50990.314	1	50990.314	2519.608	.000
TREAT	294.735	3	98.245	4.855	.048
BLOCK	38.991	2	19.496	.963	.434
Error	121.424	6	20.237		
Total	51445.465	12			
Corrected Total	455.150	11			

a. R Squared = .733 (Adjusted R Squared = .511)

ตารางวิเคราะห์ความแปรปรวนในการทดลองที่ 2 อิทธิพลของธาตุอาหารรองและจุลธาตุ

1. จำนวนใบ

อายุ 2 เดือน

Tests of Between-Subjects Effects

Dependent Variable: NL_3

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	2.254[a]	5	.451	2.470	.151
Intercept	266.021	1	266.021	1457.648	.000
TREAT	1.682	3	.561	3.073	.112
BLOCK	.572	2	.286	1.566	.284
Error	1.095	6	.182		
Total	269.370	12			
Corrected Total	3.349	11			

a. R Squared = .673 (Adjusted R Squared = .401)

อายุ 3 เดือน

Tests of Between-Subjects Effects

Dependent Variable: NL_4

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	1.083[a]	5	.217	.429	.815
Intercept	378.563	1	378.563	748.807	.000
TREAT	.837	3	.279	.552	.665
BLOCK	.247	2	.123	.244	.791
Error	3.033	6	.506		
Total	382.680	12			
Corrected Total	4.117	11			

อายุ 4 เดือน

Tests of Between-Subjects Effects

Dependent Variable: NL_5

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	1.332[a]	5	.266	1.404	.342
Intercept	546.750	1	546.750	2881.845	.000
TREAT	1.177	3	.392	2.067	.206
BLOCK	.155	2	7.750E-02	.408	.682
Error	1.138	6	.190		
Total	549.220	12			
Corrected Total	2.470	11			

a. R Squared = .539 (Adjusted R Squared = .155)

อายุ 5 เดือน

Tests of Between-Subjects Effects

Dependent Variable: NL_6

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	1.305[a]	5	.261	.777	.600
Intercept	748.920	1	748.920	2230.035	.000
TREAT	1.060	3	.353	1.052	.436
BLOCK	.245	2	.123	.365	.709
Error	2.015	6	.336		
Total	752.240	12			
Corrected Total	3.320	11			

a. R Squared = .393 (Adjusted R Squared = -.113)

2. น้ำหนักสด

น้ำหนักเริ่มต้น

Tests of Between-Subjects Effects

Dependent Variable: WEIGHT_1

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	5.578E-02[a]	5	1.116E-02	2.084	.199
Intercept	3.910	1	3.910	730.501	.000
TREAT	1.576E-02	3	5.253E-03	.981	.462
BLOCK	4.002E-02	2	2.001E-02	3.738	.088
Error	3.212E-02	6	5.353E-03		
Total	3.998	12			
Corrected Total	8.789E-02	11			

a. R Squared = .635 (Adjusted R Squared = .330)

เดือนที่ 1

Tests of Between-Subjects Effects

Dependent Variable: WEIGHT_2

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	.355[a]	5	7.094E-02	3.880	.065
Intercept	5.576	1	5.576	305.025	.000
TREAT	5.317E-02	3	1.772E-02	.969	.466
BLOCK	.302	2	.151	8.247	.019
Error	.110	6	1.828E-02		
Total	6.040	12			
Corrected Total	.464	11			

a. R Squared = .764 (Adjusted R Squared = .567)

เดือนที่ 2

Tests of Between-Subjects Effects

Dependent Variable: WEIGHT_3

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	.887ª	5	.177	7.457	.015
Intercept	9.901	1	9.901	416.244	.000
TREAT	.337	3	.112	4.726	.051
BLOCK	.550	2	.275	11.553	.009
Error	.143	6	2.379E-02		
Total	10.930	12			
Corrected Total	1.030	11			

a. R Squared = .861 (Adjusted R Squared = .746)

เดือนที่ 3

Tests of Between-Subjects Effects

Dependent Variable: WEIGHT_4

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	2.510ª	5	.502	4.659	.044
Intercept	18.625	1	18.625	172.883	.000
TREAT	.497	3	.166	1.538	.299
BLOCK	2.013	2	1.006	9.342	.014
Error	.646	6	.108		
Total	21.781	12			
Corrected Total	3.156	11			

a. R Squared = .795 (Adjusted R Squared = .625)

เดือนที่ 4

Tests of Between-Subjects Effects

Dependent Variable: WEIGHT_5

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	3.984ª	5	.797	7.076	.017
Intercept	37.347	1	37.347	331.658	.000
TREAT	.604	3	.201	1.787	.249
BLOCK	3.380	2	1.690	15.010	.005
Error	.676	6	.113		
Total	42.007	12			
Corrected Total	4.660	11			

a. R Squared = .855 (Adjusted R Squared = .734)

เดือนที่ 5

Tests of Between-Subjects Effects

Dependent Variable: WEIGHT_6

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	4.779^a	5	.956	4.561	.046
Intercept	62.472	1	62.472	298.065	.000
TREAT	1.141	3	.380	1.815	.245
BLOCK	3.638	2	1.819	8.679	.017
Error	1.258	6	.210		
Total	68.509	12			
Corrected Total	6.037	11			

a. R Squared = .792 (Adjusted R Squared = .618)

3. ความสูง

ความสูงเริ่มต้น

Tests of Between-Subjects Effects

Dependent Variable: H_1

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	7.723^a	5	1.545	2.422	.156
Intercept	5499.801	1	5499.801	8623.381	.000
TREAT	6.636	3	2.212	3.468	.091
BLOCK	1.087	2	.543	.852	.472
Error	3.827	6	.638		
Total	5511.350	12			
Corrected Total	11.549	11			

a. R Squared = .669 (Adjusted R Squared = .393)

อายุ 1 เดือน

Tests of Between-Subjects Effects

Dependent Variable: H_2

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	8.067^a	5	1.613	.419	.821
Intercept	6093.013	1	6093.013	1583.972	.000
TREAT	7.740	3	2.580	.671	.600
BLOCK	.327	2	.163	.042	.959
Error	23.080	6	3.847		
Total	6124.160	12			
Corrected Total	31.147	11			

a. R Squared = .259 (Adjusted R Squared = -.359)

อายุ 2 เดือน

Tests of Between-Subjects Effects

Dependent Variable: H_3

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	30.207[a]	5	6.041	1.017	.482
Intercept	7941.307	1	7941.307	1337.108	.000
TREAT	29.063	3	9.688	1.631	.279
BLOCK	1.145	2	.572	.096	.909
Error	35.635	6	5.939		
Total	8007.150	12			
Corrected Total	65.842	11			

a. R Squared = .459 (Adjusted R Squared = .008)

อายุ 3 เดือน

Tests of Between-Subjects Effects

Dependent Variable: H_4

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	176.702[a]	5	35.340	2.365	.162
Intercept	12313.613	1	12313.613	824.158	.000
TREAT	121.880	3	40.627	2.719	.137
BLOCK	54.822	2	27.411	1.835	.239
Error	89.645	6	14.941		
Total	12579.960	12			
Corrected Total	266.347	11			

a. R Squared = .663 (Adjusted R Squared = .383)

อายุ 4 เดือน

Tests of Between-Subjects Effects

Dependent Variable: H_5

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	99.450[a]	5	19.890	2.395	.159
Intercept	16295.070	1	16295.070	1962.473	.000
TREAT	47.590	3	15.863	1.910	.229
BLOCK	51.860	2	25.930	3.123	.118
Error	49.820	6	8.303		
Total	16444.340	12			
Corrected Total	149.270	11			

a. R Squared = .666 (Adjusted R Squared = .388)

อายุ 5 เดือน

Tests of Between-Subjects Effects

Dependent Variable: H_6

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	235.441[a]	5	47.088	4.952	.038
Intercept	23082.641	1	23082.641	2427.693	.000
TREAT	191.729	3	63.910	6.722	.024
BLOCK	43.712	2	21.856	2.299	.181
Error	57.048	6	9.508		
Total	23375.130	12			
Corrected Total	292.489	11			

a. R Squared = .805 (Adjusted R Squared = .642)

4. ความกว้างใบ

เริ่มต้น

Tests of Between-Subjects Effects

Dependent Variable: WL_1

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	3.521[a]	5	.704	1.277	.382
Intercept	1999.501	1	1999.501	3626.299	.000
TREAT	3.249	3	1.083	1.964	.221
BLOCK	.272	2	.136	.246	.789
Error	3.308	6	.551		
Total	2006.330	12			
Corrected Total	6.829	11			

a. R Squared = .516 (Adjusted R Squared = .112)

อายุ 1 เดือน

Tests of Between-Subjects Effects

Dependent Variable: WL_2

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	10.501[a]	5	2.100	.442	.806
Intercept	2030.601	1	2030.601	427.070	.000
TREAT	7.129	3	2.376	.500	.696
BLOCK	3.372	2	1.686	.355	.715
Error	28.528	6	4.755		
Total	2069.630	12			
Corrected Total	39.029	11			

a. R Squared = .269 (Adjusted R Squared = -.340)

อายุ 2 เดือน

Tests of Between-Subjects Effects

Dependent Variable: WL_3

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	13.209[a]	5	2.642	.924	.525
Intercept	3062.408	1	3062.408	1071.188	.000
TREAT	9.709	3	3.236	1.132	.408
BLOCK	3.500	2	1.750	.612	.573
Error	17.153	6	2.859		
Total	3092.770	12			
Corrected Total	30.362	11			

a. R Squared = .435 (Adjusted R Squared = -.036)

อายุ 3 เดือน

Tests of Between-Subjects Effects

Dependent Variable: WL_4

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	20.997[a]	5	4.199	1.143	.430
Intercept	4081.141	1	4081.141	1110.431	.000
TREAT	13.836	3	4.612	1.255	.371
BLOCK	7.162	2	3.581	.974	.430
Error	22.052	6	3.675		
Total	4124.190	12			
Corrected Total	43.049	11			

a. R Squared = .488 (Adjusted R Squared = .061)

อายุ 4 เดือน

Tests of Between-Subjects Effects

Dependent Variable: WL_5

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	24.475[a]	5	4.895	.785	.596
Intercept	5860.920	1	5860.920	939.626	.000
TREAT	19.100	3	6.367	1.021	.447
BLOCK	5.375	2	2.688	.431	.669
Error	37.425	6	6.238		
Total	5922.820	12			
Corrected Total	61.900	11			

a. R Squared = .395 (Adjusted R Squared = -.108)

อายุ 5 เดือน

Tests of Between-Subjects Effects

Dependent Variable: WL_6

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	56.422[a]	5	11.284	3.071	.102
Intercept	8008.333	1	8008.333	2179.633	.000
TREAT	36.620	3	12.207	3.322	.098
BLOCK	19.802	2	9.901	2.695	.146
Error	22.045	6	3.674		
Total	8086.800	12			
Corrected Total	78.467	11			

a. R Squared = .719 (Adjusted R Squared = .485)

5. ความยาวใบ

เริ่มต้น

Tests of Between-Subjects Effects

Dependent Variable: LL_1

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	7.997[a]	5	1.599	1.334	.363
Intercept	3423.941	1	3423.941	2856.590	.000
TREAT	7.376	3	2.459	2.051	.208
BLOCK	.622	2	.311	.259	.780
Error	7.192	6	1.199		
Total	3439.130	12			
Corrected Total	15.189	11			

a. R Squared = .527 (Adjusted R Squared = .132)

อายุ 1 เดือน

Tests of Between-Subjects Effects

Dependent Variable: LL_2

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	9.342[a]	5	1.868	.503	.766
Intercept	3563.853	1	3563.853	960.392	.000
TREAT	7.980	3	2.660	.717	.577
BLOCK	1.362	2	.681	.183	.837
Error	22.265	6	3.711		
Total	3595.460	12			
Corrected Total	31.607	11			

a. R Squared = .296 (Adjusted R Squared = -.291)

อายุ 2 เดือน

Tests of Between-Subjects Effects

Dependent Variable: LL_3

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	15.276[a]	5	3.055	.645	.677
Intercept	5346.741	1	5346.741	1128.269	.000
TREAT	13.869	3	4.623	.976	.464
BLOCK	1.407	2	.703	.148	.865
Error	28.433	6	4.739		
Total	5390.450	12			
Corrected Total	43.709	11			

a. R Squared = .349 (Adjusted R Squared = -.193)

อายุ 3 เดือน

Tests of Between-Subjects Effects

Dependent Variable: LL_4

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	45.329[a]	5	9.066	1.409	.341
Intercept	7119.941	1	7119.941	1106.727	.000
TREAT	28.203	3	9.401	1.461	.316
BLOCK	17.127	2	8.563	1.331	.332
Error	38.600	6	6.433		
Total	7203.870	12			
Corrected Total	83.929	11			

a. R Squared = .540 (Adjusted R Squared = .157)

อายุ 4 เดือน

Tests of Between-Subjects Effects

Dependent Variable: LL_5

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	68.483[a]	5	13.697	5.013	.037
Intercept	10103.603	1	10103.603	3697.943	.000
TREAT	47.557	3	15.852	5.802	.033
BLOCK	20.927	2	10.463	3.830	.085
Error	16.393	6	2.732		
Total	10188.480	12			
Corrected Total	84.877	11			

a. R Squared = .807 (Adjusted R Squared = .646)

อายุ 5 เดือน

Tests of Between-Subjects Effects

Dependent Variable: LL_6

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	106.837[a]	5	21.367	3.760	.069
Intercept	16650.750	1	16650.750	2930.324	.000
TREAT	62.597	3	20.866	3.672	.082
BLOCK	44.240	2	22.120	3.893	.082
Error	34.093	6	5.682		
Total	16791.680	12			
Corrected Total	140.930	11			

a. R Squared = .758 (Adjusted R Squared = .556)

6. ความยาวราก

อายุ 1 เดือน

Tests of Between-Subjects Effects

Dependent Variable: LR_2

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	179.732[a]	5	35.946	1.194	.411
Intercept	10427.666	1	10427.666	346.314	.000
TREAT	175.135	3	58.378	1.939	.225
BLOCK	4.597	2	2.299	.076	.927
Error	180.663	6	30.110		
Total	10788.060	12			
Corrected Total	360.394	11			

a. R Squared = .499 (Adjusted R Squared = .081)

อายุ 2 เดือน

Tests of Between-Subjects Effects

Dependent Variable: LR_3

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	446.348[a]	5	89.270	1.438	.332
Intercept	29196.454	1	29196.454	470.393	.000
TREAT	420.996	3	140.332	2.261	.182
BLOCK	25.352	2	12.676	.204	.821
Error	372.409	6	62.068		
Total	30015.212	12			
Corrected Total	818.758	11			

a. R Squared = .545 (Adjusted R Squared = .166)

อายุ 3 เดือน

Tests of Between-Subjects Effects

Dependent Variable: LR_4

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	712.979[a]	5	142.596	4.927	.039
Intercept	34215.516	1	34215.516	1182.325	.000
TREAT	650.325	3	216.775	7.491	.019
BLOCK	62.654	2	31.327	1.083	.397
Error	173.635	6	28.939		
Total	35102.130	12			
Corrected Total	886.614	11			

a. R Squared = .804 (Adjusted R Squared = .641)

อายุ 4 เดือน

Tests of Between-Subjects Effects

Dependent Variable: LR_5

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	115.221[a]	5	23.044	1.141	.431
Intercept	40620.112	1	40620.112	2010.408	.000
TREAT	108.873	3	36.291	1.796	.248
BLOCK	6.347	2	3.174	.157	.858
Error	121.229	6	20.205		
Total	40856.563	12			
Corrected Total	236.450	11			

a. R Squared = .487 (Adjusted R Squared = .060)

อายุ 5 เดือน

Tests of Between-Subjects Effects

Dependent Variable: LR_6

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	175.601[a]	5	35.120	.993	.493
Intercept	46624.087	1	46624.087	1317.644	.000
TREAT	82.253	3	27.418	.775	.549
BLOCK	93.348	2	46.674	1.319	.335
Error	212.307	6	35.384		
Total	47011.995	12			
Corrected Total	387.908	11			

a. R Squared = .453 (Adjusted R Squared = -.003)

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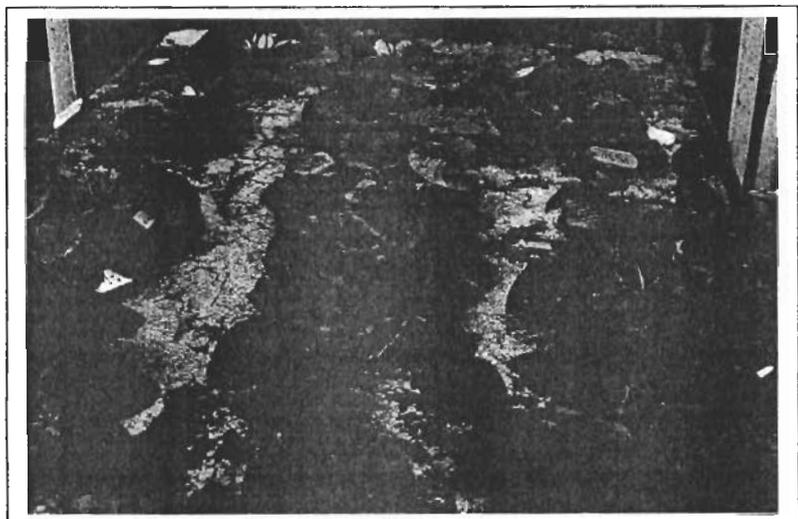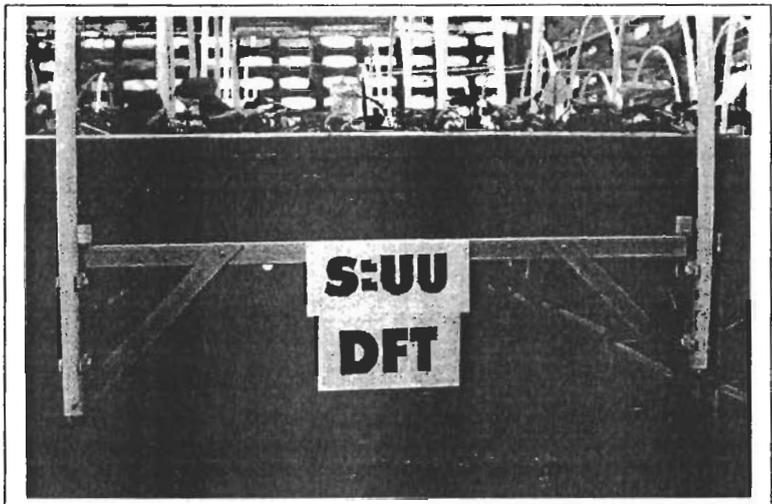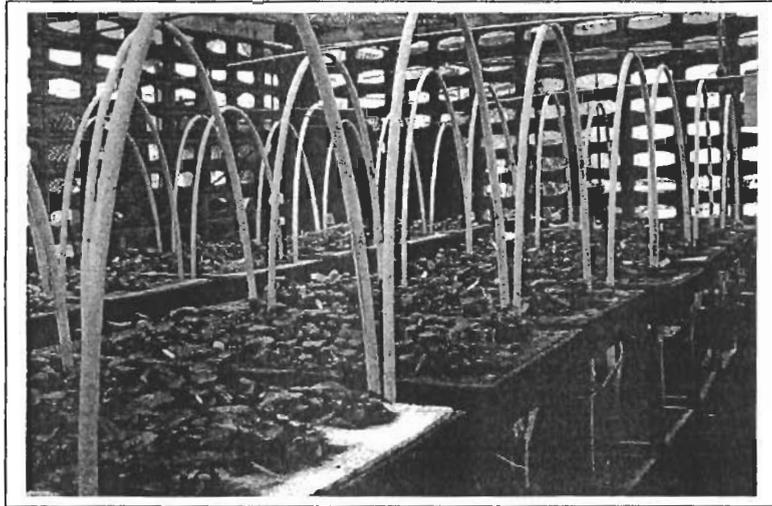
โรงเรือนทดลอง

การใช้ธาตุอาหารหลักในการทดลอง 100 ลิตร

Stock	สารเคมี	สูตรอาหาร MS ปริมาณที่ใช้(g/1 L)	ปริมาตรที่ใช้(ml)			
			T1	T2	T3	T4
A	NH_4NO_3	82.5	270	202.5	135	67.5
	KNO_3	95				
B	$MgSO_4 7H_2O$	37	135	135	135	135
C	$CaCl_2 H_2O$	44	135	135	135	135
D	KH_2PO_4	17	135	101.25	67.5	33.75
E	$MnSO_4 H_2O$	1.69	135	135	135	135
	$ZnSO_4 7H_2O$	0.86				
	$CuSO_4 5H_2O$	0.0025				
F	KI	0.083	135	135	135	135
	$CoCl_2 6H_2O$	0.0025				
G	H_3BO_3	0.62	135	135	135	135
	$Na_2MoO_4 2H_2O$	0.025				
H	$FeSO_4$	2.78	135	135	135	135
	NaEDTA	7.75				

การใช้ธาตุอาหารรองและจุลธาตุในการทดลอง 100 ลิตร

สูตรอาหาร MS

Stock	สารเคมี	ปริมาณที่ใช้(g/1 L)	T1	ปริมาตรที่ใช้(ml) T2	T3	T4
A	NH_4NO_3	82.5	270	270	270	270
	KNO_3	95				
B	$MgSO_4 7H_2O$	37	135	101	67.5	33.75
C	$CaCl_2 2H_2O$	44	135	101.25	67.5	33.75
D	KH_2PO_4	17	135	135	135	135
E	$MnSO_4 H_2O$	1.69	135	101.25	67.5	33.75
	$ZnSO_4 7H_2O$	0.86				
	$CuSO_4 5H_2O$	0.0025				
F	KI	0.083	135	101.25	67.5	33.75
	$CoCl_2 6H_2O$	0.0025				
G	H_3BO_3	0.62	135	101.25	67.5	33.75
	$Na_2MoO_4 2H_2O$	0.025				
H	$FeSO_4$	2.78	135	101.25	67.5	33.75
	$NaEDTA$	7.75				