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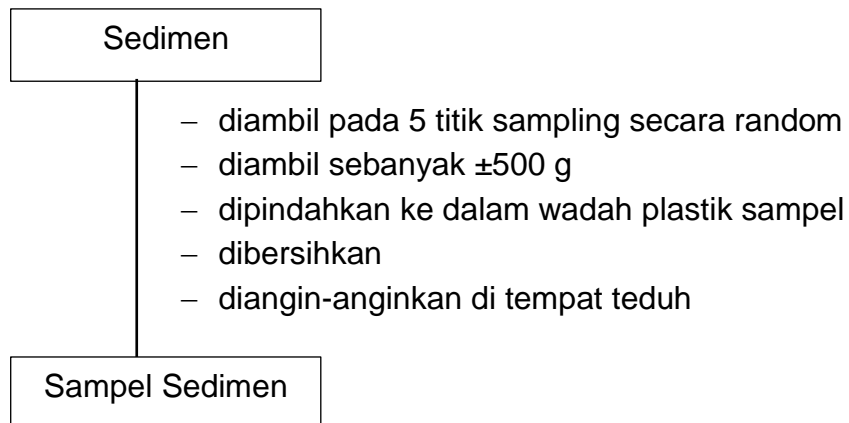
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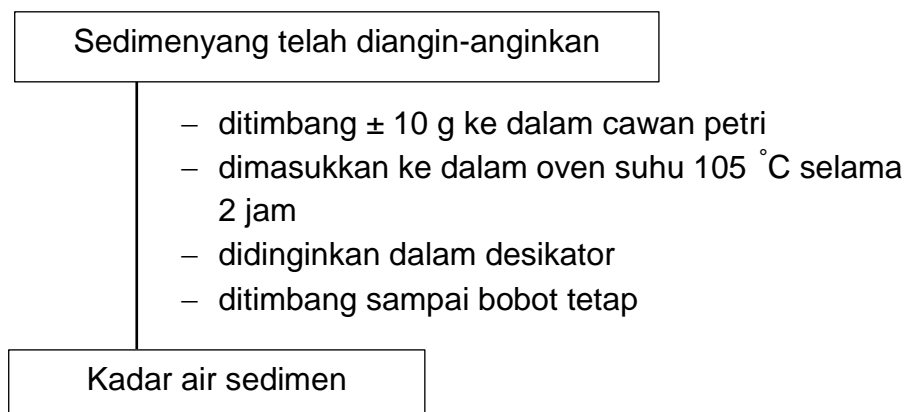
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Lampiran 1. Bagan kerja

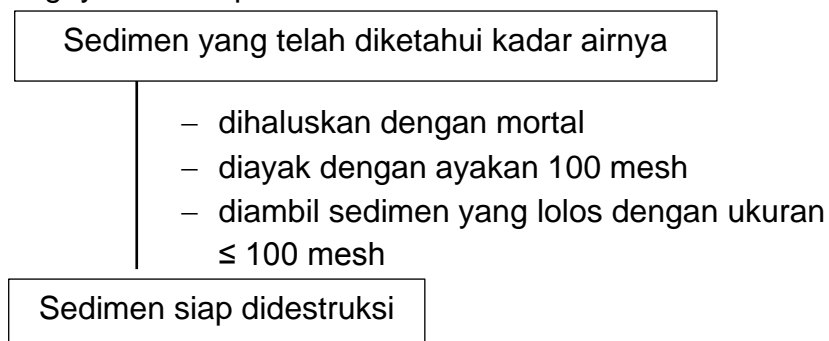
1. Pengambilan sampel



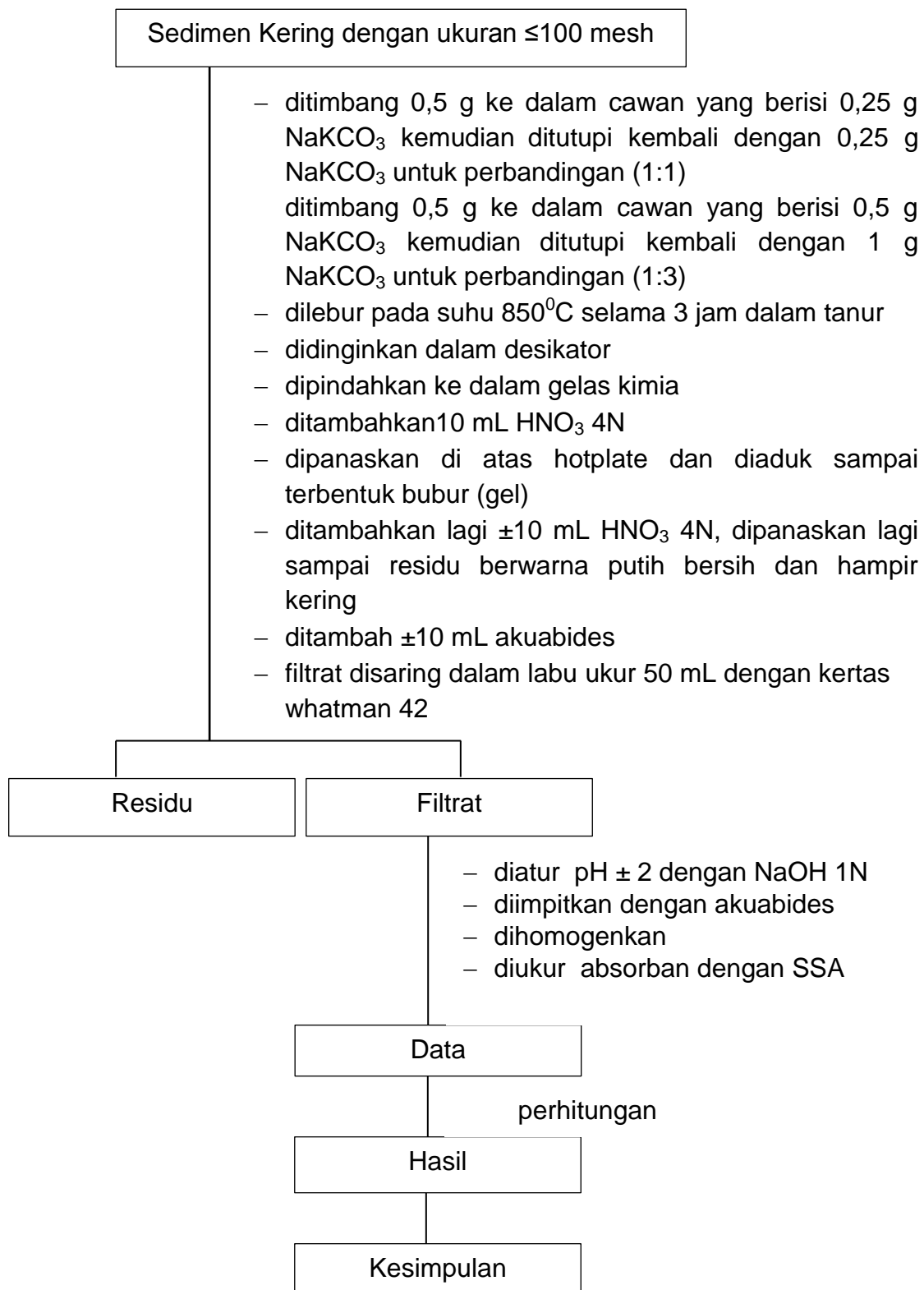
2. Penentuan kadar air



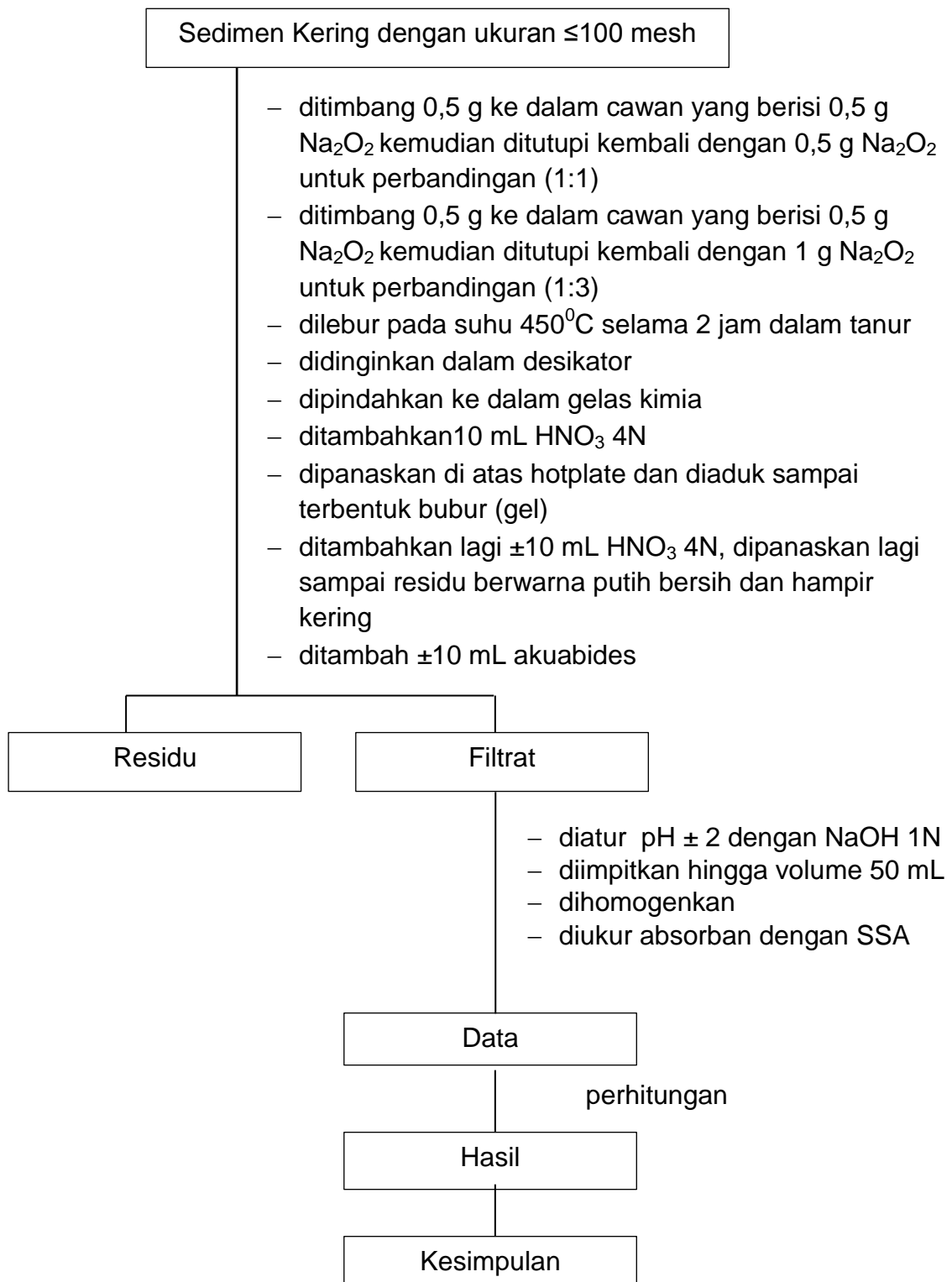
3. Pengayakan sampel sedimen



4. Metode Destruksi Kering Menggunakan NaKCO_3



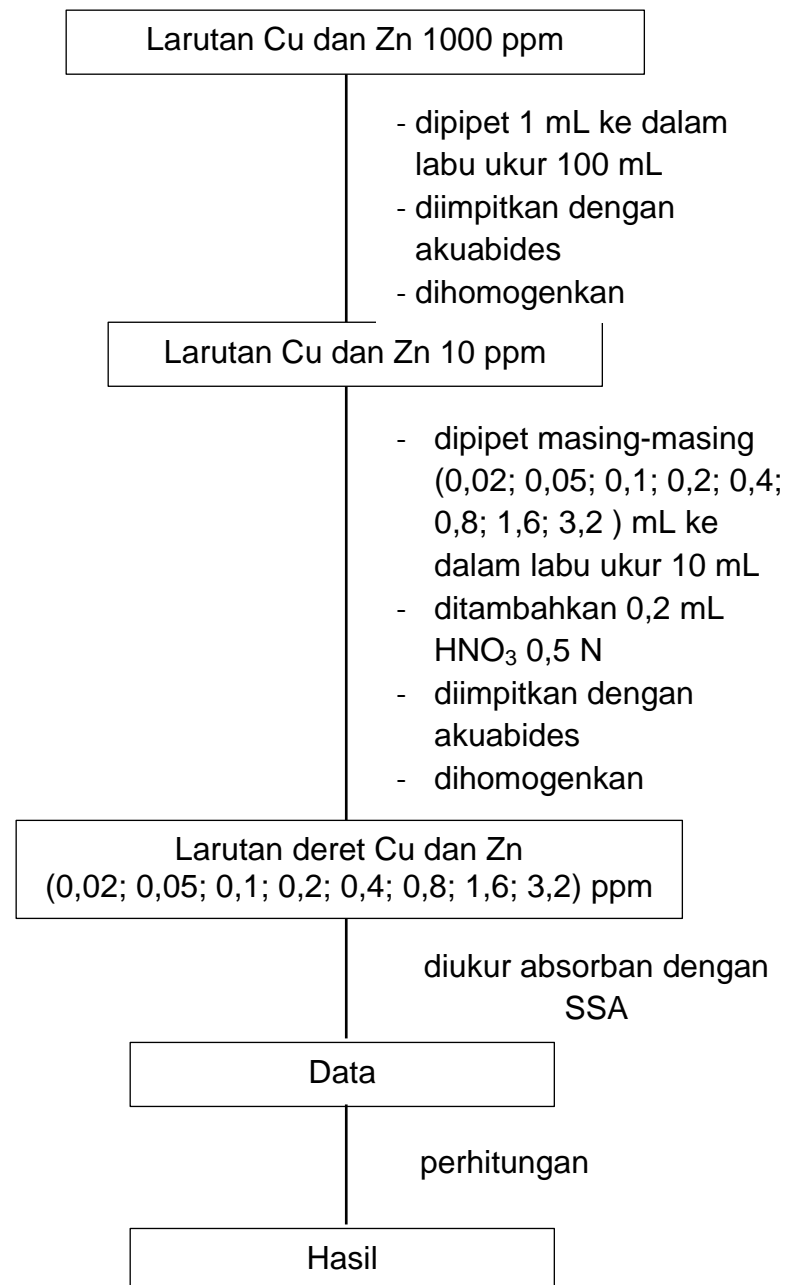
**Pengerjaan yang sama dilakukan untuk sedimen CRM*

5. Metode destruksi kering dengan Na_2O_2 

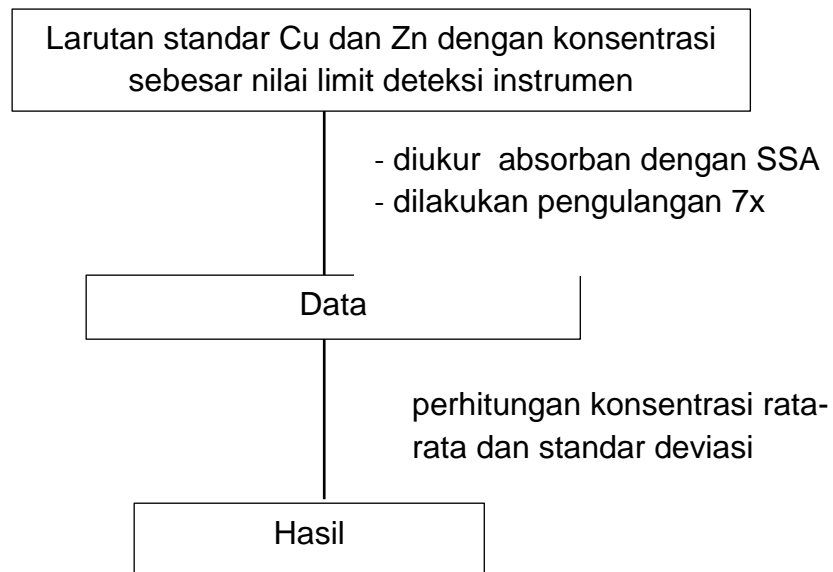
**Pengerjaan yang sama dilakukan untuk sedimen CRM*

6. Validasi Kerja Analitik

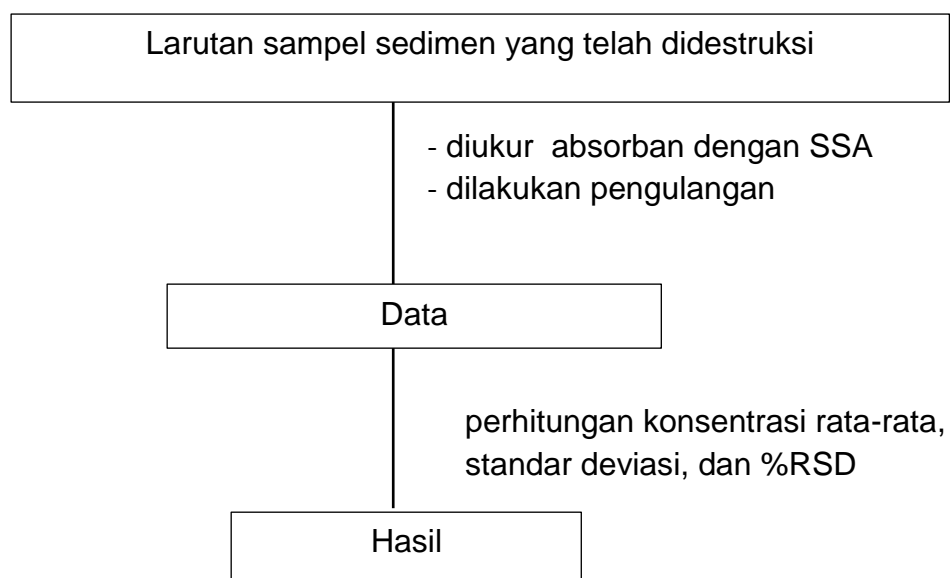
6.1 Linearitas



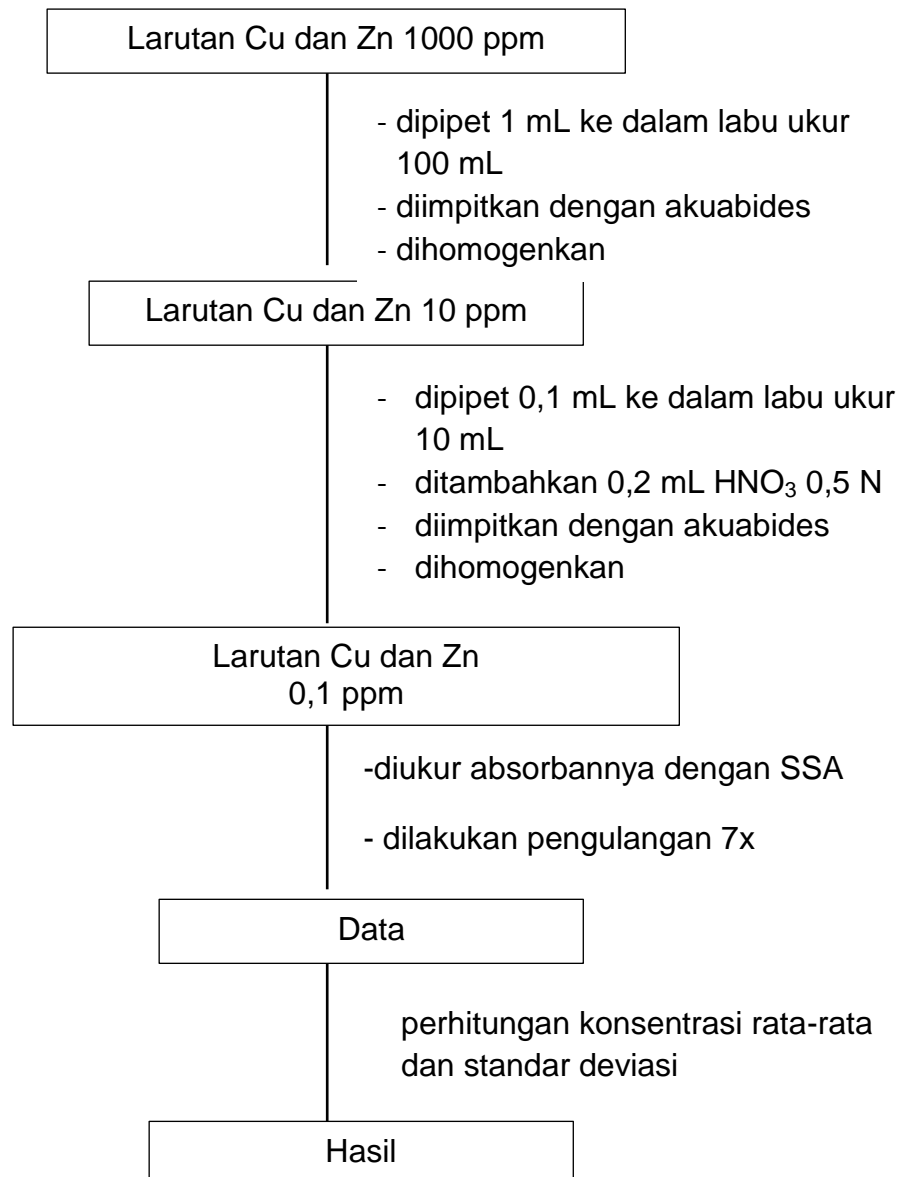
6.2 *Limit of Detection (LoD)* dan *Limit of Quantitation (LoQ)*

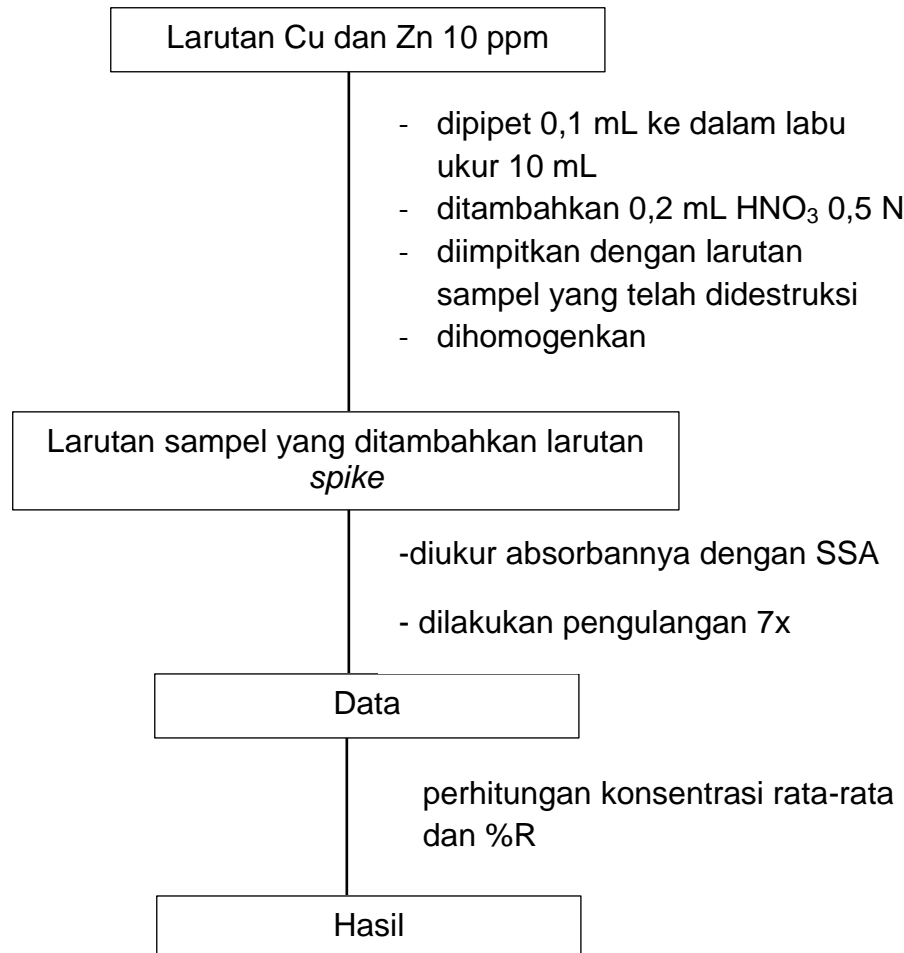


6.3 Uji Presisi

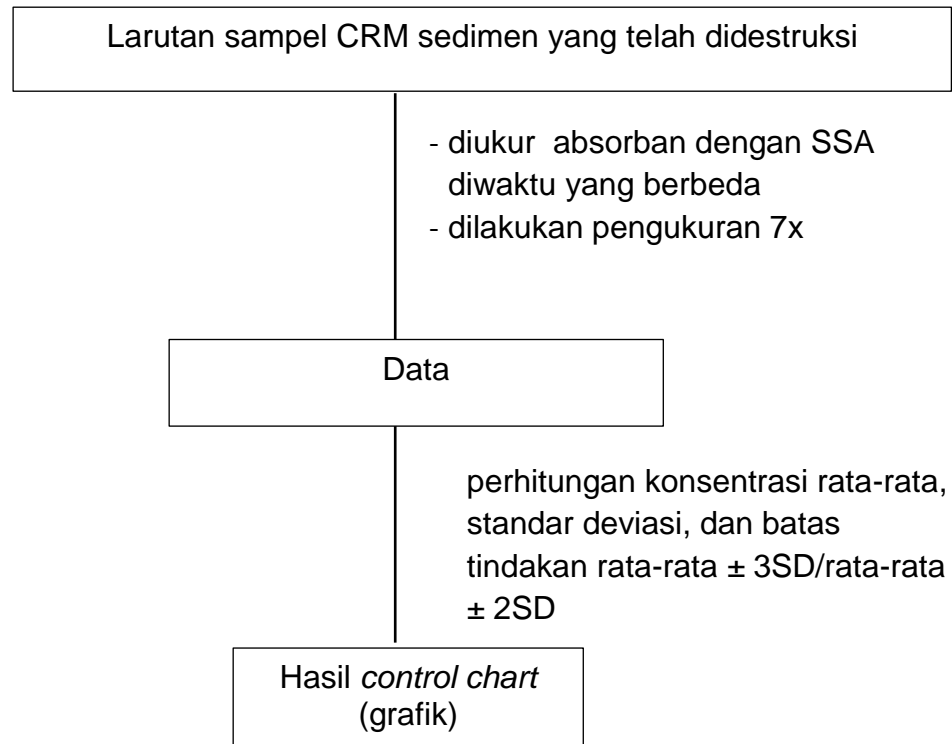


6.4 Uji Akurasi

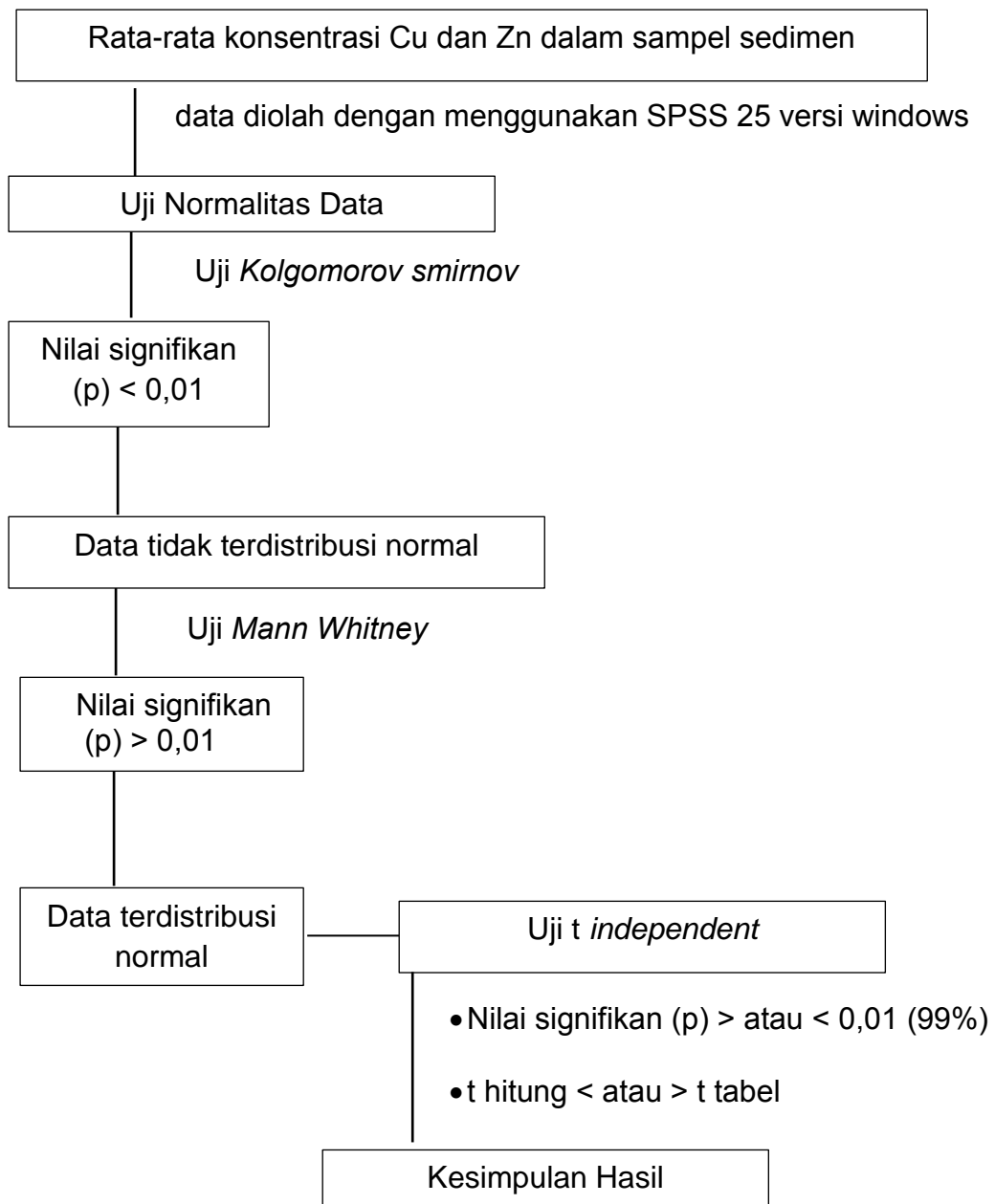
6.4.1 Larutan untuk *Spike*

6.4.2 Uji Akurasi menggunakan penambahan larutan *spike*

6.5 Control Chart



Bagan Olah Data Statistik



Lampiran 2.

Kandungan Logam Berat dalam Sedimen Secara Alamiah (Burton, 2002)

Pedoman Kualitas Sedimen (SQG)	Logam Berat (mg/kg berat kering)								Referensi
	As	Cd	Cr	Cu	Pb	Hg	Ni	Zn	
Threshold Effect Level (TEL)	5,9	0,6	37,3	35,7	35	0,17	18	123	MacDonald et al. 2000b
Effects Range Low (ERL)	33	5	80	70	35	0,15	30	120	MacDonald et al. 2000b
Lowest Effect Level (LEL)	6	0,6	26	16	31	0,2	16	120	MacDonald et al. 2000b
Minimal Effect Threshold (MET)	7	0,9	55	28	42	0,2	35	150	MacDonald et al. 2000b
Consensus Based (CB);Threshold Effect Concentration (TEC)	9,79	0,99	43,4	31,6	35,8	0,18	22,7	121	MacDonald et al. 2000b
Environment Canada (EC) - TEL	7,24	0,68	52,3	18,7	30,2	0,13	15,9	124	Smith et al. 1996
National Oceanic and Atmospheric Administration (NOAA)	8,2	1,2	81	34	46,7	0,15	20,9	150	NOAA 1999
Australian and New Zealand Environment and Conservation Council (ANZECC) ERL;	20	1,2	81	3	47	0,15	21	200	ANZECC 1997
ANZECC Interim Sediment Quality Guidelines (ISQG) –low	20	1,5	80	65	50	0,15	21	200	ANZECC 1997
Sediment Quality Advisory Value (SQAV) TEL-HA28	11	0,58	36	28	37	-	20	98	Swartz 1999
Sediment Quality Objective (SQO) Netherlands Target	2,9	0,8	-	36	85	0,3	-	140	ANZECC 1997
Hong Kong ISQG-low	8,2	1,5	80	65	75	0,15	40	200	ANZECC 1997
Hong Kong Interim Sediment Quality Value (ISQV)-low	8,2	1,5	80	65	75	0,28	40	200	Chapman et al. 1999

Lampiran 3. Titik persentase distribusi t (df=1-20) (Ott, 1994)

Pr	0.25	0.10	0.05	0.025	0.01	0.005	0.001
df	0.50	0.20	0.10	0.050	0.02	0.010	0.002
1	1.00000	3.07768	6.31375	12.70620	31.82052	63.65674	318.30884
2	0.81650	1.88562	2.91999	4.30265	6.96456	9.92484	22.32712
3	0.76489	1.63774	2.35336	3.18245	4.54070	5.84091	10.21453
4	0.74070	1.53321	2.13185	2.77645	3.74695	4.60409	7.17318
5	0.72669	1.47588	2.01505	2.57058	3.36493	4.03214	5.89343
6	0.71756	1.43976	1.94318	2.44691	3.14267	3.70743	5.20763
7	0.71114	1.41492	1.89458	2.36462	2.99795	3.49948	4.78529
8	0.70639	1.39682	1.85955	2.30600	2.89646	3.35539	4.50079
9	0.70272	1.38303	1.83311	2.26216	2.82144	3.24984	4.29681
10	0.69981	1.37218	1.81246	2.22814	2.76377	3.16927	4.14370
11	0.69745	1.36343	1.79588	2.20099	2.71808	3.10581	4.02470
12	0.69548	1.35622	1.78229	2.17881	2.68100	3.05454	3.92963
13	0.69383	1.35017	1.77093	2.16037	2.65031	3.01228	3.85198
14	0.69242	1.34503	1.76131	2.14479	2.62449	2.97684	3.78739
15	0.69120	1.34061	1.75305	2.13145	2.60248	2.94671	3.73283
16	0.69013	1.33676	1.74588	2.11991	2.58349	2.92078	3.68615
17	0.68920	1.33338	1.73961	2.10982	2.56693	2.89823	3.64577
18	0.68836	1.33039	1.73406	2.10092	2.55238	2.87844	3.61048
19	0.68762	1.32773	1.72913	2.09302	2.53948	2.86093	3.57940
20	0.68695	1.32534	1.72472	2.08596	2.52798	2.84534	3.55181

Lampiran 4. Peta Lokasi Sampling



● Stasiun 1 ● Stasiun 2 ● Stasiun 3 ● Stasiun 4 ● Stasiun 5

Lampiran 5. Dokumentasi Kegiatan



Lokasi pengambilan sampel sedimen



Proses pembersihan dan penyiapan



Proses pengeringan sampel



Penghalusan dan pengayakan



Sampel sedimen dan sedimen CRM



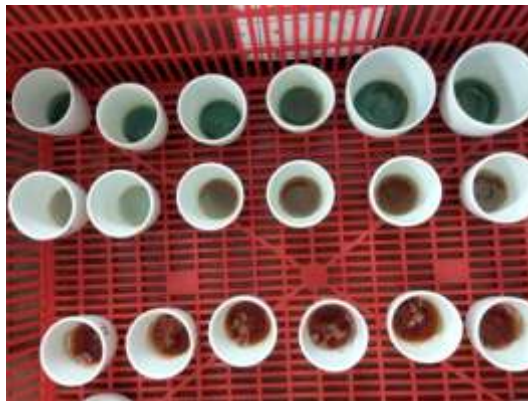
Penimbangan sampel dan pelebur



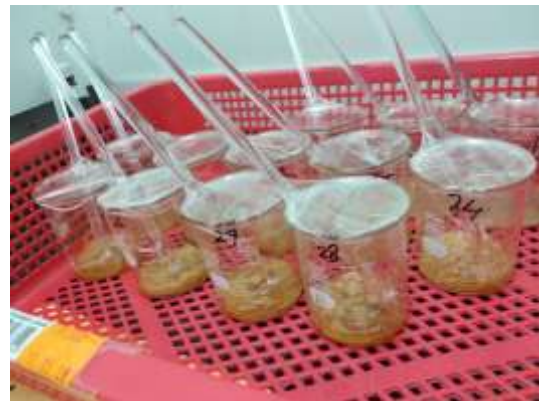
Peleburan sampel dalam tanur



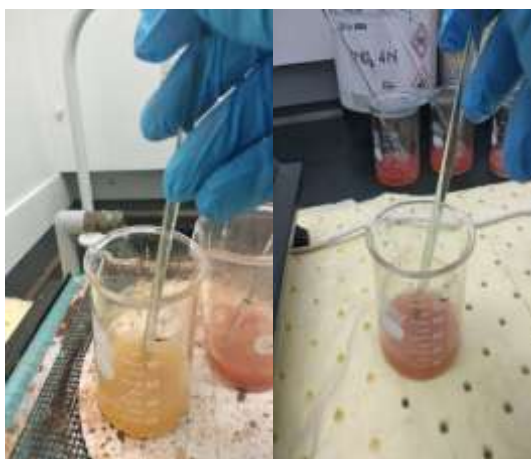
Sampel setelah dilebur



Sampel setelah ditambah HNO_3 4N



Sampel siap dipanaskan dengan HNO_3



Proses destruksi dengan HNO_3 4N



Hasil destruksi dan siap disaring

()



Hasil destruksi disaring



Larutan sampel siap dianalisis



Pembuatan larutan deret standar



Persiapan uji validasi



Larutan sampel siap dianalisis



Analisis dengan SSA

Lampiran 6. Data Kadar Air Sedimen

Perhitungan Kadar Air

$$Ka \% = \frac{C_{sb} - C_{st}}{C_{sb}} \times 100\%$$

Uraian	Kode Sampel Sedimen																	
	Sedimen CRM			ST1			ST2			ST3			ST4			ST5		
	a	b	c	a	b	c	a	b	c	a	b	c	a	b	c	b	a	b
Cawan Kosong (CK)	47.6539	56.9431	51.4503	50.0256	55.1215	46.1518	51.4876	51.3857	60.2106	44.1106	47.4829	49.0508	52.1303	41.4665	53.2145	47.3545	55.4946	42.3868
CK + sampel	52.6549	61.9434	56.4530	60.0269	65.1256	56.1556	61.4873	61.3887	70.2112	54.1470	57.4987	59.0546	62.1374	51.4688	63.2168	57.3674	65.5083	52.3988
Pemanasan (105 ^o C-2jam)																		
I	52.6080	61.8855	56.3856	59.8670	64.9749	56.0071	61.3583	61.2537	70.1234	54.0030	57.5855	58.9348	62.0115	51.9205	63.8515	57.4447	65.6240	52.6218
II	52.6109	61.8058	56.4530	59.8704	64.9788	56.0095	61.3695	61.2529	70.1201	54.0010	57.4055	58.9371	62.0005	51.6925	63.5289	57.3133	65.5043	52.4066
III	52.5787	61.8778	56.3711	59.8740	64.9835	56.0156	61.3831	61.2402	70.1049	53.9998	57.3605	58.9164	61.9901	51.4093	63.2455	57.2031	65.3441	52.2356
IV	52.6087	61.8958	56.3967	59.8705	64.9790	56.0118	61.3712	61.2470	70.1085	53.9995	57.3600	58.9160	61.9791	51.3154	63.0634	57.2029	65.3440	52.2352
V	52.5801	61.8760	56.3874	59.8668	64.9750	56.0073	61.3610	61.2550	70.0783				61.9787	51.3149	63.0629			
VI	52.5798	61.8759	56.3869	59.8663	64.9745	56.0070	61.3528	61.2546	70.0779									
VII	52.5793						61.3524											
selisih (< 0.0005 g)	0.0003	0.0001	0.0005	0.0005	0.0005	0.0003	0.0004	0.0004	0.0004	0.0003	0.0005	0.0004	0.0004	0.0005	0.0005	0.0002	0.0001	0.0004
BT(setelah pemanasan)																		
Berat sampel (basah)	5.0010	5.0003	5.0027	10.0013	10.0041	10.0038	9.9997	10.0030	10.0006	10.0364	10.0158	10.0038	10.0071	10.0023	10.0023	10.0129	10.0137	10.0120
Berat sampel (kering)	4.9254	4.9328	4.9366	9.8407	9.8530	9.8552	9.8648	9.8689	9.8673	9.8889	9.8771	9.8652	9.8484	9.8484	9.8484	9.8484	9.8494	9.8484
kadar Air (%)	1.51	1.35	1.32	1.61	1.51	1.49	1.35	1.34	1.33	1.47	1.38	1.39	1.59	1.54	1.54	1.64	1.64	1.63

