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LAMPIRAN

Lampiran 1. Hasil uji statistik non-parametrik Kruskall-wallis Diameter Telur embrio O. *celebensis*

Diameter Telur Fase 19

Table Analyzed	D. Telur 19

Kruskal-Wallis test	
P value	0,6379

Exact or approximate P value?	Gaussian Approximation
P value summary	ns
Do the medians vary signif. (P < 0.05)	No
Number of groups	4
Kruskal-Wallis statistic	1,696

Dunn's Multiple Comparison Test	Difference in rank sum	Significant? P < 0,05?	Summary
Kontrol vs 50%	6,455	No	ns
Kontrol vs 75%	4,455	No	ns
Kontrol vs 100%	1,636	No	ns

Diameter Telur Fase 20

Table Analyzed	D. Telur 20

Kruskal-Wallis test	
P value	0,0278
Exact or approximate P value?	Gaussian Approximation
P value summary	*
Do the medians vary signif. (P < 0.05)	Yes
Number of groups	4
Kruskal-Wallis statistic	9,112

Dunn's Multiple Comparison Test	Difference in rank sum	Significant? P < 0,05?	Summary
Kontrol (0%) vs 50%	-0,8000	No	ns
Kontrol (0%) vs 75%	-0,3000	No	ns
Kontrol (0%) vs 100%	12,30	No	ns

Diameter Telur Fase 21   D, Telur 21

Kruskal-Wallis test	
P value	0,1513
Exact or approximate P value?	Gaussian Approximation
P value summary	ns
Do the medians vary signif. (P < 0.05)	No
Number of groups	4
Kruskal-Wallis statistic	5,297

Dunn's Multiple Comparison Test	Difference in rank sum	Significant? P < 0,05?	Summary
Kontrol (0%) vs 50%	4,700	No	ns
Kontrol (0%) vs 75%	-0,5500	No	ns
Kontrol (0%) vs 100%	9,850	No	ns

Diameter Telur Fase 22

Table Analyzed	D, Telur 22		
Kruskal-Wallis test			
P value	0,2675		
Exact or approximate P value?	Gaussian Approximation		
P value summary	ns		
Do the medians vary signif. (P < 0.05)	No		
Number of groups	4		
Kruskal-Wallis statistic	3,945		

Dunn's Multiple Comparison Test	Difference in rank sum	Significant? P < 0,05?	Summary
Kontrol (0%) vs 50%	-3,375	No	ns
Kontrol (0%) vs 75%	-7,425	No	ns
Kontrol (0%) vs 100%	4,675	No	ns

Diameter Telur Fase 23

Table Analyzed	D, Telur 23		
Kruskal-Wallis test			
P value	0,0641		
Exact or approximate P value?	Gaussian Approximation		
P value summary	ns		
Do the medians vary signif. (P < 0.05)	No		
Number of groups	4		
Kruskal-Wallis statistic	7,260		

Dunn's Multiple Comparison Test	Difference in rank sum	Significant? P < 0,05?	Summary
Kontrol (0%) vs 50%	-0,3000	No	ns
Kontrol (0%) vs 75%	-10,60	No	ns
Kontrol (0%) vs 100%	1,500	No	ns
Parameter			

Diameter Telur Fase 24   D, Telur 24

Kruskal-Wallis test			
P value	0,6817		
Exact or approximate P value?	Gaussian Approximation		
P value summary	ns		
Do the medians vary signif. (P < 0.05)	No		
Number of groups	4		
Kruskal-Wallis statistic	1,503		

Dunn's Multiple Comparison Test	Difference in rank sum	Significant? P < 0,05?	Summary
Kontrol (0%) vs 50%	3,150	No	ns
Kontrol (0%) vs 75%	-2,900	No	ns
Kontrol (0%) vs 100%	1,550	No	ns

Diameter Telur Fase 25

Table Analyzed   D, Telur 25

Kruskal-Wallis test
P value   0,5383

Exact or approximate P value?   Gaussian Approximation
P value summary   ns

Do the medians vary signif. (P < 0.05)   No
Number of groups   4
Kruskal-Wallis statistic   2,168

Dunn's Multiple Comparison Test	Difference in rank sum	Significant? P < 0,05?	Summary
Kontrol (0%) vs 50%	0,8500	No	ns
Kontrol (0%) vs 75%	5,200	No	ns
Kontrol (0%) vs 100%	6,150	No	ns

Diameter Telur Fase 26

Table Analyzed   D, Telur 26

Kruskal-Wallis test
P value   0,1220

Exact or approximate P value?   Gaussian Approximation
P value summary   ns

Do the medians vary signif. (P < 0.05)   No
Number of groups   4
Kruskal-Wallis statistic   5,796

Dunn's Multiple Comparison Test	Difference in rank sum	Significant? P < 0,05?	Summary
Kontrol (0%) vs 50%	-2,000	No	ns
Kontrol (0%) vs 75%	-0,8000	No	ns
Kontrol (0%) vs 100%	9,000	No	ns

Diameter Telur Fase 27

Table Analyzed   D, Telur 27

Kruskal-Wallis test
P value   0,5738
Exact or approximate P value?   Gaussian Approximation
P value summary   ns
Do the medians vary signif. (P < 0.05)   No
Number of groups   4
Kruskal-Wallis statistic   1,994

Dunn's Multiple Comparison Test	Difference in rank sum	Significant? P < 0,05?	Summary
Kontrol (0%) vs 50%	4,600	No	ns
Kontrol (0%) vs 75%	2,300	No	ns
Kontrol (0%) vs 100%	6,900	No	ns

Diameter Telur Fase 28

Table Analyzed   D, Telur 28

Kruskal-Wallis test

P value	0,5714
Exact or approximate P value?	Gaussian Approximation
P value summary	ns
Do the medians vary signif. (P < 0.05)	No
Number of groups	4
Kruskal-Wallis statistic	2,005

Dunn's Multiple Comparison Test	Difference in rank sum	Significant? P < 0,05?	Summary
Kontrol (0%) vs 50%	-3,100	No	ns
Kontrol (0%) vs 75%	-6,950	No	ns
Kontrol (0%) vs 100%	-4,950	No	ns

Diameter Telur Fase 29

Table Analyzed   D, Telur 29

Kruskal-Wallis test

P value	0,3522
Exact or approximate P value?	Gaussian Approximation
P value summary	ns
Do the medians vary signif. (P < 0.05)	No
Number of groups	4
Kruskal-Wallis statistic	3,268

Dunn's Multiple Comparison Test	Difference in rank sum	Significant? P < 0,05?	Summary
Kontrol (0%) vs 50%	5,400	No	ns
Kontrol (0%) vs 75%	-1,900	No	ns
Kontrol (0%) vs 100%	5,500	No	ns

Diameter Telur Fase 30

Table Analyzed   D, Telur 30

Kruskal-Wallis test

P value	0,3522
Exact or approximate P value?	Gaussian Approximation
P value summary	ns
Do the medians vary signif. (P < 0.05)	No
Number of groups	4
Kruskal-Wallis statistic	3,268

Dunn's Multiple Comparison Test	Difference in rank sum	Significant? P < 0,05?	Summary
Kontrol (0%) vs 50%	5,400	No	ns
Kontrol (0%) vs 75%	-1,900	No	ns
Kontrol (0%) vs 100%	5,500	No	ns

Diameter Telur Fase 31

Table Analyzed   D, Telur 31

Kruskal-Wallis test
P value   0,2927
Exact or approximate P value?   Gaussian Approximation
P value summary   ns
Do the medians vary signif. (P < 0.05)   No
Number of groups   4
Kruskal-Wallis statistic   3,725

Dunn's Multiple Comparison Test	Difference in rank sum	Significant? P < 0,05?	Summary
Kontrol (0%) vs 50%	1,700	No	ns
Kontrol (0%) vs 75%	3,800	No	ns
Kontrol (0%) vs 100%	9,300	No	ns

Diameter Telur Fase 32

Table Analyzed   D, Telur 32

Kruskal-Wallis test
P value   0,3974
Exact or approximate P value?   Gaussian Approximation
P value summary   ns
Do the medians vary signif. (P < 0.05)   No
Number of groups   4
Kruskal-Wallis statistic   2,963

Dunn's Multiple Comparison Test	Difference in rank sum	Significant? P < 0,05?	Summary
Kontrol (0%) vs 50%	-6,350	No	ns
Kontrol (0%) vs 75%	1,050	No	ns
Kontrol (0%) vs 100%	1,300	No	ns

Diameter Telur Fase 33

Table Analyzed   D, Telur 33

Kruskal-Wallis test
P value   0,3783

Exact or approximate P value?   Gaussian Approximation
P value summary   ns

Do the medians vary signif. (P < 0.05)   No
Number of groups   4
Kruskal-Wallis statistic   3,088

Dunn's Multiple Comparison Test	Difference in rank sum	Significant? P < 0,05?	Summary
Kontrol (0%) vs 50%	0,7500	No	ns
Kontrol (0%) vs 75%	7,700	No	ns
Kontrol (0%) vs 100%	5,350	No	ns

Diameter Telur Fase 34

Table Analyzed	D, Telur 34		

Kruskal-Wallis test

P value	0,7541		
Exact or approximate P value?	Gaussian Approximation		
P value summary	ns		
Do the medians vary signif. (P < 0.05)	No		
Number of groups	4		
Kruskal-Wallis statistic	1,196		

Dunn's Multiple Comparison Test	Difference in rank sum	Significant? P < 0,05?	Summary
Kontrol (0%) vs 50%	-3,600	No	ns
Kontrol (0%) vs 75%	-2,850	No	ns
Kontrol (0%) vs 100%	1,250	No	ns

Diameter Telur Fase 35

Table Analyzed	D, Telur 35		

Kruskal-Wallis test

P value	0,0973		
Exact or approximate P value?	Gaussian Approximation		
P value summary	ns		
Do the medians vary signif. (P < 0.05)	No		
Number of groups	4		
Kruskal-Wallis statistic	6,314		

Dunn's Multiple Comparison Test	Difference in rank sum	Significant? P < 0,05?	Summary
Kontrol (0%) vs 50%	-1,050	No	ns
Kontrol (0%) vs 75%	-5,200	No	ns
Kontrol (0%) vs 100%	7,250	No	ns

Diameter Telur Fase 36

Table Analyzed	D, Telur 36		

Kruskal-Wallis test

P value	0,6918		
Exact or approximate P value?	Gaussian Approximation		
P value summary	ns		
Do the medians vary signif. (P < 0.05)	No		
Number of groups	4		
Kruskal-Wallis statistic	1,459		

Dunn's Multiple Comparison Test	Difference in rank sum	Significant? P < 0,05?	Summary
Kontrol (0%) vs 50%	-2,850	No	ns
Kontrol (0%) vs 75%	-1,450	No	ns
Kontrol (0%) vs 100%	-5,900	No	ns

Diameter Telur Fase 37

Table Analyzed	D, Telur 37

Kruskal-Wallis test

P value	0,1016

Exact or approximate P value?	Gaussian Approximation
P value summary	ns

Do the medians vary signif. (P < 0.05)	No
Number of groups	4
Kruskal-Wallis statistic	6,215

Dunn's Multiple Comparison Test	Difference in rank sum	Significant? P < 0,05?	Summary
Kontrol (0%) vs 50%	-7,300	No	ns
Kontrol (0%) vs 75%	-6,100	No	ns
Kontrol (0%) vs 100%	3,800	No	ns

Lampiran 2. Hasil uji statistik non-parametrik Kruskall-wallis Volume Kuning Telur embrio O. *celebensis*

Volume Kuning Telur Fase 19

Table Analyzed	VKT 19

Kruskal-Wallis test

P value	0,1162
Exact or approximate P value?	Gaussian Approximation
P value summary	ns
Do the medians vary signif. (P < 0.05)	No
Number of groups	4
Kruskal-Wallis statistic	5,908

Dunn's Multiple Comparison Test	Difference in rank sum	Significant? P < 0,05?	Summary
Kontrol (0%) vs 50%	1,250	No	ns
Kontrol (0%) vs 75%	3,100	No	ns
Kontrol (0%) vs 100%	11,45	No	ns

Volume Kuning Telur Fase 20

Table Analyzed	VKT 20

Kruskal-Wallis test

P value	0,1162
Exact or approximate P value?	Gaussian Approximation
P value summary	ns
Do the medians vary signif. (P < 0.05)	No
Number of groups	4
Kruskal-Wallis statistic	5,908

Dunn's Multiple Comparison Test	Difference in rank sum	Significant? P < 0,05?	Summary
Kontrol (0%) vs 50%	1,250	No	ns
Kontrol (0%) vs 75%	3,100	No	ns
Kontrol (0%) vs 100%	11,45	No	ns

Volume Kuning Telur Fase 21

Table Analyzed	VKT 21

Kruskal-Wallis test

P value	0,0187
Exact or approximate P value?	Gaussian Approximation
P value summary	*
Do the medians vary signif. (P < 0.05)	Yes
Number of groups	4
Kruskal-Wallis statistic	9,984

Dunn's Multiple Comparison Test	Difference in rank sum	Significant? P < 0,05?	Summary
Kontrol (0%) vs 50%	-1,100	No	ns
Kontrol (0%) vs 75%	-0,2500	No	ns
Kontrol (0%) vs 100%	12,95	Yes	*

Volume Kuning Telur Fase 22

Table Analyzed VKT 22

Kruskal-Wallis test
P value 0,0002
Exact or approximate P value? Gaussian Approximation
P value summary ***
Do the medians vary signif. (P < 0.05) Yes
Number of groups 4
Kruskal-Wallis statistic 19,88

Dunn's Multiple Comparison Test	Difference in rank sum	Significant? P < 0,05?	Summary
Kontrol (0%) vs 50%	2,800	No	ns
Kontrol (0%) vs 75%	6,100	No	ns
Kontrol (0%) vs 100%	21,30	Yes	***

Volume Kuning Telur Fase 23

Table Analyzed VKT 23

Kruskal-Wallis test
P value 0,0161
Exact or approximate P value? Gaussian Approximation
P value summary *
Do the medians vary signif. (P < 0.05) Yes
Number of groups 4
Kruskal-Wallis statistic 10,32

Dunn's Multiple Comparison Test	Difference in rank sum	Significant? P < 0,05?	Summary
Kontrol (0%) vs 50%	6,050	No	ns
Kontrol (0%) vs 75%	3,750	No	ns
Kontrol (0%) vs 100%	16,00	Yes	**

Volume Kuning Telur Fase 24

Table Analyzed VKT 24

Kruskal-Wallis test
P value 0,5034
Exact or approximate P value? Gaussian Approximation
P value summary ns
Do the medians vary signif. (P < 0.05) No
Number of groups 4
Kruskal-Wallis statistic 2,348

Dunn's Multiple Comparison Test	Difference in rank sum	Significant? P < 0,05?	Summary
Kontrol (0%) vs 50%	-5,450	No	ns
Kontrol (0%) vs 75%	-2,150	No	ns
Kontrol (0%) vs 100%	2,200	No	ns

Volume Kuning Telur Fase 25

Table Analyzed | VKT 25

Kruskal-Wallis test
P value | 0,0082
Exact or approximate P value? | Gaussian Approximation
P value summary | **
Do the medians vary signif. (P < 0.05) | Yes
Number of groups | 4
Kruskal-Wallis statistic | 11,76

Dunn's Multiple Comparison Test	Difference in rank sum	Significant? P < 0,05?	Summary
Kontrol (0%) vs 50%	14,95	Yes	*
Kontrol (0%) vs 75%	1,750	No	ns
Kontrol (0%) vs 100%	11,50	No	ns

Volume Kuning Telur Fase 26

Table Analyzed | VKT 26

Kruskal-Wallis test
P value | 0,0181
Exact or approximate P value? | Gaussian Approximation
P value summary | *
Do the medians vary signif. (P < 0.05) | Yes
Number of groups | 4
Kruskal-Wallis statistic | 10,05

Dunn's Multiple Comparison Test	Difference in rank sum	Significant? P < 0,05?	Summary
Kontrol (0%) vs 50%	6,950	No	ns
Kontrol (0%) vs 75%	4,750	No	ns
Kontrol (0%) vs 100%	16,10	Yes	**

Volume Kuning Telur Fase 27

Table Analyzed | VKT 27

Kruskal-Wallis test
P value | < 0,0001
Exact or approximate P value? | Gaussian Approximation
P value summary | ***
Do the medians vary signif. (P < 0.05) | Yes
Number of groups | 4
Kruskal-Wallis statistic | 21,75

Dunn's Multiple Comparison Test	Difference in rank sum	Significant? P < 0,05?	Summary
Kontrol (0%) vs 50%	-7,100	No	ns
Kontrol (0%) vs 75%	6,650	No	ns
Kontrol (0%) vs 100%	16,25	Yes	**

Volume Kuning Telur Fase 28

Table Analyzed   VKT 28

Kruskal-Wallis test
P value   0,1254
Exact or approximate P value?   Gaussian Approximation
P value summary   ns
Do the medians vary signif. (P < 0.05)   No
Number of groups   4
Kruskal-Wallis statistic   5,732

Dunn's Multiple Comparison Test	Difference in rank sum	Significant? P < 0,05?	Summary
Kontrol (0%) vs 50%	6,200	No	ns
Kontrol (0%) vs 75%	1,250	No	ns
Kontrol (0%) vs 100%	11,15	No	ns

Volume Kuning Telur Fase 29

Table Analyzed   VKT 29

Kruskal-Wallis test
P value   < 0,0001
Exact or approximate P value?   Gaussian Approximation
P value summary   ***
Do the medians vary signif. (P < 0.05)   Yes
Number of groups   4
Kruskal-Wallis statistic   22,75

Dunn's Multiple Comparison Test	Difference in rank sum	Significant? P < 0,05?	Summary
Kontrol (0%) vs 50%	-6,700	No	ns
Kontrol (0%) vs 75%	1,800	No	ns
Kontrol (0%) vs 100%	17,30	Yes	**

Volume Kuning Telur Fase 30

Table Analyzed   VKT 30

Kruskal-Wallis test
P value   0,0001
Exact or approximate P value?   Gaussian Approximation
P value summary   ***
Do the medians vary signif. (P < 0.05)   Yes
Number of groups   4
Kruskal-Wallis statistic   20,62

Dunn's Multiple Comparison Test	Difference in rank sum	Significant? P < 0,05?	Summary
Kontrol (0%) vs 50%	0,0	No	ns
Kontrol (0%) vs 75%	4,800	No	ns
Kontrol (0%) vs 100%	20,40	Yes	***

Volume Kuning Telur Fase 31

Table Analyzed   VKT 31

Kruskal-Wallis test
P value   0,0442
Exact or approximate P value?   Gaussian Approximation
P value summary   *
Do the medians vary signif. (P < 0.05)   Yes
Number of groups   15
Kruskal-Wallis statistic   24,13

Dunn's Multiple Comparison Test	Difference in rank sum	Significant? P < 0,05?	Summary
Kontrol (0%) vs 50%	-5,123	No	ns
Kontrol (0%) vs 75%	0,9773	No	ns
Kontrol (0%) vs 100%	14,63	No	ns

Volume Kuning Telur Fase 32

Table Analyzed   VKT 32

Kruskal-Wallis test
P value   0,0004
Exact or approximate P value?   Gaussian Approximation
P value summary   ***
Do the medians vary signif. (P < 0.05)   Yes
Number of groups   4
Kruskal-Wallis statistic   18,43

Dunn's Multiple Comparison Test	Difference in rank sum	Significant? P < 0,05?	Summary
Kontrol (0%) vs 50%	-7,150	No	ns
Kontrol (0%) vs 75%	-0,4000	No	ns
Kontrol (0%) vs 100%	14,55	Yes	*

Volume Kuning Telur Fase 33

Table Analyzed   VKT 33

Kruskal-Wallis test
P value   < 0,0001
Exact or approximate P value?   Gaussian Approximation
P value summary   ***
Do the medians vary signif. (P < 0.05)   Yes
Number of groups   4
Kruskal-Wallis statistic   25,26

Dunn's Multiple Comparison Test	Difference in rank sum	Significant? P < 0,05?	Summary
Kontrol (0%) vs 50%	-2,250	No	ns
Kontrol (0%) vs 75%	13,00	Yes	*
Kontrol (0%) vs 100%	20,25	Yes	***

Volume Kuning Telur Fase 34

Table Analyzed | VKT 34

Kruskal-Wallis test
P value	< 0,0001
Exact or approximate P value?	Gaussian Approximation
P value summary	***
Do the medians vary signif. (P < 0.05)	Yes
Number of groups	4
Kruskal-Wallis statistic	25,26

Dunn's Multiple Comparison Test	Difference in rank sum	Significant? P < 0,05?	Summary
Kontrol (0%) vs 50%	-2,250	No	ns
Kontrol (0%) vs 75%	13,00	Yes	*
Kontrol (0%) vs 100%	20,25	Yes	***

Volume Kuning Telur Fase 35

Table Analyzed | VKT 34

Kruskal-Wallis test
P value	0,0009
Exact or approximate P value?	Gaussian Approximation
P value summary	***
Do the medians vary signif. (P < 0.05)	Yes
Number of groups	4
Kruskal-Wallis statistic	16,42

Dunn's Multiple Comparison Test	Difference in rank sum	Significant? P < 0,05?	Summary
Kontrol (0%) vs 50%	-1,200	No	ns
Kontrol (0%) vs 75%	13,05	Yes	*
Kontrol (0%) vs 100%	15,35	Yes	**

Volume Kuning Telur Fase 36

Table Analyzed | VKT 36

Kruskal-Wallis test
P value	0,0003
Exact or approximate P value?	Gaussian Approximation
P value summary	***
Do the medians vary signif. (P < 0.05)	Yes
Number of groups	4
Kruskal-Wallis statistic	18,58

Dunn's Multiple Comparison Test	Difference in rank sum	Significant? P < 0,05?	Summary
Kontrol (0%) vs 50%	-0,1000	No	ns
Kontrol (0%) vs 75%	15,60	Yes	**
Kontrol (0%) vs 100%	16,10	Yes	**

Volume Kuning Telur Fase 37

Table Analyzed	VKT 37

Kruskal-Wallis test

P value	0,0015
Exact or approximate P value?	Gaussian Approximation
P value summary	**
Do the medians vary signif. (P < 0.05)	Yes
Number of groups	4
Kruskal-Wallis statistic	15,39

Dunn's Multiple Comparison Test	Difference in rank sum	Significant? P < 0,05?	Summary
Kontrol (0%) vs 50%	-1,050	No	ns
Kontrol (0%) vs 75%	6,100	No	ns
Kontrol (0%) vs 100%	17,15	Yes	**

Lampiran 3. Hasil uji statistik non-parametrik Kruskall-wallis Laju penyerapan Volume Kuning Telur embrio *O. celebensis*.

Laju Penyerapan Kuning Telur

Table Analyzed	LPKT

Kruskal-Wallis test

P value	0,1825
Exact or approximate P value?	Gaussian Approximation
P value summary	ns
Do the medians vary signif. (P < 0.05)	No
Number of groups	4
Kruskal-Wallis statistic	4,858

Dunn's Multiple Comparison Test	Difference in rank sum	Significant? P < 0,05?	Summary
Kontrol (0%) vs 50%	0,4500	No	ns
Kontrol (0%) vs 75%	-3,150	No	ns
Kontrol (0%) vs 100%	-9,700	No	ns
50% vs 75%	-3,600	No	ns
50% vs 100%	-10,15	No	ns
75% vs 100%	-6,550	No	ns

Lampiran 4. Hasil uji statistik non-parametrik Kruskall-wallis Denyut Jantung embrio *O. celebensis*

Denyut Jantung Fase 24

Table Analyzed	Data 1

Kruskal-Wallis test	
P value	< 0,0001
Exact or approximate P value?	Gaussian Approximation
P value summary	***
Do the medians vary signif. (P < 0.05)	Yes
Number of groups	4
Kruskal-Wallis statistic	33,74

Dunn's Multiple Comparison Test	Difference in rank sum	Significant? P < 0,05?	Summary
Kontrol vs 50%	12,30	No	ns
Kontrol vs 75%	19,10	Yes	***
Kontrol vs 100%	-8,600	No	ns

Denyut Jantung Fase 25

Table Analyzed	Data 1

Kruskal-Wallis test	
P value	< 0,0001
Exact or approximate P value?	Gaussian Approximation
P value summary	***
Do the medians vary signif. (P < 0.05)	Yes
Number of groups	4
Kruskal-Wallis statistic	45,94

Dunn's Multiple Comparison Test	Difference in rank sum	Significant? P < 0,05?	Summary
Kontrol vs 50%	30,42	Yes	***
Kontrol vs 75%	37,22	Yes	***
Kontrol vs 100%	15,27	Yes	*

Denyut Jantung Fase 26

Table Analyzed	Data 1

Kruskal-Wallis test	
P value	< 0,0001
Exact or approximate P value?	Gaussian Approximation
P value summary	***
Do the medians vary signif. (P < 0.05)	Yes
Number of groups	4
Kruskal-Wallis statistic	28,54

Dunn's Multiple Comparison Test	Difference in rank sum	Significant? P < 0,05?	Summary
Kontrol vs 50%	28,92	Yes	***
Kontrol vs 75%	24,57	Yes	***
Kontrol vs 100%	10,82	No	ns

Denyut Jantung Fase 27

Table Analyzed	Data 1	

Kruskal-Wallis test

P value	< 0,0001	
Exact or approximate P value?	Gaussian Approximation	
P value summary	***	
Do the medians vary signif. (P < 0.05)	Yes	
Number of groups	4	
Kruskal-Wallis statistic	26,51	

Dunn's Multiple Comparison Test	Difference in rank sum	Significant? P < 0,05?	Summary
Kontrol vs 50%	23,23	Yes	***
Kontrol vs 75%	27,33	Yes	***
Kontrol vs 100%	3,933	No	ns

Denyut Jantung Fase 28

Table Analyzed	Data 1	

Kruskal-Wallis test

P value	< 0,0001	
Exact or approximate P value?	Gaussian Approximation	
P value summary	***	
Do the medians vary signif. (P < 0.05)	Yes	
Number of groups	4	
Kruskal-Wallis statistic	23,73	

Dunn's Multiple Comparison Test	Difference in rank sum	Significant? P < 0,05?	Summary
Kontrol vs 50%	8,400	No	ns
Kontrol vs 75%	13,55	No	ns
Kontrol vs 100%	-21,65	Yes	**

Denyut Jantung Fase 29

Table Analyzed	Data 1	

Kruskal-Wallis test

P value	0,0137	
Exact or approximate P value?	Gaussian Approximation	
P value summary	*	
Do the medians vary signif. (P < 0.05)	Yes	
Number of groups	4	
Kruskal-Wallis statistic	10,66	

Dunn's Multiple Comparison Test	Difference in rank sum	Significant? P < 0,05?	Summary
Kontrol vs 50%	-17,82	Yes	*
Kontrol vs 75%	-11,37	No	ns
Kontrol vs 100%	1,783	No	ns

Denyut Jantung Fase 30

Table Analyzed	Data 1

Kruskal-Wallis test

P value	0,0066
Exact or approximate P value?	Gaussian Approximation
P value summary	**
Do the medians vary signif. (P < 0.05)	Yes
Number of groups	4
Kruskal-Wallis statistic	12,24

Dunn's Multiple Comparison Test	Difference in rank sum	Significant? P < 0,05?	Summary
Kontrol vs 50%	9,000	No	ns
Kontrol vs 75%	6,500	No	ns
Kontrol vs 100%	-15,80	Yes	*

Denyut Jantung Fase 31

Table Analyzed	Data 1

Kruskal-Wallis test

P value	0,0010
Exact or approximate P value?	Gaussian Approximation
P value summary	***
Do the medians vary signif. (P < 0.05)	Yes
Number of groups	4
Kruskal-Wallis statistic	16,36

Dunn's Multiple Comparison Test	Difference in rank sum	Significant? P < 0,05?	Summary
Kontrol vs 50%	-4,617	No	ns
Kontrol vs 75%	-24,52	Yes	***
Kontrol vs 100%	-13,27	No	ns

Denyut Jantung Fase 32

Table Analyzed	Data 1

Kruskal-Wallis test

P value	0,0047
Exact or approximate P value?	Gaussian Approximation
P value summary	**
Do the medians vary signif. (P < 0.05)	Yes
Number of groups	4
Kruskal-Wallis statistic	12,98

Dunn's Multiple Comparison Test	Difference in rank sum	Significant? P < 0,05?	Summary
Kontrol vs 50%	6,867	No	ns
Kontrol vs 75%	2,517	No	ns
Kontrol vs 100%	-18,88	Yes	**

Denyut Jantung Fase 33

Table Analyzed   Data 1

Kruskal-Wallis test
P value   < 0,0001
Exact or approximate P value?   Gaussian Approximation
P value summary   ***
Do the medians vary signif. (P < 0.05)   Yes
Number of groups   4
Kruskal-Wallis statistic   25,45

Dunn's Multiple Comparison Test	Difference in rank sum	Significant? P < 0,05?	Summary
Kontrol vs 50%	-15,77	Yes	*
Kontrol vs 75%	-22,12	Yes	**
Kontrol vs 100%	-27,32	Yes	***

Denyut Jantung Fase 34

Table Analyzed   Data 1

Kruskal-Wallis test
P value   < 0,0001
Exact or approximate P value?   Gaussian Approximation
P value summary   ***
Do the medians vary signif. (P < 0.05)   Yes
Number of groups   4
Kruskal-Wallis statistic   44,51

Dunn's Multiple Comparison Test	Difference in rank sum	Significant? P < 0,05?	Summary
Kontrol vs 50%	-22,75	Yes	**
Kontrol vs 75%	-28,75	Yes	***
Kontrol vs 100%	15,20	No	ns

Denyut Jantung Fase 35

Table Analyzed   Data 1

Kruskal-Wallis test
P value   0,0030
Exact or approximate P value?   Gaussian Approximation
P value summary   **
Do the medians vary signif. (P < 0.05)   Yes
Number of groups   4
Kruskal-Wallis statistic   13,94

Dunn's Multiple Comparison Test	Difference in rank sum	Significant? P < 0,05?	Summary
Kontrol vs 50%	-11,10	No	ns
Kontrol vs 75%	-19,95	Yes	**
Kontrol vs 100%	-16,95	Yes	*

Denyut Jantung Fase 36

Table Analyzed   Data 1

Kruskal-Wallis test
P value   < 0,0001
Exact or approximate P value?   Gaussian Approximation
P value summary   ***
Do the medians vary signif. (P < 0.05)   Yes
Number of groups   4
Kruskal-Wallis statistic   31,93

Dunn's Multiple Comparison Test	Difference in rank sum	Significant? P < 0,05?	Summary
Kontrol vs 50%	-17,58	Yes	*
Kontrol vs 75%	-29,03	Yes	***
Kontrol vs 100%	-26,78	Yes	***

Denyut Jantung Fase 37

Table Analyzed   Data 1

Kruskal-Wallis test
P value   0,0013
Exact or approximate P value?   Gaussian Approximation
P value summary   **
Do the medians vary signif. (P < 0.05)   Yes
Number of groups   4
Kruskal-Wallis statistic   15,72

Dunn's Multiple Comparison Test	Difference in rank sum	Significant? P < 0,05?	Summary
Kontrol vs 50%	-7,017	No	ns
Kontrol vs 75%	-13,97	No	ns
Kontrol vs 100%	15,48	Yes	*

Lampiran 5. Hasil uji statistik non-parametrik Kruskall-wallis Panjang Larva Awal Menetas

Panjang Larva Awal Menetas

Table Analyzed	Data 1
Kruskal-Wallis test	
P value	0,0080
Exact or approximate P value?	Gaussian Approximation
P value summary	**
Do the medians vary signif. (P < 0.05)	Yes
Number of groups	4
Kruskal-Wallis statistic	11,84

Dunn's Multiple Comparison Test	Difference in rank sum	Significant? P < 0,05?	Summary
Kontrol (0%) vs 50%	9,200	Yes	*
Kontrol (0%) vs 75%	11,85	Yes	*
Kontrol (0%) vs 100%	13,85	No	ns
50% vs 75%	2,650	No	ns
50% vs 100%	4,650	No	ns
75% vs 100%	2,000	No	ns

Lampiran 6. Hasil uji statistik non-parametrik Kruskall-wallis Waktu Penetasan embrio
O. *celebensis*

Waktu Penetasan
Table Analyzed   Data 1

Kruskal-Wallis test
P value   0,0080
Exact or approximate P value?   Gaussian Approximation
P value summary   **
Do the medians vary signif. (P < 0.05)   Yes
Number of groups   4
Kruskal-Wallis statistic   11,83

Dunn's Multiple Comparison Test	Difference in rank sum	Significant? P < 0,05?	Summary
Kontrol vs 50%	-5,850	No	ns
Kontrol vs 75%	-11,95	Yes	**
Kontrol vs 100%	-15,65	No	ns

Lampiran 7. Embrio yang dapat hidup dan berhasil menetas pada embrio kontrol

Kontrol (0%)
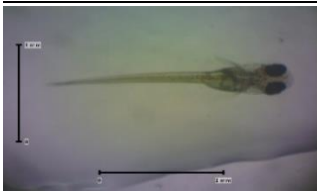
Embrio A1
Rabu, 25 Januari 2023
Pukul 18.17 WITA

Embrio A2
Selasa, 24 Januari 2023
Pukul 13.00 WITA
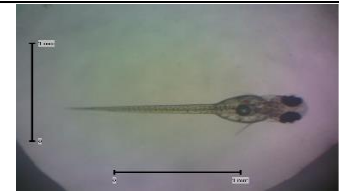
Embrio A3
Minggu, 29 Januari 2023
Pukul 11.46 WITA

Embrio A4
Selasa, 24 Januari 2023
Pukul 13.00 WITA

Embrio A5
Rabu, 25 Januari 2023
Pukul 18.17 WITA

Embrio A6
Selasa, 24 Januri 2023
Pukul 13.00 WITA

Embrio A7
Rabu, 25 Januari 2023
Pukul 18.17 WITA

Embrio A8
Selasa, 24 Januari 2023
Pukul 13.00 WITA

Embrio A9
Selasa, 24 Januari 2023
Pukul 20.30 WITA

Embrio A10
Selasa, 24 Januari 2023
Pukul 20.30 WITA

Lampiran 8. Embrio yang dapat hidup dan berhasil menetas pada embrio perlakuan paparan YTX 50%

**Embrio paparan Yessotoxin (50%)**
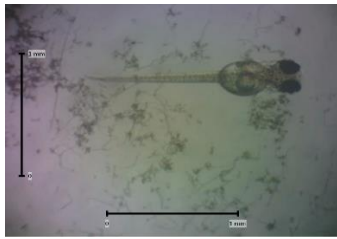
Embrio B1
Senin, 23 Januari 2023
Pukul 07.00 WITA
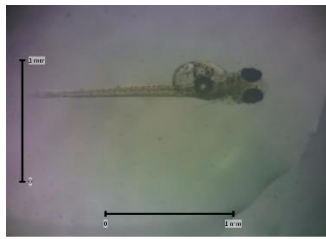
Embrio B2
Minggu, 22 Januari 2023
Pukul 02. 45 WITA

Embrio B3
Senin, 23 Januari 2023
Pukul 12. 47 WITA

Embrio B4
Minggu, 22 Januari 2023
Pukul 02. 45 WITA

Embrio B5
Senin, 23 Januari 2023
Pukul 07.00 WITA

Embrio B6
Senin, 23 Januari 2023
Pukul 07.00 WITA

Embrio B7
Minggu, 22 Januari 2023
Pukul 02.45 WITA
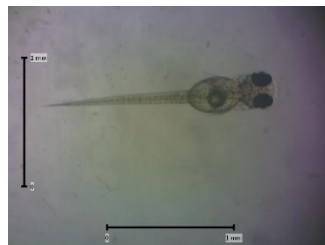
Embrio B8
Senin, 23 Januari 2023
Pukul 07.00 WITA

Embrio B9
Senin, 23 Januari 2023
Pukul 15.47 WITA

Embrio B10
Senin 23 Januari 2023
Pukul 12. 47 WITA

Lampiran 9. Terdapat 5 dari 10 embrio yang dapat hidup dan berhasil menetas pada embrio perlakuan paparan YTX 75%.

Paparan Yessotoxin (75%)

Embrio C1
Minggu, 22 Januari 2023
Pukul 10.45 WITA
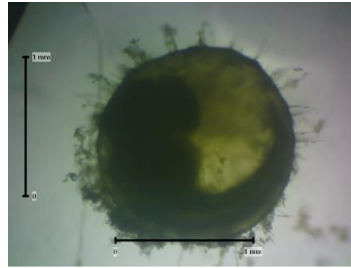
Embrio C2
Jum'at 27 Januari 2023
Pukul 20.14

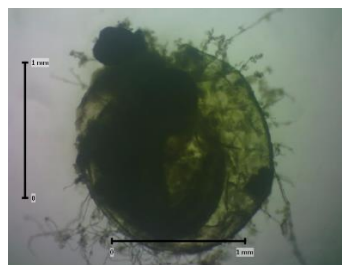Embrio C3
Senin, 23 Januari 2023
Pukul 12.53 WITA

Embrio C4
Jum'at, 27 Januari 2023
Pukul 19.40 WITA
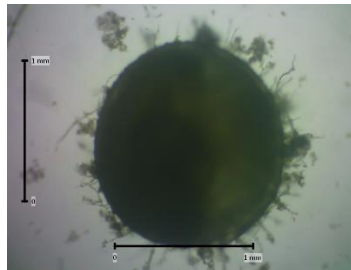
Embrio C5
Jum'at 27 Januari 2023
Pukul 19.40 WITA
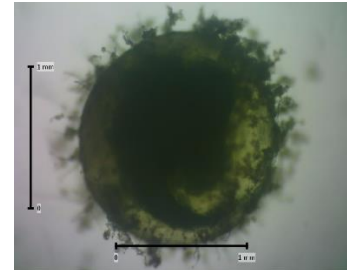
Embrio C6
Jum'at, 27 Januari 2023
Pukul 19.40
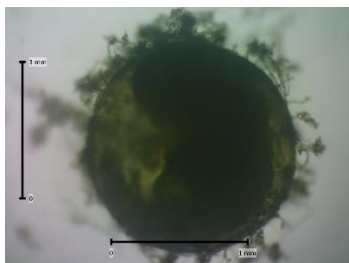
Embrio C7
Jum'at, 27 Januari 2023
Pukul 19.40 WITA

Embrio C8
Senin, 23 Januari 2023
Pukul 12.53 WITA
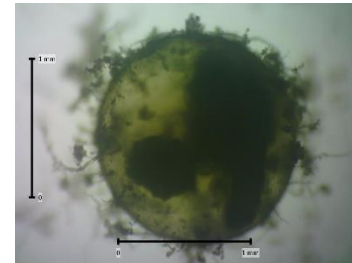
Embrio C9
Jum'at, 27 Januari 2023
Pukul 19.40 WITA

Embrio C10
Senin, 23 Januari 2023
Pukul 12.53 WITA

Lampiran 10. Hanya 1 dari 10 embrio yang dapat hidup dan berhasil menetas pada embrio perlakuan paparan YTX 100%

Embrio paparan Yessotoxin (100%)
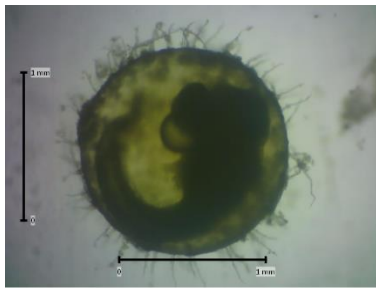
Embrio D1
Jum'at 27 Januari 2023
Pukul 19.40 WITA

Embrio D2
Jum'at 27 Januari 2023
Pukul 19.40 WITA
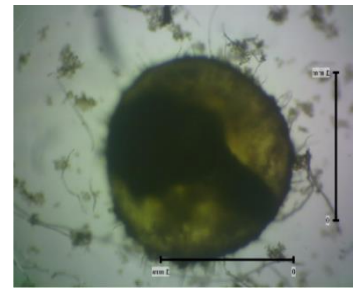
Embrio D3
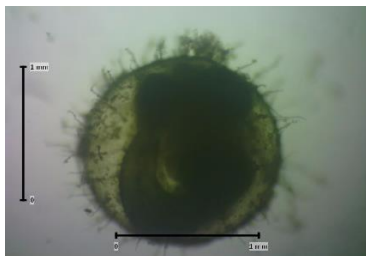Jum'at 23 Januari 2023
Pukul 19.40 WITA

Embrio D4
Jum'at 27 Januari 2023
Pukul 19.40 WITA
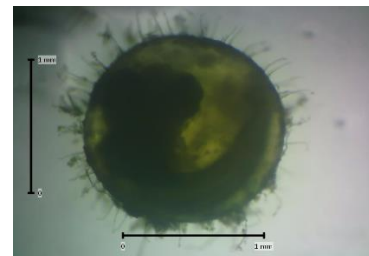

Embrio D5
Jum'at 27 Januari 2023
Pukul 19.40 WITA

Embrio D6
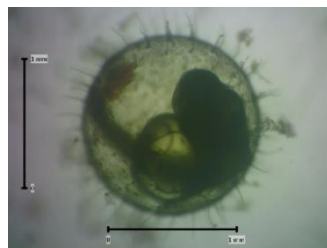Jum'at 27 Januari 2023
Pukul 19.40 WITA

Embrio D7
Jum'at 27 Januari 2023
Pukul 19.40 WITA

Embrio D8
Jum'at 27 Januari 2023
Pukul 19.40 WITA

Embrio D9
Jum'at 27 Januari 2023
Pukul 19.40 WITA

Embrio D10
Jum'at 27 Januari 2023
Pukul 19.40 WITA

GLOSARIUM

Apoptosis : Kematian sel terprogram yang terjadi pada organisme Multiseluler.

Aritmia : Kondisi laju denyut yang tidak beraturan, dapat lebih cepat atau lebih lambat.

Abnormalitas : Kondisi tidak normal.

Bradikardia : Kondisi denyut jantung yang lebih lambat dari denyut normal

Caspase : Enzim yang berperan dalam proses apoptosis.

Edema : Akumulasi cairan abnormal yang menyebabkan pembengkakan

Detoksifikasi : Proses metabolisme zat toksin didalam tubuh yang mengurangi kadar racun.

Dwarfism : Gangguan pertumbuhan yang menyebabkan kekerdilan

Homeostatis : Kemampuan makhluk hidup untuk mepertahankan kondisi internalnya agar tetap stabil dan konstan.

JSF : Jam setelah fertilisasi.

Korion : Selaput pelindung bagian terluar dari telur.

Kardiovaskular : Sistem sirkulasi yang berkaitan dengan jantung dan pembuluh darah

Kista : Sel non-motil yang tidak memiliki flagella dan kemapuan gerak yang merupakan fase dorman pada dinoflagellata

Kontaminan : Zat, benda atau bahan yang memberikan pengaruh terhadap lingkungan dan memberikan efek buruk.

Lordosis : Kelengkungan tulang belakang ke arah dalam.

Proliferasi : Mekanisme pertumbuhan jaringan dengan cepat dimana sel tumbuh dan membelah menghasilkan dua sel.

Somit : Struktur sementara yang akan tersegmentasi dan membentuk sel-sel tulang belakang .

Skoliosis : Kondisi kelengkungan tubuh abnormal.

Saluran *cuvier* : Saluran yang membantu dalam menyerap kuning telur.

Sel endotel : Sel yang melapisi permukaan bagian dalam pembuluh darah, berfungsi mengatur tekanan darah dan distribusi aliran darah ke jaringan dan organ dengan melepaskan berbagai jenis zat bioaktif.

Sinyal landak : Pusat sistem regulasi dalam perkembangan embrio yang mengendalikan pola dan proliferasi berbagai macam organ.

HCE	: Enzim koriolitik tinggi, dapat membengkakkan selubung telur dengan aksi proteolitiknya
LCE	: Enzim koriolitik rendah, secara efektif mencerna lapisan dalam selubung telur yang bengkak di bawah perlakuan awal HCE.
Lipofilik	: Kemampuan senyawa kimia untuk larut dalam lemak
Perivitelin	: Ruang antara korion dan kuning telur yang berisi plasma
Pseudo fertilization	: Kondisi telur cacat yang seolah-olah terbuahi
Malformasi	: Formasi yang salah (cacat perkembangan)
Mekanotransduksi	: Mekanisme sel mengubah stimulus mekanik menjadi aktivitas elektro kimia. Bentuk transduksi sensorik ini bertanggung jawab atas sejumlah indera dan proses fisiologis dalam tubuh seperti sentuhan, keseimbangan dan pendengaran.
Takikardia	: Kondisi dimana laju denyut lebih tinggi daripada laju denyut normal
Notokord	: Batang elastis yang memanjang pada organisme
Vaskular	: Pembuluh darah