LAMPIRAN

A. Perhitungan Bobot Tetap

Penimbangan	Sampel 1 (g)			Sample 2(g)		
	R1	R2	R3	R1	R2	R3
1	1,8501	2,0171	2,1097	2,2176	2,0541	2,2181
2	1,8350	1,9985	2,0886	2,2099	2,0501	2,2084
3	1,8340	1,9581	2,0872	2,2073	2,0489	2,2067
4	1,8336	1,9548	1,9909	2,2062	2,0428	2,2024
5	1,8298	1,9537	1,9895	2,1984	2,0406	2,1976
6	1,8259	1,9241	1,9874	2,1932	2,0366	2,1929
7	1,8244	1,9177	1,9868	2,1899	2,0260	2,1894
8	-	1,9118	1,9827	2,1876	2,0178	2,1835
9	-	1,9097	1,9802	2,1811	2,0161	2,1796
10	-	1,9063	1,9785	2,1793	2,0148	2,1776
11	-	1,9011	1,9743	-	-	-
12	-	1,8965	1,9714	-	-	-
13	-	1,8947	1,9695	-	-	-
14	-	1,8915	1,9667	-	-	-
15	-	1,8898	1,9645	-	-	-
Berat kertas saring	**0,9857**	**0,9873**	**0,9902**	**0,9916**	**0,9975**	**0,9987**

Keterangan :

R1 : replikasi 1

R2 : replikasi 2

R3 : replikasi 3

Rumus : $\frac{\textit{selisih dua kali penimbangan terakhir}}{\textit{penimbangan awal} - \textit{bobot kertas saring}}$

- Sampel 1

R1 $= \frac{1,8259-1,8244}{1,9259-0,9857} \; x \; 100\%$

$= \frac{0,0015}{0,8402} \; x \; 100\%$

$= 0,17\%$

R1 $= \frac{1,9667-1,9645}{1,9667-0.9902} \; x \; 100\%$

$= \frac{0,0022}{0,9765} \; x \; 100\%$

$= 0,22\%$

R2 $= \frac{1,8915-1,8898}{1,8915-0,9873} \; x \; 100\%$

$= \frac{0,0017}{0,9042} \; x \; 100\%$

$= 0,19\%$

- Sampel 4

R1 $= \frac{2,1811-2,1793}{2,1811-0,9916}\ x\ 100\%$

$= \frac{0,0018}{1,1895}\ x\ 100\%$

$= 0,15\%$

R1 $= \frac{2,1796-2,1776}{2,1796-0,9987}\ x\ 100\%$

$= \frac{0,002}{1,1809}\ x\ 100\%$

$= 0,16\%$

R2 $= \frac{2,0161-2,0148}{2,0161-0,9975}\ x\ 100\%$

$= \frac{0,0013}{1,0186}\ x\ 100\%$

$= 0,12\%$

B. Perhitungan berat jenis

Sampel	Replikasi	Rumus	Berat Jenis (g/ml)	Rata-rata
Sampel 1	**A**	Berat jenis g/ml $= \frac{\text{berat sampel (g)}}{\text{volume piknometer(ml)}}$	BJ= $\frac{26,7301\ g}{25\ ml}$ BJ= 1,0692 g/ml	$= \frac{1,0692 + 1,0692+1,0683}{3}$ $=1,0686\ g$
	B		BJ= $\frac{26,7147\ g}{25\ ml}$ BJ= 1,0685 g/ml	
	C		BJ= $\frac{26,7097\ g}{25\ ml}$ BJ=1,0683 g/ml	
Sampel 4	**A**		BJ = $\frac{26,9783\ g}{25\ ml}$ BJ=1,0791 g/ml	$= \frac{1,0791 + 1,0680+1,0793}{3}$ $=1,0758\ g$
	B		BJ= $\frac{26,7260\ g}{25\ ml}$ BJ=1,0680 g/ml	
	C		BJ=$\frac{26,9837g}{25\ ml}$ BJ=1,0793 g/ml	

C. Perhitungan Kadar

- Konversi sampel dari ml ke kg

  Massa sampel = volume smapel x berat jenis sampel

  - **Sampel 1**

  = 100 ml x 1,0686 g/ml = 106,86 g

  = 06,86 g = 0,10686 kg

  - **Sampel 4**

  = 100 ml x 1,0758 g/ml = 107,58 g

  = 107,58 g = 0,10758 kg

Sampel	kode	Kadar sebagai natrium siklamat (mg/kg) $=\frac{\text{berat endapan (mg)}}{\text{berat sampel (kg)}} x \frac{201,22}{233,43}$	ıdar sebagai asam siklamat (mg/kg) Kadar natrium siklamat x $\frac{179,02}{201,22}$	Rata-rata (mg/kg)
Sampel 1	A	$=\frac{838,7\ mg}{0,10686kg}$ x 0,862 = 6766,28	= 6766,28 mg/kg x 0,8906 = 60266,04	6503,59
	B	$=\frac{902,5\ mg}{0,10686kg}$ x 0,862 = 7280,13	= 7280,13 mg/kg x 0,8906 = 6484,68	
	C	$=\frac{974,3\ mg}{0,10686kg}$ x 0,862 = 7859,31	= 7859,31 mg/kg x 0,8906 = 6999,50	
Sampel 4	A	$=\frac{1187,7\ mg}{0,10758\ kg}$ x 0,862 = 9516,61	= 9516,61 mg/kg x 0,8906 = 8475,49	8050,16
	B	$=\frac{1017,3\ mg}{0,10758\ kg}$ x 0,862 = 8151,26	= 8151,26 mg/kg x 0,8906 = 7259,51	
	C	$=\frac{1178,9\ mg}{0,10758\ kg}$ x 0,862 = 9446,10	= 9446,10 mg/kg x 0,8906 = 8412,69	

D. Perhitungan Pembuatan Reagen

1. Pengenceran HCl 10% (v/v) sebanyak 250 ml

   HCL pekat yang tersedia 37%, maka volume HCl pekat yang diambil:

   V1 . C1 = V2 . C2

   V1. 37%= 250 ml . 10%

   $V1 = \frac{250 \text{ ml} .10\%}{37\%}$

   V1 = 67,5 ml

   Keterangan : 1 = sebelum di encerkan

   2 = setelah diencerkan

2. Pembuatan Larutan $BaCl_2$ 10% (b/v) sebanyak 250 ml

   $BaCl_2$ 10% $= \frac{10\ gram}{100\ ml} = \frac{x\ gram}{250\ ml}$

   X gram $= \frac{10\ x\ 250}{100}$

   = 25 gram

3. Pembuatan Larutan $NaNO_2$ 10% (b/v) sebanyak 250 ml

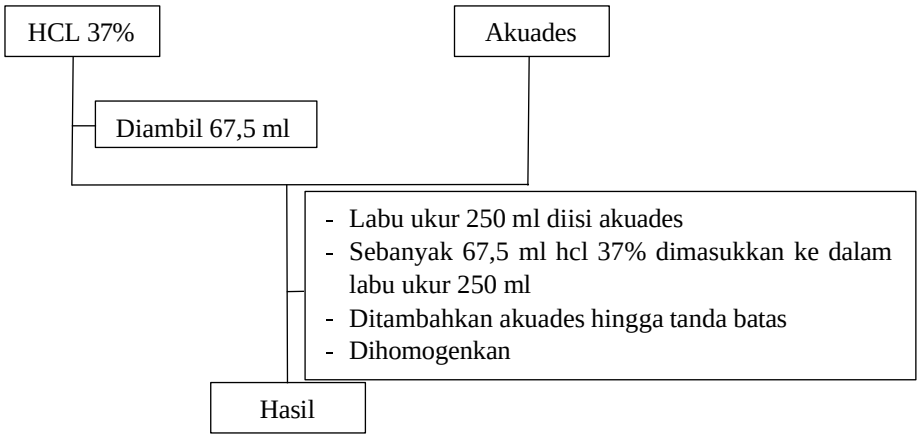
   $NaNO_2$ 10% $= \frac{10\ gram}{100\ ml} = \frac{x\ gram}{250\ ml}$

   X gram $= \frac{10\ x\ 250}{100}$

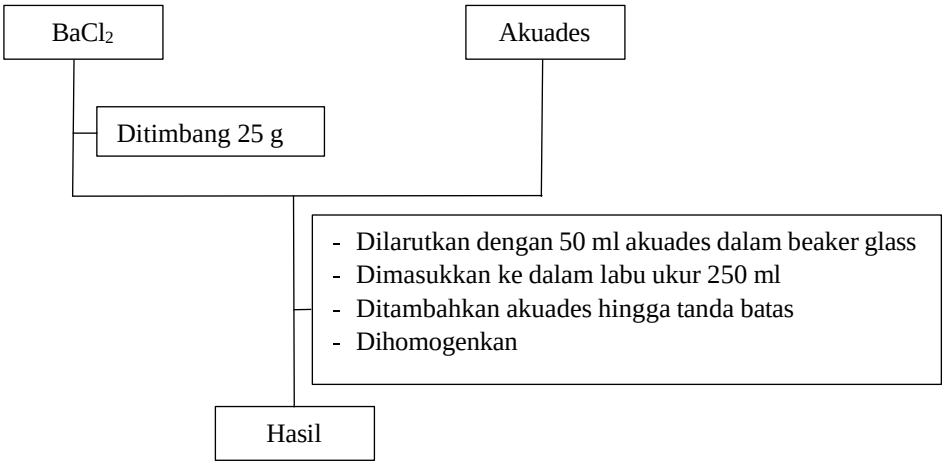
   = 25 gram

- Pembuatan reagen

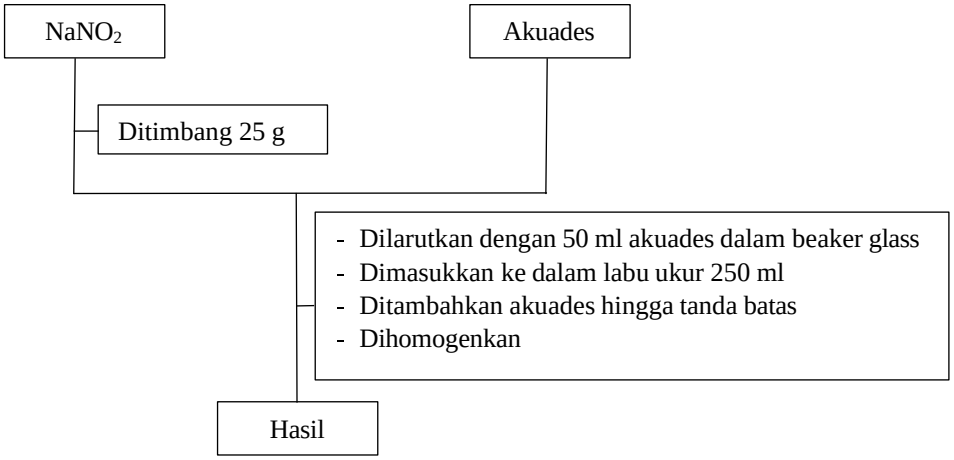
1. HCL 10%



2. $BaCl_2$ 10%

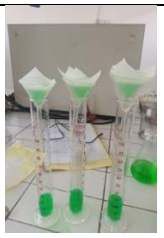


3. $NaNO_2$ 10%



E. Dokumentasi Penelitian

Gambar	Keterangan
	Alat dan bahan
	Sampel
	Pengovenan kertas saring dengan suhu 105^{o}C selama 1 jam
Metode Gravimetri	
	Penimbangan bobot kertas saring

	Penambahan arang aktif
	Penyaringan sampel

	Penambahan HCl 10 %
	Penambahan $BaCl_2$ 10%
	Penyaringan setelah di diamkan selama 30 menit

	Penambahan $NaNO_2$ 10 %
	Pemanasan sampel dengan suhu 125^{o}C selama 2 jam
	Hasil endapan

	Penyaringan pengendapan dan pembilasan endapan dengan akuades
	Pengovenan kertas saring + hasil endapan sampel pada suhu 100^{o}C selama 15 menit
	Bobot kertas saring + endapan sampel
	Berat piknometer + kosong
	Berat piknometer + sampel