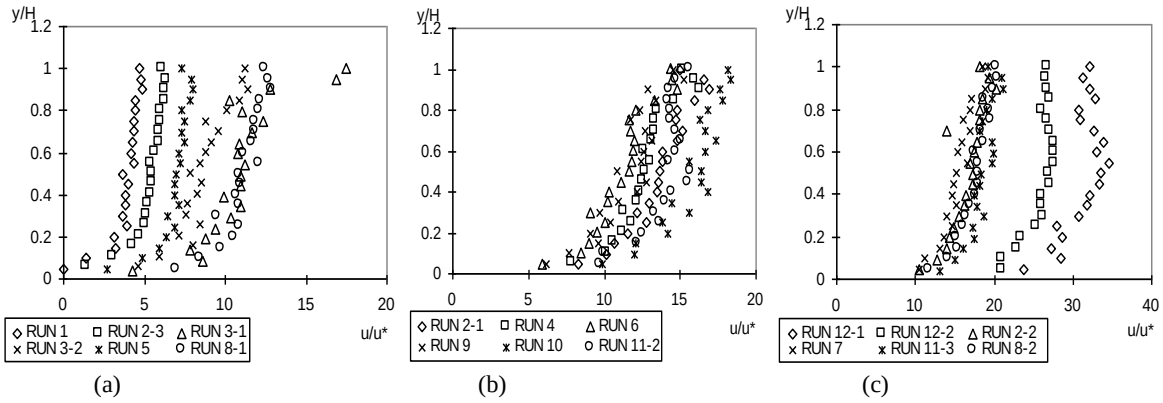
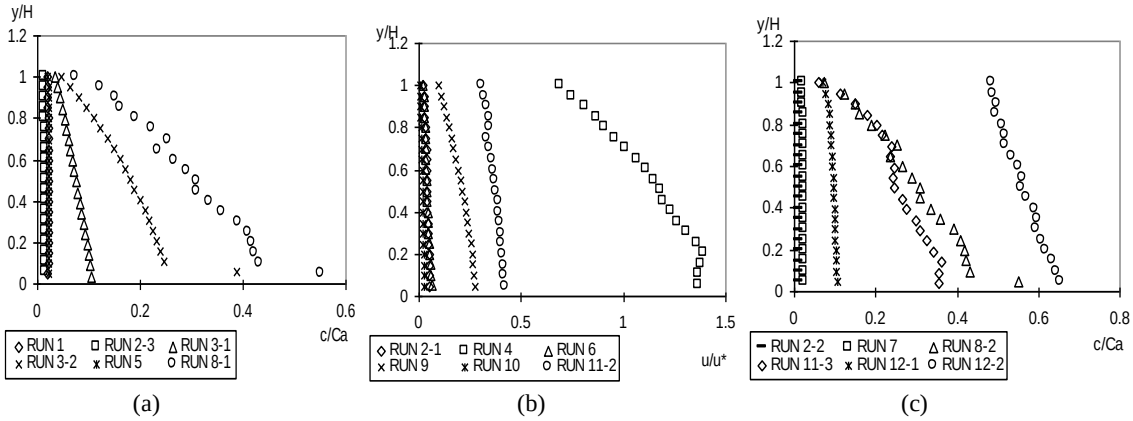
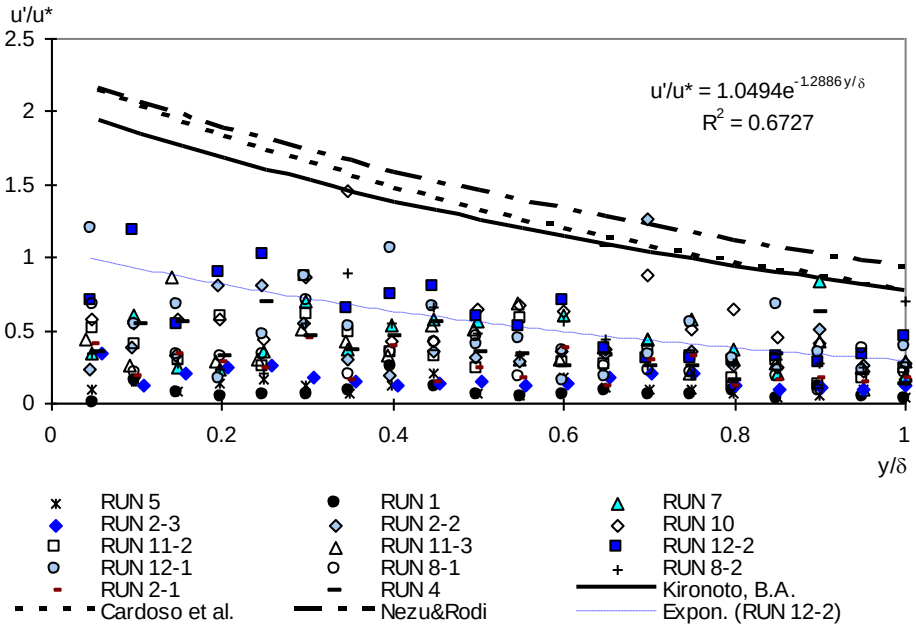


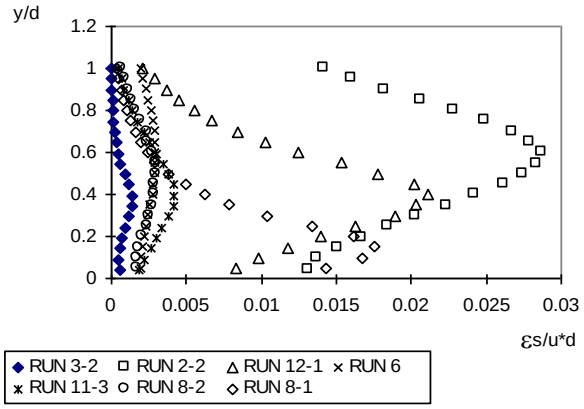
Gambar 1. Profil distribusi kecepatan untuk beberapa variasi parameter aliran.



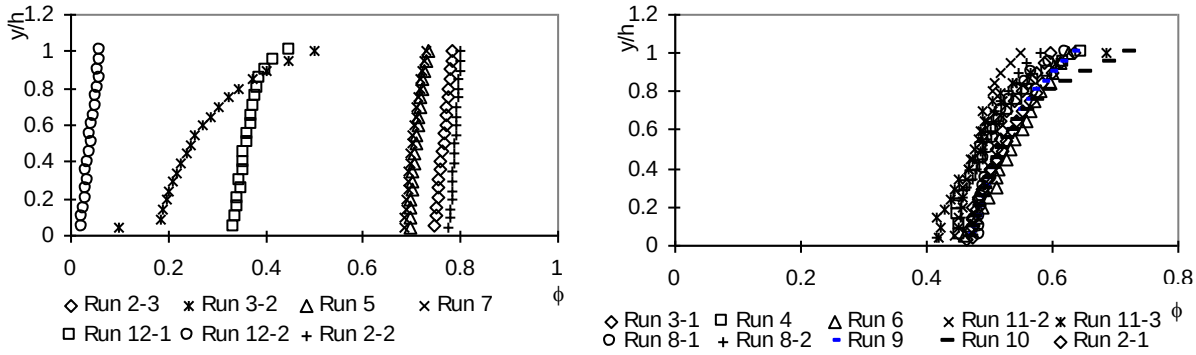
Gambar 2. Profil konsentrasi sedimen suspensi hasil pengukuran.



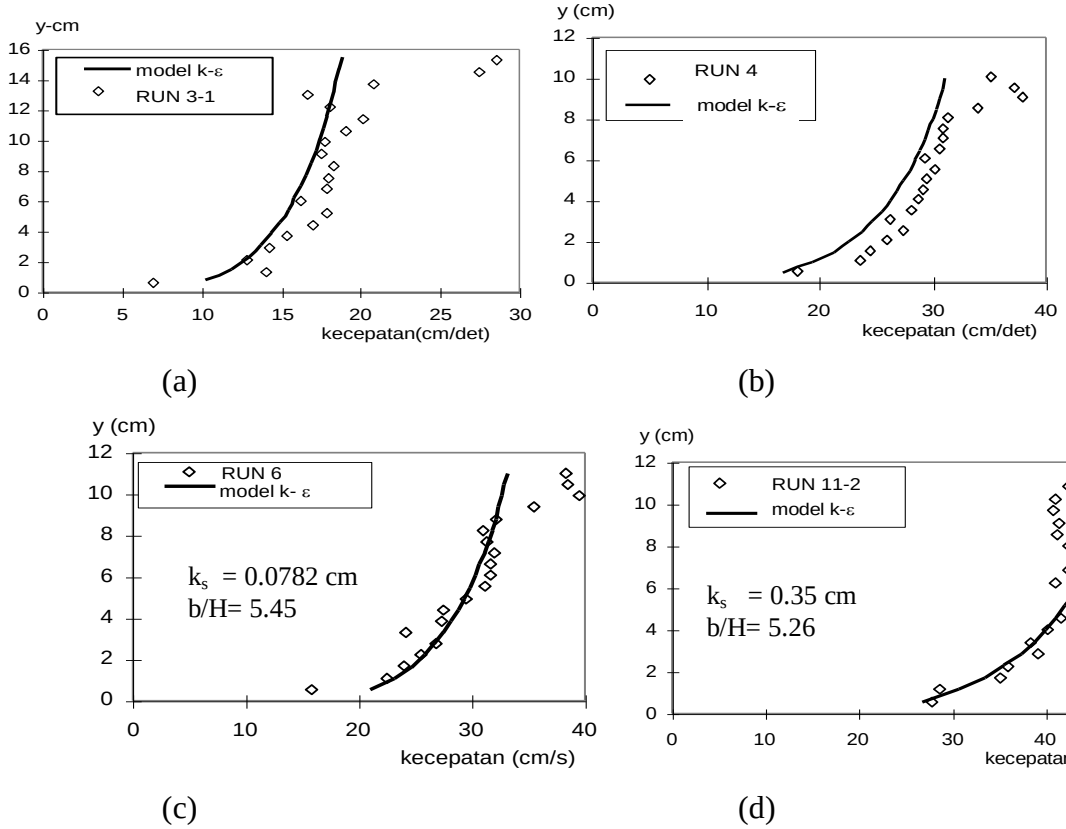
Gambar 3. Intensitas turbulen arah longitudinal.

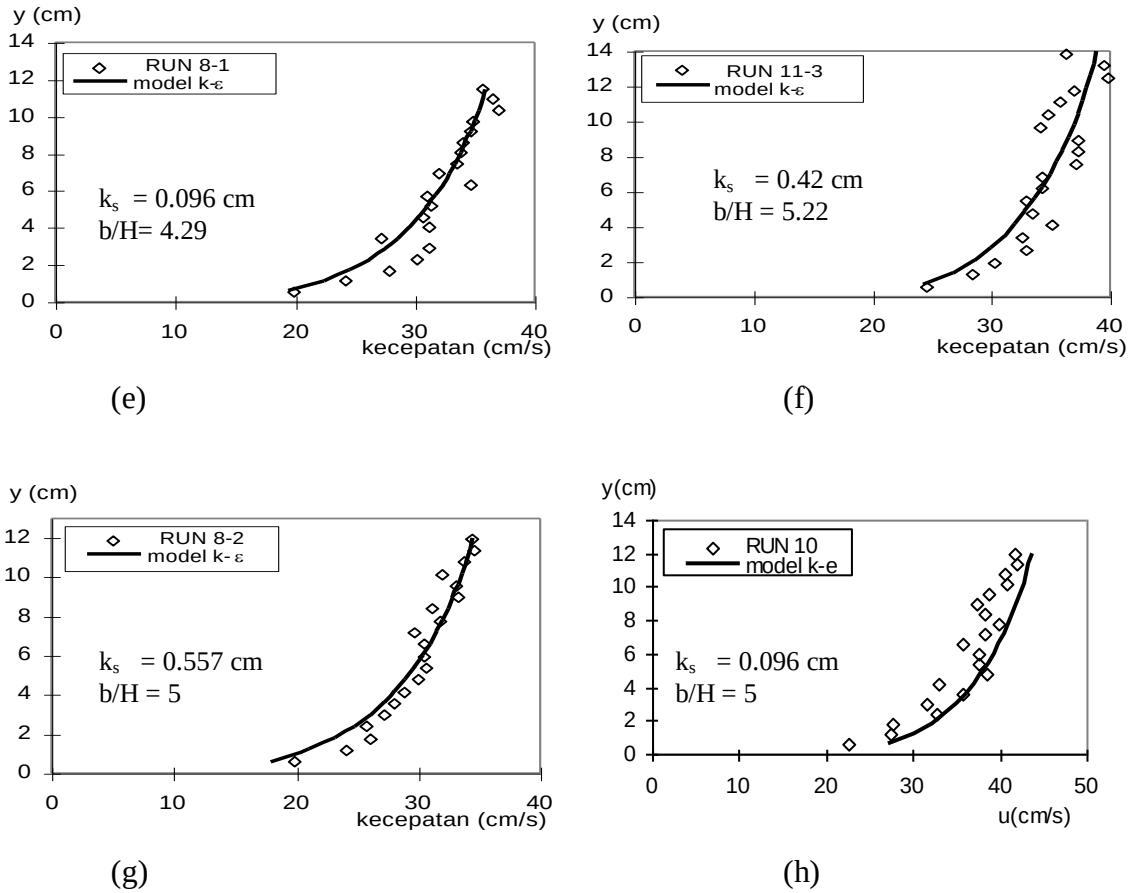


Gambar 4. Koefisien diffusi sedimen suspensi.

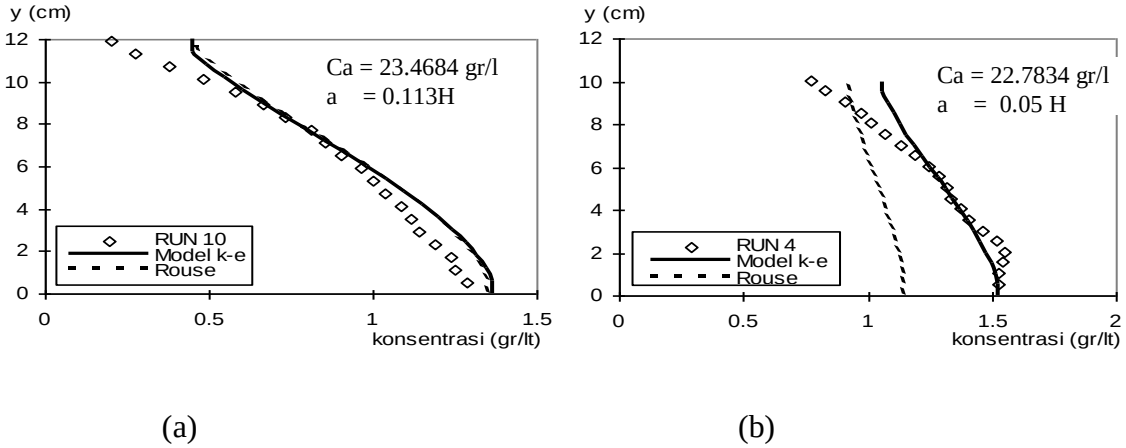


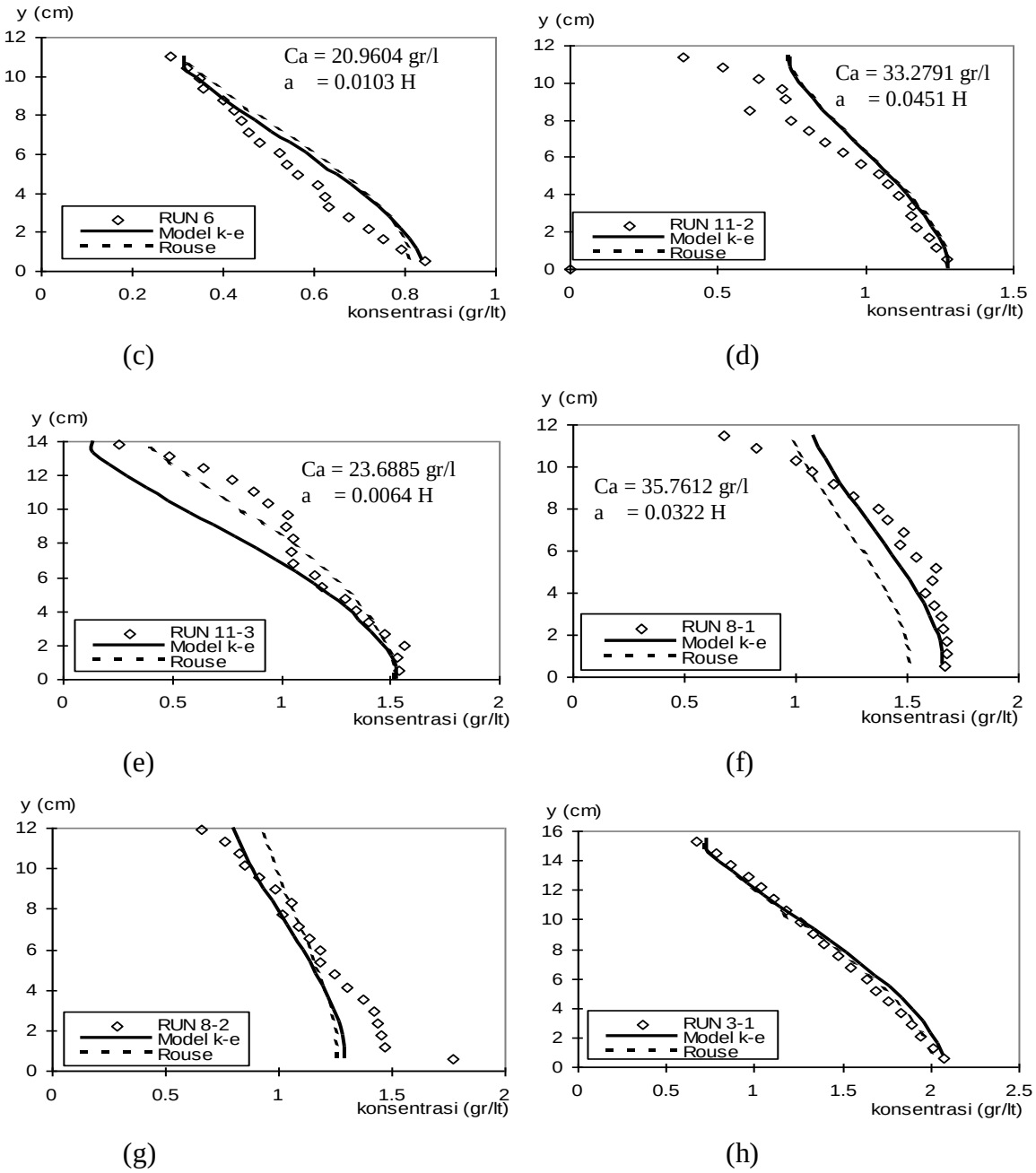
Gambar 5. Damping turbulensi fluida oleh partikel sedimen suspensi.





Gambar 6. Perbandingan profil disribusi kecepatan hasil pengukuran dengan model aliran turbulen k-ε.





Gambar 7. Perbandingan profil distribusi konsentrasi sedimen suspensi hasil pengukuran, model aliran turbulen k-ε dan distribusi Rouse.

Tabel 1. Perbandingan hitungan u_* metode *Clauser's* dengan *Energy Gradient*

RUN	So (-)	H (cm)	Energi Gradient u_{*eg} - cm/det	Clauser's u_* - cm/det	$(u_* - u_{*eg})/u_*$ (%)
RUN 1	0.00183	11.50	4.5437	5.9064	23.07
RUN 2-1	0.00183	12.00	4.6414	1.4471	220.74
RUN 2-2	0.00255	12.70	5.6365	1.3778	309.09
RUN 2-3	0.00255	9.40	4.8492	5.18	6.39
RUN 3-1	0.00122	15.50	4.3010	1.6354	162.99
RUN 3-2	0.00122	9.40	3.3494	3.0237	10.77
RUN 4	0.000487	10.00	2.1849	2.3275	6.13
RUN 5	0.00183	11.80	4.5955	4.3828	4.85
RUN 6	0.00122	11.00	3.6284	2.6702	35.88
RUN 7	0.00183	12.00	4.6414	2.0377	127.78
RUN 8-1	0.00183	11.50	4.5437	2.8693	58.36
RUN 8-2	0.00061	12.00	2.6797	1.7033	57.33
RUN 9	0.00122	11.30	3.6757	3.2676	12.49
RUN 10	0.00255	12.00	5.4789	2.294	138.84
RUN 11-1	0.000487	10.40	2.2290	8.5568	73.95
RUN 11-2	0.00067	11.40	2.7354	2.8772	4.93
RUN 11-3	0.00067	14.00	3.0334	1.8826	61.13
RUN 12-1	0.00146	11.80	4.1110	1.4084	191.89
RUN 12-2	0.00067	12.00	2.8084	1.7928	56.65

Tabel 2. Perhitungan level acuan

seri aliran (-)	Ca (gr/cm^3)	y(z) (cm)	ws (cm/det)	H (cm)	ε_s (gr/cm.det)	a (cm)	a/H (-)
RUN 3-1	0.035761	0.554	4.6888	15.50	0.1197	0.4813	0.0310
RUN 3-2	0.012123	0.554	4.3139	9.40	0.0221	0.5492	0.0584
RUN 9	0.067393	0.554	4.3139	11.29	0.1490	0.4540	0.0402
RUN 6	0.014407	0.554	4.2492	11.00	0.0426	0.5256	0.0478
RUN 5	0.031706	0.554	4.7929	11.80	0.4264	0.1547	0.0131
RUN 7	0.031317	0.554	4.8850	12.00	0.3345	0.2532	0.0211
RUN 2-3	0.048453	0.554	5.0093	9.40	0.1955	0.3590	0.0382
RUN 2-2	0.059788	0.554	5.5924	12.70	0.2281	0.3386	0.0267
RUN 10	0.023468	0.554	5.3685	11.95	0.1570	0.4691	0.0392
RUN 11-2	0.022783	0.554	3.8976	11.38	0.1651	0.4347	0.0382
RUN 11-3	0.020960	0.554	4.0364	13.85	0.0444	0.5113	0.0369
RUN 12-2	0.002668	0.554	3.8069	11.95	0.1506	0.5373	0.0449
RUN 12-1	0.017693	0.554	4.4799	11.76	0.1385	0.4867	0.0414
RUN 8-1	0.033279	0.554	4.7414	11.48	0.4704	0.2573	0.0224
RUN 8-2	0.023689	0.554	3.8678	11.95	0.0363	0.5297	0.0443
RUN 2-1	0.029673	0.554	4.9353	11.95	0.1213	0.4824	0.0404
RUN 4	0.025371	0.554	3.7138	10.00	0.6688	0.0489	0.0049
						mean	0.0347

Tabel 3. Perhitungan konsentrasi sedimen suspensi rata-rata

Seri aliran (-)	A (gr.cm/lt)	H (cm)	a (cm)	H-a (cm)	Konsentrasi pengukuran lokal (gr/lt)				Konsentrasi rata-rata (gr/lt)		Error (%)
					$C_{=a}$	$C_{=H}$	$C_{0.2H}$	$C_{0.8H}$	pengukuran, $\bar{C}$	Straub, $\bar{C}_S$	
RUN 1	7.5219	11.48	0.554	10.925	0.7230	0.6537	0.7198	0.6707	0.6553	0.7014	7.038
RUN 2-1	14.447	11.95	0.554	11.400	1.6066	0.7332	1.6025	0.9980	1.2085	1.3758	13.84
RUN 2-2	7.9647	12.62	0.554	12.065	0.6883	0.6323	0.6703	0.6417	0.6312	0.6596	4.505
RUN 2-3	5.9755	9.48	0.554	8.930	0.7033	0.6350	0.6920	0.6495	0.6301	0.6761	7.301
RUN 3-1	20.176	15.28	0.554	14.725	2.0726	0.6678	1.8908	1.0388	1.3205	1.5713	18.99
RUN 3-2	18.1	9.48	0.554	8.930	4.7074	0.5566	2.8102	1.3195	1.9085	2.2512	17.96
RUN 4	11.617	10.05	0.554	9.500	1.5236	0.7676	1.5506	1.0115	1.1554	1.3485	16.71
RUN 5	7.7754	11.76	0.554	11.210	0.7216	0.6541	0.7162	0.6744	0.6610	0.7005	5.986
RUN 6	5.899	11.00	0.554	10.450	0.8434	0.2856	0.7199	0.4004	0.5361	0.6001	11.94
RUN 7	8.0109	11.95	0.554	11.400	0.7412	0.6558	0.7313	0.6795	0.6701	0.7119	6.225
RUN 8-1	15.519	11.48	0.554	10.925	1.6719	0.6791	1.6651	1.1661	1.3520	1.4780	9.322
RUN 8-2	11.287	11.95	0.554	11.400	1.6719	0.2183	1.2638	0.5739	0.9442	1.0051	6.448
RUN 9	28.478	11.29	0.554	10.735	3.7312	1.2585	3.4852	1.9637	2.5227	2.9146	15.54
RUN 10	9.5787	11.95	0.554	11.400	1.2874	0.2003	1.1901	0.5776	0.8013	0.9604	19.86
RUN 11-2	10.853	11.38	0.554	10.830	1.1628	0.8414	1.1184	0.9493	0.9533	1.0550	10.66
RUN 11-3	14.212	13.85	0.554	13.300	1.5401	0.2585	1.4724	0.8724	1.0259	1.2474	21.59
RUN 12-1	18.501	11.76	0.554	11.210	1.8799	1.2194	1.8142	1.5444	1.5727	1.7130	8.924
RUN 12-2	17.341	11.95	0.554	11.400	1.7481	1.2943	1.6444	1.3596	1.4507	1.5376	5.995

Tabel 4. Perhitungan posisi nilai konsentrasi rata-rata pengukuran

Seri (-)	Nilai c pada 2 titik (gr/lt)		$\bar{C}_{2titik}$ (gr/lt)	$\bar{C}_{pengukuran}$ (gr/lt)	Error (%)	posisi nilai $\bar{C}$ pengukuran		
						1 titik	2 titik	
RUN 1	0.7108	0.6653	0.6880	0.6553	5.00	-	0.29 H	0.85 H
RUN 2-1	1.5402	0.8554	1.1978	1.2085	0.89	0.675 H	0.25 H	0.89 H
RUN 2-2	0.6703	0.6417	0.6560	0.6312	3.94	-	0.2 H	0.8 H
RUN 2-3	0.6809	0.6418	0.6613	0.6301	4.96	-	0.355 H	0.9 H
RUN 3-1	1.8908	0.7783	1.3345	1.3205	1.06	0.6 H	0.188 H	0.95 H
RUN 3-2	2.8102	0.9799	1.8950	1.9085	0.70	0.62 H	0.2 H	0.9 H
RUN 4	1.5262	0.8313	1.1788	1.1554	2.02	0.68 H	0.1 H	0.95 H
RUN 5	0.7111	0.6678	0.6894	0.6610	4.31	-	0.3 H	0.89 H
RUN 6	0.7199	0.3562	0.5381	0.5361	0.37	0.5 H	0.2 H	0.85 H
RUN 7	0.7236	0.6709	0.6972	0.6701	4.04	0.8 H	0.3 H	0.89 H
RUN 8-1	1.6195	1.0696	1.3446	1.3520	0.55	0.70 H	0.29 H	0.849 H
RUN 8-2	1.3063	0.5739	0.9401	0.9442	0.44	0.44 H	0.1 H	0.8 H
RUN 9	3.4053	1.6185	2.5119	2.5227	0.43	0.62 H	0.25 H	0.89 H
RUN 10	1.0385	0.5776	0.8081	0.8013	0.85	0.65 H	0.39 H	0.8 H
RUN 11-2	1.1184	0.9098	1.0141	0.9533	6.37	0.5 H	0.2 H	0.84 H
RUN 11-3	1.4724	0.6396	1.0560	1.0259	2.94	0.64 H	0.2 H	0.89 H
RUN 12-1	1.7435	1.5114	1.6275	1.5727	3.48	0.73 H	0.35 H	0.85 H
RUN 12-2	1.6444	1.3596	1.5020	1.4507	3.54	0.44 H	0.2 H	0.8 H
					mean	0.599 H	0.24 H	0.86 H
					stdev	0.098	0.081	0.047