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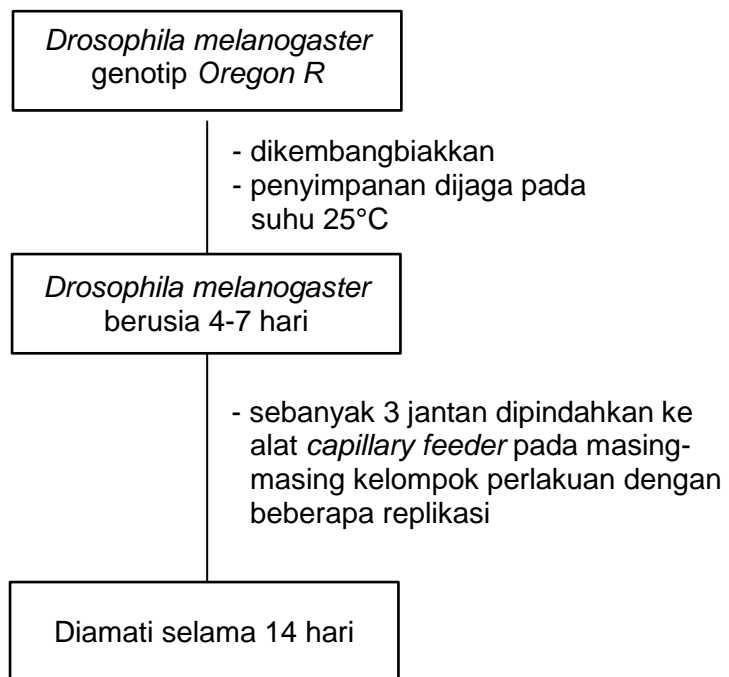
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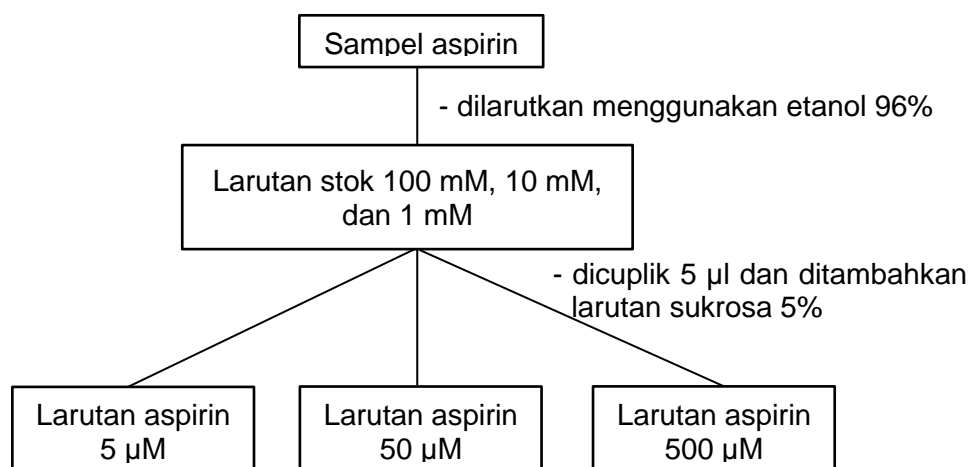
# LAMPIRAN

## Lampiran 1. Skema Kerja

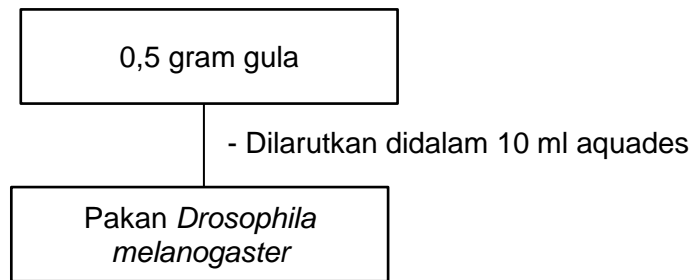
### Lampiran 1.1. Penyiapan Hewan Uji



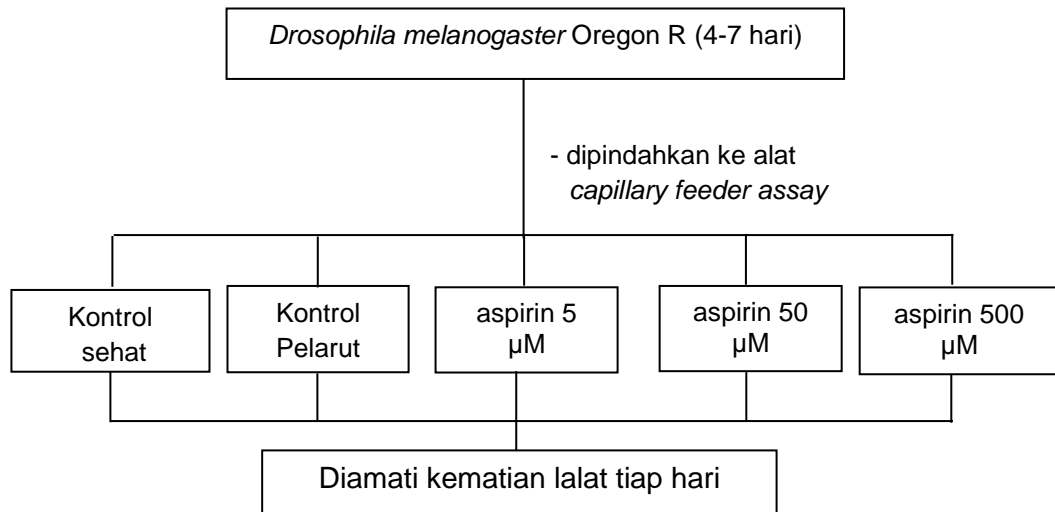
### Lampiran 1.2. Penyiapan Sampel



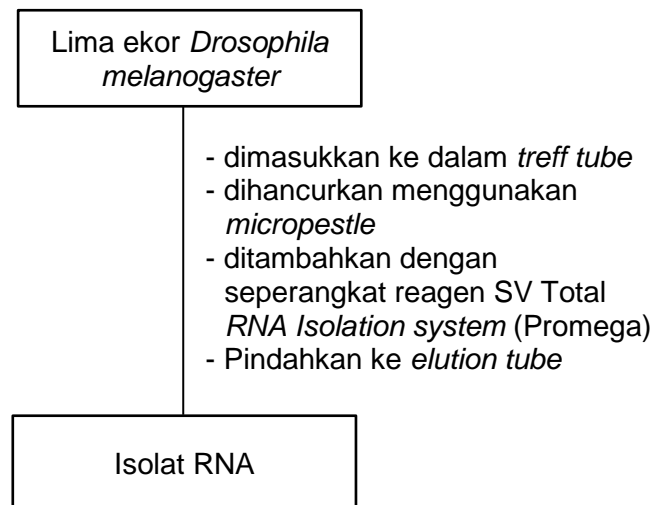
### Lampiran 1.3. Penyiapan Pakan



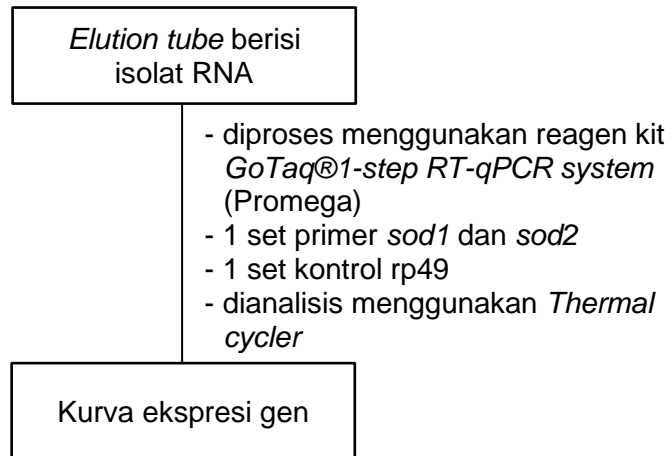
### Lampiran 1.4 Skema Kerja Uji Survival



### Lampiran 1.5. Penyiapan Sampel RNA



## Lampiran 1.6. Pengujian dengan PCR



## Lampiran 1. Perhitungan

### Lampiran 2.1. Perhitungan Pengenceran Aspirin

Pembuatan larutan stok (Aspirin 100 mM) :

$$M = \frac{m}{MR} \times \frac{1000}{ml}$$

$$M = \frac{m}{180,16} \times \frac{1000}{1 \text{ ml}}$$

$$m = 0,018 \text{ gram (ad 1 mL etanol 96\%)}$$

Dibuat pengenceran dengan konsentrasi 10 mM :

$$M1 \times V1 = M2 \times V2$$

$$100 \times V1 = 10 \times 1 \text{ ml}$$

$$V1 = \frac{10 \times 1}{100}$$

$$V1 = 0,1 \text{ mL} \Rightarrow 100 \mu\text{L (dicuplik dari 100 mM lalu ad 1 mL etanol 96\%)}$$

Dibuat pengenceran dengan konsentrasi 1 mM :

$$M1 \times V1 = M2 \times V2$$

$$100 \times V1 = 1 \times 1 \text{ ml}$$

$$V1 = \frac{1 \times 1}{100}$$

$$V1 = 0,01 \text{ mL} \Rightarrow 10 \mu\text{L (dicuplik dari 100 mM lalu ad 1 mL etanol 96\%)}$$

### Lampiran 2.2. Perhitungan Aspirin + Pakan

Dibuat aspirin konsentrasi 500  $\mu\text{M}$  dalam pakan dari larutan aspirin 100 mM.

$$500 \mu\text{M} = 500 \times 10^{-3} \text{ mM}$$

$$M1 \times V1 = M2 \times V2$$

$$100 \times V1 = 500 \times 10^{-3} \times 1 \text{ mL}$$

$$V1 = 5 \times 10^{-3} \text{ mL}$$

$$V1 = 5 \mu\text{L (dicuplik dari 100 mM lalu ad 1 mL pakan)}$$

Dibuat aspirin konsentrasi 50  $\mu\text{M}$  dalam pakan dari larutan aspirin 10 mM.

$$50 \mu\text{M} = 50 \times 10^{-3} \text{ mM}$$

$$M_1 \times V_1 = M_2 \times V_2$$

$$10 \times V_1 = 50 \times 10^{-3} \times 1$$

$$V_1 = 5 \times 10^{-3} \text{ mL}$$

$$V_1 = 5 \mu\text{L} \text{ (dicuplik dari 10 mM lalu ad 1 mL pakan)}$$

Dibuat aspirin konsentrasi 5  $\mu\text{M}$  dalam pakan dari larutan aspirin 1 mM.

$$5 \mu\text{M} = 5 \times 10^{-3} \text{ mM}$$

$$M_1 \times V_1 = M_2 \times V_2$$

$$1 \times V_1 = 5 \times 10^{-3} \times 1$$

$$V_1 = 5 \times 10^{-3} \text{ mL}$$

$$V_1 = 5 \mu\text{L} \text{ (dicuplik dari 1 mM lalu ad 1 mL pakan)}$$



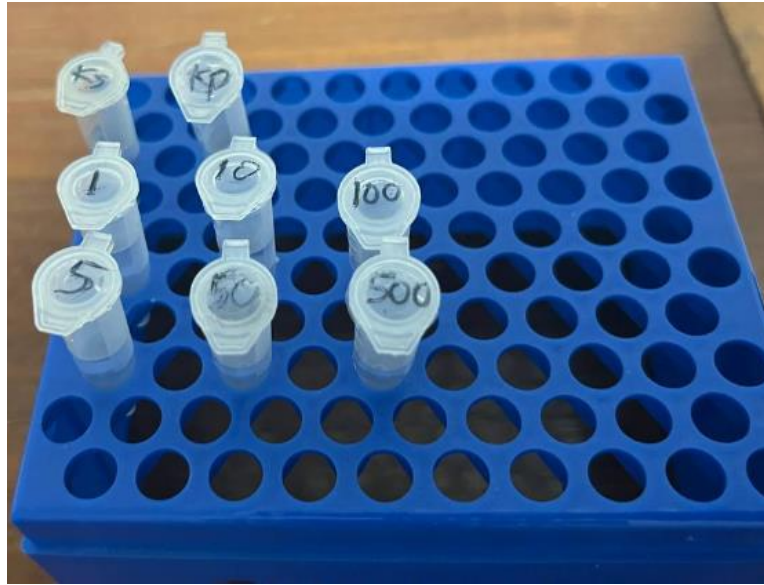
## Lampiran 2. Gambar Penelitian



Gambar 12. Perangkaian alat metode CAFE



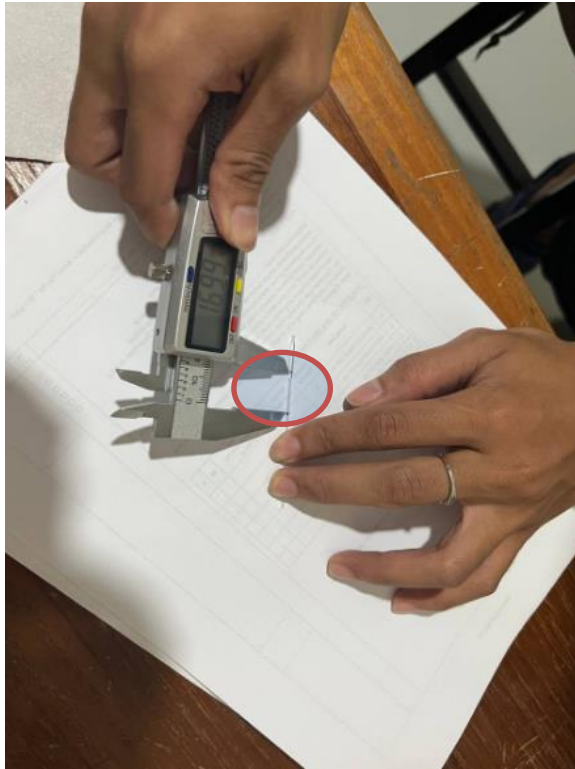
Gambar 13. Pemilihan *D. melanogaster* jantan berusia 4-7 hari



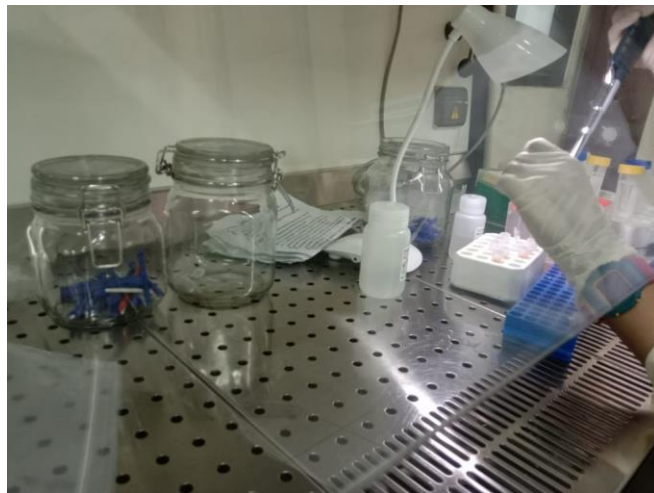
**Gambar 14. Pembuatan larutan sukrosan dan aspirin**



**Gambar 15. Proses *D. melanogaster* memakan aspirin**



**Gambar 16. Pengukuran aspirin *intake***



**Gambar 17. Tahap isolasi RNA**



**Gambar 18. Rangkaian alat PCR**

#### Lampiran 4. Hasil Pengukuran Volume *intake*

##### Perhitungan volume *intake* pakan cair

$$\begin{aligned}\text{Volume intake} &= \left[ \frac{1}{4} \pi d^2 \times t \right]_{\text{sampel}} - \left[ \frac{1}{4} \pi d^2 \times t \right]_{\text{kontrol penguapan}} \\ &= \left[ \frac{1}{4} (3,14)(1,1)^2 \times 19,02 \right] - \left[ \frac{1}{4} (3,14) (1,1)^2 \times 16,48 \right] \\ &= 18,07 - 15,65 \\ &= 2,42 \mu\text{l}\end{aligned}$$

##### Perhitungan volume *intake* per lalat

$$\text{Volume intake} = \frac{\text{jumlah volume intake}}{\text{total lalat}} = \frac{2,42}{3} = 0,81 \mu\text{l}$$

##### Perhitungan aspirin *intake*

###### Kelompok aspirin 5 $\mu\text{l}$

$$\text{Molaritas} = \frac{\text{massa}}{\text{Mr}} \times \frac{1000}{V}$$

$$5 \times 10^{-6} = \frac{\text{massa}}{180,16} \times \frac{1000}{0,49 \times 10^{-3}}$$

$$\text{Massa} = 0,0000441 \text{ gram} \rightarrow 0,0004 \mu\text{g}$$

###### Kelompok aspirin 50 $\mu\text{l}$

$$\text{Molaritas} = \frac{\text{massa}}{\text{Mr}} \times \frac{1000}{V}$$

$$50 \times 10^{-6} = \frac{\text{massa}}{180,16} \times \frac{1000}{0,52 \times 10^{-3}}$$

$$\text{Massa} = 0,004684 \text{ gram} \rightarrow 0,0047 \mu\text{g}$$

###### Kelompok aspirin 500 $\mu\text{l}$

$$\text{Molaritas} = \frac{\text{massa}}{\text{Mr}} \times \frac{1000}{V}$$

$$500 \times 10^{-6} = \frac{\text{massa}}{180,16} \times \frac{1000}{1,05 \times 10^{-3}}$$

$$\text{Massa} = 0,094584 \text{ gram} \rightarrow 0,0946 \mu\text{g}$$

## Lampiran 5. Hasil Analisis Statistik

### Analisis ekspresi gen *sod1*

1	Table Analyzed	Aspirin_sod1				
2						
3	One-way analysis of variance					
4	P value	0.3585				
5	P value summary	ns				
6	Are means signif. different? (P < 0.05)	No				
7	Number of groups	5				
8	F	1.386				
9	R square	0.5257				
10						
11	ANOVA Table	SS	df	MS		
12	Treatment (between columns)	0.2695	4	0.06739		
13	Residual (within columns)	0.2432	5	0.04863		
14	Total	0.5127	9			
15						
16	Tukey's Multiple Comparison Test	Mean Diff.	q	Significant? P < 0.05?	Summary	95% CI of diff
17	Kontrol Tanpa Perlakuan vs Kontrol pelarut	0.2600	1.667	No	ns	-0.6246 to 1.145
18	Kontrol Tanpa Perlakuan vs Aspirin 500 uM	0.4250	2.726	No	ns	-0.4596 to 1.310
19	Kontrol Tanpa Perlakuan vs Aspirin 50 uM	0.01500	0.09619	No	ns	-0.8696 to 0.8996
20	Kontrol Tanpa Perlakuan vs Aspirin 5 uM	0.07000	0.4489	No	ns	-0.8146 to 0.9546
21	Kontrol pelarut vs Aspirin 500 uM	0.1650	1.058	No	ns	-0.7196 to 1.050
22	Kontrol pelarut vs Aspirin 50 uM	-0.2450	1.571	No	ns	-1.130 to 0.6396
23	Kontrol pelarut vs Aspirin 5 uM	-0.1900	1.218	No	ns	-1.075 to 0.6946
24	Aspirin 500 uM vs Aspirin 50 uM	-0.4100	2.629	No	ns	-1.295 to 0.4746
25	Aspirin 500 uM vs Aspirin 5 uM	-0.3550	2.277	No	ns	-1.240 to 0.5296
26	Aspirin 50 uM vs Aspirin 5 uM	0.05500	0.3527	No	ns	-0.8296 to 0.9396

### Analisis ekspresi gen *sod2*

1	Table Analyzed	Aspirin_sod2				
2						
3	One-way analysis of variance					
4	P value	0.9917				
5	P value summary	ns				
6	Are means signif. different? (P < 0.05)	No				
7	Number of groups	5				
8	F	0.05842				
9	R square	0.04465				
10						
11	ANOVA Table	SS	df	MS		
12	Treatment (between columns)	0.05600	4	0.01400		
13	Residual (within columns)	1.198	5	0.2396		
14	Total	1.254	9			
15						
16	Tukey's Multiple Comparison Test	Mean Diff.	q	Significant? P < 0.	Summary	95% CI of diff
17	Kontrol tanpa perlakuan vs kontrol pelarut	0.08000	0.2311	No	ns	-1.884 to 2.044
18	Kontrol tanpa perlakuan vs Aspirin 500 uM	0.07000	0.2022	No	ns	-1.894 to 2.034
19	Kontrol tanpa perlakuan vs aspirin 50 uM	-0.1150	0.3322	No	ns	-2.079 to 1.849
20	Kontrol tanpa perlakuan vs Aspirin 5 uM	-0.06000	0.1733	No	ns	-2.024 to 1.904
21	kontrol pelarut vs Aspirin 500 uM	-0.01000	0.02889	No	ns	-1.974 to 1.954
22	kontrol pelarut vs aspirin 50 uM	-0.1950	0.5633	No	ns	-2.159 to 1.769
23	kontrol pelarut vs Aspirin 5 uM	-0.1400	0.4044	No	ns	-2.104 to 1.824
24	Aspirin 500 uM vs aspirin 50 uM	-0.1850	0.5344	No	ns	-2.149 to 1.779
25	Aspirin 500 uM vs Aspirin 5 uM	-0.1300	0.3756	No	ns	-2.094 to 1.834
26	aspirin 50 uM vs Aspirin 5 uM	0.05500	0.1589	No	ns	-1.909 to 2.019