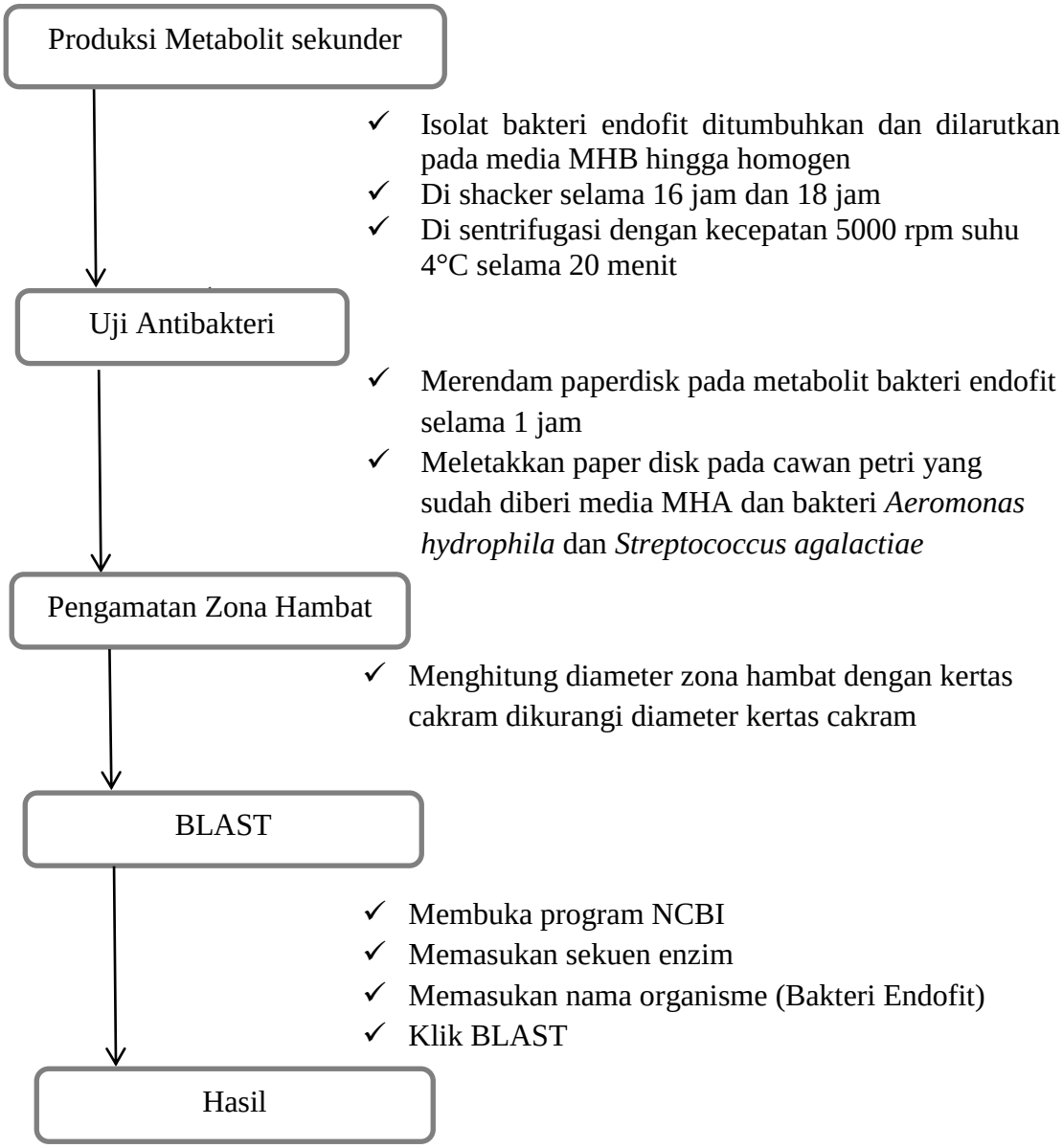
LAMPIRAN

Lampiran 1. Diagram Alir



Lampiran 2. Komposisi media yang digunakan dalam penelitian

(Sumber: Maual Oxord)

1. Medium Nutrien Agar (NA)
   - ✓ Beef extract 3 gram
   - ✓ Bacto pepton 5 gram
   - ✓ Agar 15 gram
   - ✓ Aquadest 1000 ml

2. Medium Nutrien Broth (NB)
   - ✓ Beef extract 3 gram
   - ✓ Bacto pepton 5 gram
   - ✓ Aquadest 1000 ml

3. Medium Mueller-Hinton Agar (MHA)
   - ✓ Beef extract 300 gram
   - ✓ Casamino acids 17.5 gram
   - ✓ Starch 1.5 gram
   - ✓ Agar 17 gram
   - ✓ Aquadest 1000 ml

4. Medium Meller-Hinton Broth (MHB)
   - ✓ Beef extract 300 gram
   - ✓ Casamino acids 17.5 gram
   - ✓ Starch 1.5 gram
   - ✓ Aquadest 1000 ml

Lampiran 3. Gambar Isolat Bakteri Endofit Rimpang Temulawak

Isolat bakteri endofit yag telah dimurnikan dan ditumbuhkan didalam media NA miring

Lampiran 4. Gambar Bakteri Uji

Aeromonas hydrophilla (kiri) dan *Streptococcus agalactiae* (kanan) pada media TSA miring

Lampiran 5. Diameter Zona Hambat

Tabel 1. Diameter zona hambat pada uji aktifitas metabolit bakteri endofit terhadap bakteri *Aeromonas hydrophila* (dalam mm)

Kode Isolat Bakteri Endofit	*Aeromonas hydrophila*			Total	Rata-rata	Keterangan
	Ulangan I	Ulangan II	Ulangan III			
BT1	3,9	3,9	3,6	11,49	3,8	Sedang
BT2	4,5	5,7	6,6	16,8	5,6	Sedang
PD1	3,7	4,3	4,6	12,6	4,3	Sedang
PD2	4,4	3,0	3,8	11,2	3,7	Sedang

Tabel 2. Diameter zona hambat pada uji aktifitas metabolit bakteri endofit terhadap bakteri *Streptococcus agalactiae* (dalam mm)

Kode Isolat Bakteri Endofit	*Streptococcus agalactiae*			Total	Rata-rata	Keterangan
	Ulangan I	Ulangan II	Ulangan III			
BT1	3,24	4,34	3,9	11,48	3,8	Sedang
BT2	4,12	5,7	6,7	16,52	5,5	Sedang
PD1	3,7	4,2	3,6	11,5	3,8	Sedang
PD2	3,5	3,5	3,8	10,8	3,6	Sedang

Tabel 3. Diameter zona hambat pada kontrol

Jenis Kontrol	*Aeromonas hydrophila*		Total	Rata-rata	Keterangan
	Ulangan I	*Ulangan II*			
Kontrol Positif (Amoxcylin)	14,18	14,17	28,35	14,18	Kuat
Kontrol Negatif (Cakram Steril)	0	0	0	0	Lemah

Tabel 4. Diameter zona hambat pada kontrol

Jenis Kontrol	*Streptococcus agalactiae*		Total	Rata-rata	Keterangan
	Ulangan I	*Ulangan II*			
Kontrol Positif (Amoxcylin)	14,86	14,86	29,72	14,86	Kuat
Kontrol Negatif (Cakram Steril)	0	0	0	0	Lemah

Lampiran 6. Alat-alat Penelitian

Gambar 1. Laminar Air Flow

Gambar 2. Inkubator

Gambar 3. Rotary Shacker

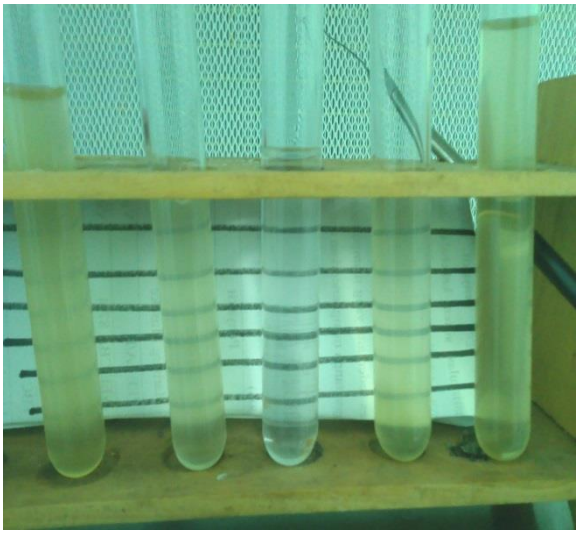
Gambar 4. Sentrigugasi

Gambar 5. Autoclaf

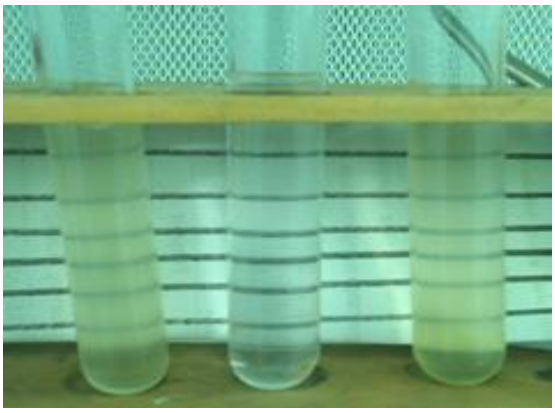
Gambar 6. Timbanagan

Gambar 7. Hot Plate

Lampiran 7. Gambar Penyamaan Kekeruhan Mc Farland 0,5



Bakteri endofit disamakan kekeruhannya dengan mc farland 0,5



Bakteri uji disamakan kekeruhannya dengan mc farland 0,5

Lampiran 8. Hasil BLAST Protein dan Nukleutida

1. Hasil Blast Protein Enzim Kurkumin sintase dengan *Bacillus brevis*

Sampel	***Query cover***	***Ident***	**Protein Homolog**
Kurkumin sintase [BAH56226.1]	94%	84%	naringenin-kalkon sintase [BAH44642.1]
Kurkumin sintase [BAH56226.1]	58%	26%	3-oxoasil-sintase III [BAH44604.1]
Kurkumin sintase [BAH56226.1]	30%	24%	putatif hydrolase [BAH43519.1]

2. Hasil Blast Protein Enzim Fenilpropanoil asetil koenzim A sintase dengan *Bacillus brevis*

Sampel	**Query cover**	**Ident**	**Protein Homolog**
Fenilpropanoil asetil koenzim A sintase [BAH56225.1]	91%	28%	naringenin-kalkon sintase [BAH44642.1]
Fenilpropanoil asetil koenzim A sintase [BAH56225.1]	44%	30%	3-oxoasil- sintase III [BAH44604.1]
Fenilpropanoil asetil koenzim A sintase [BAH56225.1]	34%	29%	putatif 3-oxoasil sintase [BAH45654.1]

3. Hasil Blast Protein Kurkumin Sintase dengan *Pseudomonas stutzeri*

Sampel	**Query cover**	***ident***	**Protein Homolog**
Kurkumin sintase [BAH56226.1]	30%	22%	Asetil koenzim A karboksilase, biotin karboksilase, putatif [ABP80852.1]
Kurkumin sintase [BAH56226.1]	28%	25%	Fosfate ABC transporter periplasmik [ABP79284.1]
Kurkumin sintase [BAH56226.1]	43%	25%	Kadmium translokasi p-tipe ATP-ase [ABP78370.1]

4. Hasil Blast Protein Fenilpropanoil asetil koenzim A sintase dengan *Pseudomonas stutzeri*

Sampel	**Query cover**	***ident***	**Protein Homolog**
Fenilpropanoil asetil koenzim A sintase [BAH56225.1]	25%	26%	*probable two-component sensor* [ABP78700.1]
Fenilpropanoil asetil koenzim A sintase [BAH56225.1]	16%	32%	fosfate ABC transporter periplasmik [ABP79284.1]
Fenilpropanoil asetil koenzim A sintase [BAH56225.1]	45%	23%	3-oxoasil-sintase III, putatif [ABP80488.1]

5. Hasil Blast Protein Kurkumin Sintase dengan *Actinomyces viscosus*

Sampel	**Query cover**	**Ident**	**Protein Homolog**
Kurkumin sintase [BAH56226.1]	16%	29%	hipotetikal protein HMPREF0059_02530 [EGE37164.1]
Kurkumin sintase [BAH56226.1]	26%	27%	hipotetikal protein HMPREF0059_00305 EGE38957.1
Kurkumin sintase [BAH56226.1]	33%	25%	hipotetikal protein HMPREF0059_01058 [EGE38204.1]

6. Hasil Blast Fenilpropanoil asetil koenzim A sintase dengan *Actinomyces viscosus*

Sampel	**Query cover**	**Ident**	**Protein Homolog**
Fenilpropanoil asetil koenzim A sintase [BAH56225.1]	19%	31%	hipotetikal protein HMPREF0059_02411 [EGE37048.1]
Fenilpropanoil asetil koenzim A sintase [BAH56225.1]	19%	27%	hipotetikal protein HMPREF0059_02632 [EGE36829.2]
Fenilpropanoil asetil koenzim A sintase [BAH56225.1]	28%	23%	hipotetikal protein HMPREF0059_02262 [EGE36900.1]

7. Hasil Blast Nukleotida Kurkumin sintase dengan *Bacillus brevis*

4 Sampel	***Query cover***	***Ident***	**Region Genom From Genom *Bacillus brevis***
Kurkumin sintase [AB495007.1]	21%	95%	Region 4744117 to 4744138 ……. Region 6039667 to 6039687 [AP008955.1]

8. Hasil Blast Nukleotida Kurkumin Sintase dengan *Pseudomonas stutzeri*

Sampel	**Query cover**	**Ident**	**Region Genom From Genom *Pseudomonas stutzeri***
Kurkumin sintase [AB495007.1]	59%	84%	41835 to 41876 ……. 4503683 to 4503709 [CP000304.1]
Kurkumin sintase [AB495007.1]	2%	88%	4831 to 4855 [AY957390.1]
Kurkumin sintase [AB495007.1]	1%	90%	9322 to 9342 [AY957387.1]

9. Hasil blast nukleotida enzim fenilpropanoil asetil-Koenzim A sintase dengan spesies bakteri *Bacillus brevis*

Sampel	**Query cover**	**Ident**	**Region genome**
Fenilpropanoil asetil-Koenzim A sintase [AB495006.1]	11%	95 %	1704823 to 1704843 [AP008955.1]

10. Hasil blast nukleotida enzim fenilpropanoil asetil-Koenzim A sintase dengan spesies bakteri *Pseudomonas stutzeri*

Sampel	**Query cover**	***ident***	**Protein Homolog**
Fenilpropanoil asetil-Koenzim A sintase [AB495006.1]	55%	96%	3837831 to 3837855…… 4333905 to 4333920 CP000304.1
Fenilpropanoil asetil-Koenzim A sintase [AB495006.1]	2%	96%	4831 to 4855 AY957390.1