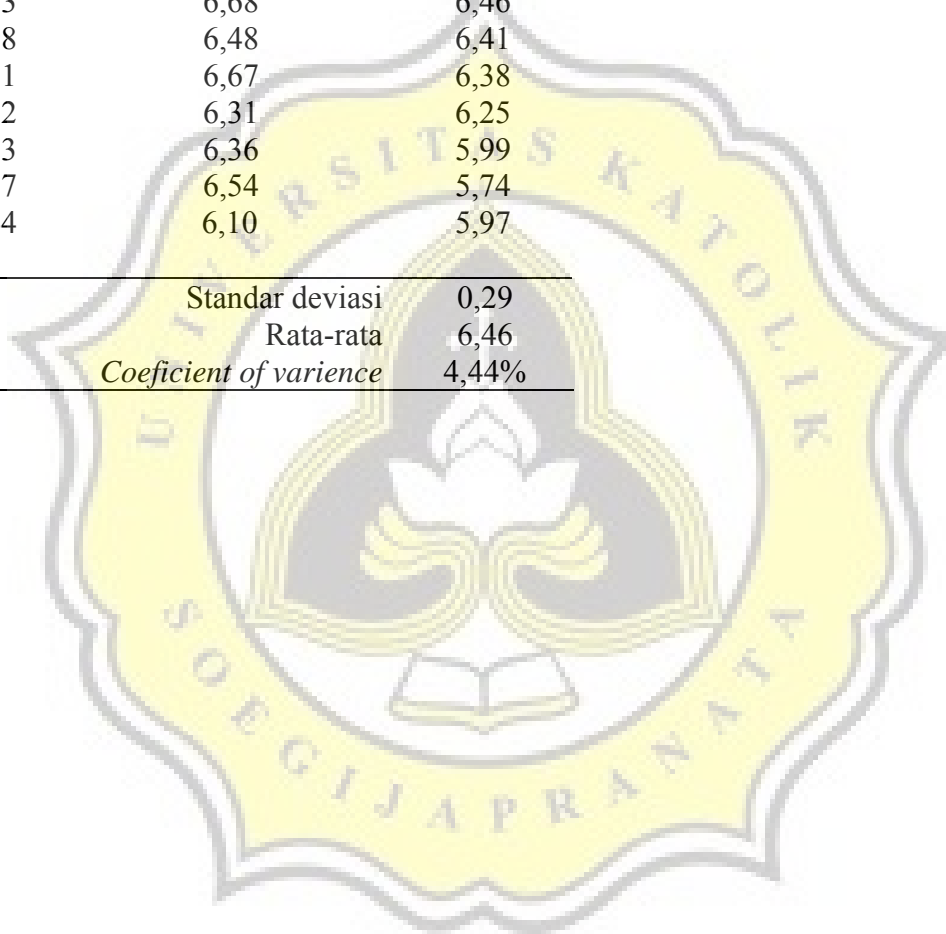


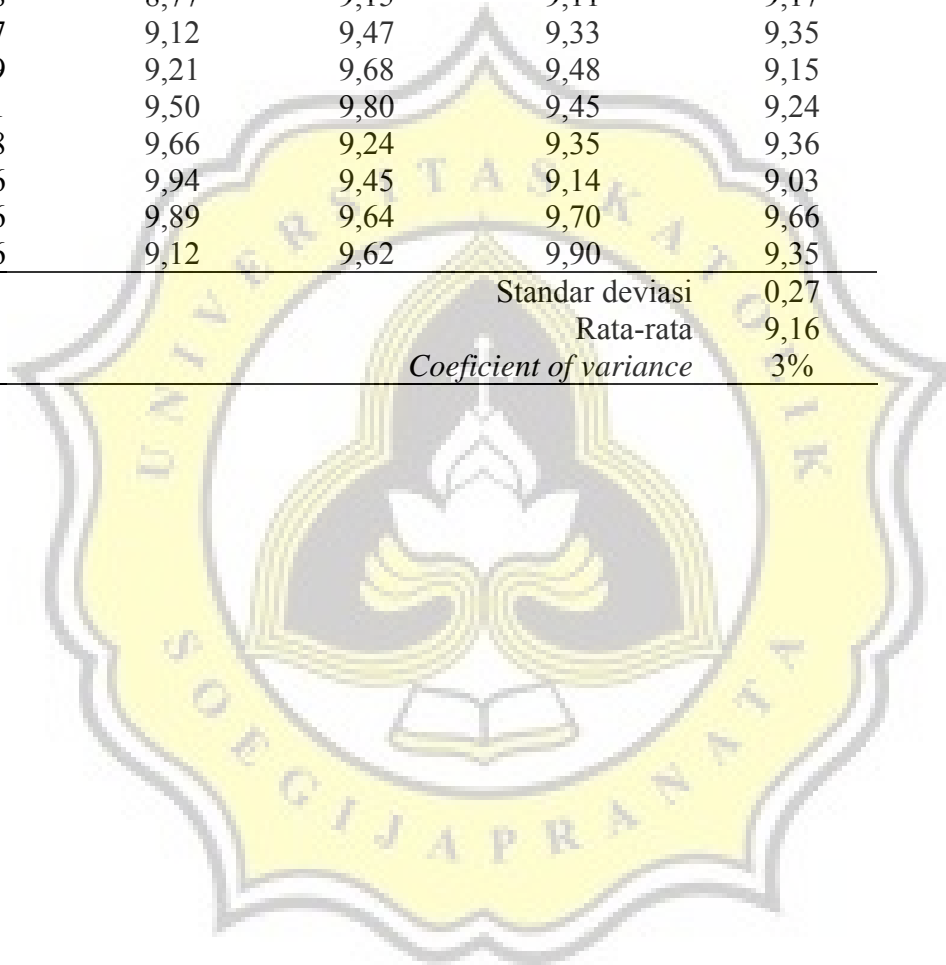
LAMPIRAN 1. Keseragaman Berat Kerang Darah Penelitian Pendahuluan

Berat (g)	Berat (g)	Berat (g)
6,43	6,01	6,36
6,64	6,23	6,41
6,99	6,81	6,49
6,59	6,41	6,75
6,29	6,48	6,69
6,79	6,43	6,06
6,00	6,62	6,48
6,86	6,59	6,99
6,53	6,68	6,46
6,98	6,48	6,41
6,81	6,67	6,38
6,52	6,31	6,25
6,23	6,36	5,99
6,37	6,54	5,74
6,44	6,10	5,97
	Standar deviasi	0,29
	Rata-rata	6,46
	<i>Coefficient of variance</i>	4,44%



LAMPIRAN 2. Keseragaman Berat Kerang Darah Penelitian Utama

Berat (g)	Berat (g)	Berat (g)	Berat (g)	Berat (g)
8,97	9,84	9,89	9,07	9,06
9,29	9,56	9,81	9,09	9,71
9,49	9,52	9,47	9,41	9,78
9,72	9,55	9,15	9,37	9,33
9,67	8,66	9,20	9,60	9,28
9,53	9,88	9,15	9,06	9,30
9,69	9,99	9,20	9,60	9,53
9,88	8,77	9,15	9,11	9,17
9,77	9,12	9,47	9,33	9,35
8,69	9,21	9,68	9,48	9,15
8,61	9,50	9,80	9,45	9,24
8,98	9,66	9,24	9,35	9,36
9,26	9,94	9,45	9,14	9,03
8,96	9,89	9,64	9,70	9,66
8,66	9,12	9,62	9,90	9,35
			Standar deviasi	0,27
			Rata-rata	9,16
			<i>Coefficient of variance</i>	3%



LAMPIRAN 3. Kuisisioner Survei Tingkat Konsumsi Kerang

Survei ini dilakukan untuk mengetahui tingkat konsumsi kerang masyarakat Semarang. Berikut ini ada beberapa pertanyaan yang diperlukan untuk kepentingan di atas. Diharapkan Anda dapat menjawab pertanyaan ini dengan baik.

Nama :

Jenis Kelamin : L / P

Usia :

Berat Badan :

Dalam 1 minggu, Anda mengonsumsi masakan kerang berapa kali?

1x 2x 3x > 3x

Berapa banyak kerang yang Anda konsumsi dalam sekali makan?

10 butir 20 butir 30 butir 40 butir > 40 butir

Terima kasih

LAMPIRAN 4. Hasil Survei Tingkat Konsumsi Kerang

No.	Nama	Jenis Kelamin	Usia	Berat Badan (kg)	Konsumsi Kerang (per minggu)	Banyak Konsumsi (ekor)
1	Maria A. C.	P	26	52	1	10
2	Nike L	P	24	55	1	10
3	Yuli	P	22	48	1	10
4	Natalia	P	21	44	1	10
5	Lala	P	25	50	1	10
6	Ina	P	21	60	1	10
7	Metta	P	23	48	1	10
8	Kartika	P	21	50	1	10
9	Ayu	P	35	72	1	10
10	Dian	P	22	51	1	10
11	Hany	P	25	58	1	10
12	Sylvia	P	26	51	1	10
13	Sri Erawati	P	33	60	1	10
14	Dina	P	24	50	1	10
15	Chusnul R. D	P	24	55	1	10
16	Triana K. D	P	20	43	1	10
17	Imaniar A	P	21	55	1	10
18	Novita	P	34	60	1	10
19	Trifosa K.	P	22	44	1	20
20	Melani P.	P	22	68	1	20
21	Marta R.	P	23	60	1	20
22	Kuntum R.	P	29	59	1	20
23	Felisia	P	28	45	1	20
24	Santi	P	24	57	1	20
25	Dewi	P	28	60	1	20
26	Donna	P	25	51	1	20
27	Yunita	P	22	40	1	20
28	Theresia	P	21	52	1	20
29	Marlinda	P	22	54	1	20
30	Ina	P	21	56	1	20
31	Linda	P	27	55	1	20
32	Stephanie	P	31	75	1	20
33	Agustina	P	24	52	1	20
34	Rina	P	20	53	1	20
35	Monica S.	P	21	40	1	30
36	Rida L. D.	P	24	45	1	40
37	Sarita	P	21	48	1	40
38	Lani	P	28	52	2	30
39	In	P	31	50	3	20
40	Keshia	P	30	67	4	30
Rata-rata				53,625	1,15	17,25

Dengan asumsi :

Kerang yang dikonsumsi adalah kerang berukuran sedang dengan berat rata-rata 2,08 g.

LAMPIRAN 5. Kandungan Cd Penelitian Pendahuluan

Sampel	Ulangan	Berat basah (g)	Berat kering (g)	Kadar Air (%)	Abs Cd	Konsentrasi Cd (µg/g berat kering)	Konsentrasi Cd (µg/g berat segar)
akuades					0,079		
kontrol	1	5,46	1,38	74,73	0,170	1,820	0,4600
	2	5,21	1,20	76,97	0,177	1,960	0,4514
	3	4,89	1,03	78,94	0,163	1,680	0,3539
Rata-rata						1,820	0,4218
SD						0,140	0,0590
0,5%	1	5,06	1,27	74,90	0,199	2,400	0,6024
	2	5,42	1,29	76,20	0,151	1,440	0,3427
	3	4,94	1,14	76,92	0,212	2,660	0,6138
Rata-rata						2,167	0,5196
SD						0,643	0,1533
1%	1	5,14	1,24	75,88	0,191	2,240	0,5404
	2	4,26	1,07	74,88	0,187	2,160	0,5425
	3	4,61	1,19	74,19	0,187	2,160	0,5576
Rata-rata						2,187	0,5468
SD						0,046	0,0094
3%	1	4,31	1,09	74,71	0,147	1,360	0,3439
	2	5,01	1,08	78,44	0,097	0,360	0,0776
	3	4,83	1,16	75,98	0,095	0,320	0,0769
Rata-rata						0,680	0,1661
SD						0,589	0,1540
5%	1	4,81	1,03	78,59	0,102	0,460	0,0985
	2	4,72	1,12	76,27	0,111	0,640	0,1519
	3	4,50	1,02	77,33	0,081	0,040	0,0091
Rata-rata						0,380	0,0865
SD						0,308	0,0722

LAMPIRAN 6. Kandungan Cu Penelitian Pendahuluan

Sampel	Ulangan	Berat basah (g)	Berat kering (g)	Kadar Air (%)	Abs Cu	Konsentrasi Cu ($\mu\text{g/g}$ berat kering)	Konsentrasi Cu ($\mu\text{g/g}$ berat segar)
akuades					0,045		
kontrol	1	5,46	1,38	74,73	0,221	3,520	0,8897
	2	5,21	1,20	76,97	0,199	3,080	0,7094
	3	4,89	1,03	78,94	0,235	3,800	0,8004
Rata-rata						3,467	0,7998
SD						0,363	0,0901
0,5%	1	5,06	1,27	74,90	0,280	4,700	
	2	5,42	1,29	76,20	0,220	3,500	1,1796
	3	4,94	1,14	76,92	0,236	3,820	0,8330
Rata-rata						4,007	0,8815
SD						0,621	0,9647
1%	1	5,14	1,24	75,88	0,246	4,020	0,1877
	2	4,26	1,07	74,88	0,241	3,920	0,9698
	3	4,61	1,19	74,19	0,242	3,940	0,9846
Rata-rata						3,960	1,0170
SD						0,053	0,9905
3%	1	4,31	1,09	74,71	0,211	3,320	0,0242
	2	5,01	1,08	78,44	0,246	4,020	0,8396
	3	4,83	1,16	75,98	0,229	3,680	0,8666
Rata-rata						3,673	0,8838
SD						0,350	0,8633
5%	1	4,81	1,03	78,59	0,249	4,080	0,0223
	2	4,72	1,12	76,27	0,252	4,140	0,8737
	3	4,50	1,02	77,33	0,216	3,420	0,9824
Rata-rata						3,880	0,7752
SD						0,399	0,8771

LAMPIRAN 7. Kandungan Cd Penelitian Utama

Sampel	Ulangan	Berat basah (gr)	Berat kering (gr)	Kadar Air (%)	Abs Cd	Konsentrasi Cd (µg/g berat kering)	Konsentrasi Cd (µg/g berat segar)
kontrol	1	9,443	1,861	80,292	0,577	10,4600	2,0614
	2	9,032	1,970	78,189	0,427	7,4600	1,6271
	3	8,544	1,659	80,583	0,571	10,3400	2,0077
	4	8,713	1,967	77,425	0,525	9,4200	2,1266
	5	8,701	1,739	80,014	0,659	12,1000	2,4183
	rata-rata					9,9560	2,0482
	SD					1,6967	0,2838
0,50%	1	4,298	1,493	65,263	0,360	6,1200	2,1259
	2	5,656	1,329	76,503	0,312	5,1600	1,2125
	3	5,830	1,420	75,643	0,388	6,6800	1,6270
	4	5,433	1,279	76,459	0,346	5,8400	1,3748
	5	5,164	1,188	76,995	0,372	6,3600	1,4631
	rata-rata					6,0320	1,5607
	SD					0,5772	0,3497
1%	1	4,868	1,304	73,213	0,380	6,5200	1,7465
	2	4,500	1,091	75,756	0,220	3,3200	0,8049
	3	4,577	1,132	75,268	0,399	6,9000	1,7065
	4	6,059	1,417	76,613	0,409	7,1000	1,6605
	5	5,799	1,449	75,013	0,261	4,1400	1,0345
	rata-rata					5,5960	1,3906
	SD					1,7404	0,4385
3%	1	5,971	1,486	75,113	0,427	7,4600	1,8566
	2	5,019	1,223	75,633	0,422	7,3600	1,7934
	3	6,689	1,630	75,632	0,399	6,9000	1,6814
	4	5,201	1,258	75,812	0,460	8,1200	1,9640
	5	5,310	1,112	79,058	0,338	5,6800	1,1895
	rata-rata					7,1040	1,6970
	SD					0,9075	0,3016
5%	1	5,639	1,098	80,528	0,273	4,3800	0,8529
	2	6,153	1,409	77,101	0,304	5,0000	1,1450
	3	6,706	1,520	77,334	0,315	5,2200	1,1832
	4	6,805	1,384	79,662	0,383	6,5800	1,3382
	5	6,172	1,448	76,539	0,424	7,4000	1,7361
	rata-rata					5,7160	1,2511
	SD					1,2375	0,3230
Akuades					0,054		
Berat rata-rata kerang		2,084					

LAMPIRAN 8. Kandungan Cu Penelitian Utama

Sampel	Ulangan	Berat basah (gr)	Berat kering (gr)	Kadar Air (%)	Abs Cu	Konsentrasi Cu (µg/g berat kering)	Konsentrasi Cu (µg/g berat segar)
kontrol	1	9,443	1,861	80,292	0,560	9,8000	1,9314
	2	9,032	1,970	78,189	0,270	4,0000	0,8725
	3	8,544	1,659	80,583	0,450	7,6000	1,4757
	4	8,713	1,967	77,425	0,380	6,2000	1,3997
	5	8,701	1,739	80,014	0,380	6,2000	1,2391
	rata-rata					6,7600	1,3837
	SD					2,1326	0,3844
0,50%	1	4,298	1,493	65,263	0,320	5,0000	1,7369
	2	5,656	1,329	76,503	0,450	7,6000	1,7858
	3	5,830	1,420	75,643	0,320	5,0000	1,2178
	4	5,433	1,279	76,459	0,440	7,4000	1,7421
	5	5,164	1,188	76,995	0,330	5,2000	1,1963
	rata-rata					6,0400	1,5358
	SD					1,3372	0,3008
1%	1	4,868	1,304	73,213	0,310	4,8000	1,2858
	2	4,500	1,091	75,756	0,280	4,2000	1,0183
	3	4,577	1,132	75,268	0,410	6,8000	1,6818
	4	6,059	1,417	76,613	0,390	6,4000	1,4967
	5	5,799	1,449	75,013	0,320	5,0000	1,2494
	rata-rata					5,4400	1,3464
	SD					1,1082	0,2529
3%	1	5,971	1,486	75,113	0,410	6,8000	1,6923
	2	5,019	1,223	75,633	0,310	4,8000	1,1696
	3	6,689	1,630	75,632	0,380	6,2000	1,5108
	4	5,201	1,258	75,812	0,390	6,4000	1,5480
	5	5,310	1,112	79,058	0,320	5,0000	1,0471
	rata-rata					5,8400	1,3936
	SD					0,8877	0,2725
5%	1	5,639	1,098	80,528	0,280	4,2000	0,8178
	2	6,153	1,409	77,101	0,280	4,2000	0,9618
	3	6,706	1,520	77,334	0,300	4,6000	1,0426
	4	6,805	1,384	79,662	0,310	4,8000	0,9762
	5	6,172	1,448	76,539	0,430	7,2000	1,6892
	rata-rata					5,0000	1,0975
	SD					1,2570	0,3408
Akuades					0,054		
Berat rata-rata kerang		2,084					

LAMPIRAN 9. Analisa Anova Satu Arah Logam Cd

Oneway

Descriptives

Cd

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
kontrol	5	2,048220	,2838399	,1269370	1,695786	2,400654	1,6271	2,4183
0,5%	5	1,560660	,3497051	,1563929	1,126444	1,994876	1,2125	2,1259
1%	5	1,390580	,4385075	,1961065	,846101	1,935059	,8049	1,7465
3%	5	1,696980	,3016014	,1348803	1,322492	2,071468	1,1895	1,9640
5%	5	1,251080	,3229715	,1444372	,850058	1,652102	,8529	1,7361
Total	25	1,589504	,4206251	,0841250	1,415878	1,763130	,8049	2,4183

ANOVA

Cd

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	1,885	4	,471	3,990	,015
Within Groups	2,362	20	,118		
Total	4,246	24			

Post Hoc Tests

Homogeneous Subsets

Cd

Duncan

perlakuan	N	Subset for alpha = .05	
		1	2
5%	5	1,251080	
1%	5	1,390580	
0,5%	5	1,560660	
3%	5	1,696980	1,696980
kontrol	5		2,048220
Sig.		,073	,122

Means for groups in homogeneous subsets are displayed.

a Uses Harmonic Mean Sample Size = 5,000.

LAMPIRAN 10. Analisa Anova Satu Arah Logam Cu

Oneway

Descriptives

Cu

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
kontrol	5	,9256	,13748	,06148	,7549	1,0963	,72	1,09
0,5%	5	1,0069	,06297	,02816	,9288	1,0851	,94	1,06
1%	5	,9232	,09123	,04080	,8100	1,0365	,79	1,03
3%	5	,9384	,09747	,04359	,8174	1,0595	,81	1,04
5%	5	,8135	,13223	,05914	,6493	,9777	,69	1,04
Total	25	,9215	,11710	,02342	,8732	,9699	,69	1,09

ANOVA

Cu

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	,096	4	,024	2,071	,123
Within Groups	,233	20	,012		
Total	,329	24			

Post Hoc Tests

Homogeneous Subsets

Cu

Duncan

perlakuan	N	Subset for alpha = .05	
		1	2
5%	5	,8135	
1%	5	,9232	,9232
kontrol	5	,9256	,9256
3%	5	,9384	,9384
0,5%	5		1,0069
Sig.		,107	,274

Means for groups in homogeneous subsets are displayed.

a Uses Harmonic Mean Sample Size = 5,000.

LAMPIRAN 11. Nilai HQ dan JMK

Perlakuan	C (µg/g berat segar)		WC (g/minggu)	Cd				Cu			
	Cd	Cu		WI (µg/minggu)	HQ	JMK (g/minggu)	JMK (ekor/minggu)	WI (µg/minggu)	HQ	JMK (g/minggu)	JMK (ekor/minggu)
kontrol	2,0482	1,3837	20,8400	42,6845	0,1109	187,9699	90,3702	28,8363	0,0004	50589,0005	24321,6349
			41,6800	85,3690	0,2217			57,6726	0,0008		
			83,3600	170,7380	0,4435			115,3452	0,0016		
0,5%	1,5607	1,5358	20,8400	32,5250	0,0845	246,6842	118,5982	32,0061	0,0005	45578,8514	21912,9093
			41,6800	65,0500	0,1690			64,0121	0,0009		
			83,3600	130,1000	0,3379			128,0243	0,0018		
1%	1,3906	1,3464	20,8400	28,9801	0,0753	276,8589	133,1052	28,0590	0,0004	51990,4932	24995,4294
			41,6800	57,9602	0,1505			56,1180	0,0008		
			83,3600	115,9204	0,3011			112,2359	0,0016		
3%	1,6970	1,3936	20,8400	35,3655	0,0919	226,8709	109,0726	29,0426	0,0004	50229,6211	24148,8563
			41,6800	70,7310	0,1837			58,0852	0,0008		
			83,3600	141,4619	0,3674			116,1705	0,0017		
5%	1,2511	1,0975	20,8400	26,0729	0,0677	307,7292	147,9467	22,8719	0,0003	63781,3212	30664,0967
			41,6800	52,1458	0,1354			45,7438	0,0007		
			83,3600	104,2917	0,2709			91,4876	0,0013		

Edible portion satu ekor kerang 2,08 gram (Lampiran 7)

PTWI Cd = 7 µg/kg berat badan

Tolerable upper intake Cu = 10000 µg/hari

$$HQ_{Cd} \text{ kontrol} = \frac{WI}{MTWI} = \frac{42,6845 \mu\text{g} / \text{min } ggu}{7 \mu\text{g} / \text{kg } bb \times 55 \text{ kg}} = 0,1109$$

$$\begin{aligned} JMK \text{ Cd kontrol} &= \frac{1}{HQ} \times WC \\ &= \frac{1}{0,1109} \times 20,8400 \text{ g/minggu} \\ &= 187,9699 \text{ g/minggu} = 90,3702 \text{ ekor/minggu} \end{aligned}$$

$$HQ_{Cu} \text{ kontrol} = \frac{WI}{MTWI} = \frac{28,8363 \mu\text{g} / \text{min } ggu}{10000 \mu\text{g} / \text{hari} \times 7 \text{ hari} / \text{min } ggu} = 0,0004$$

$$\begin{aligned} JMK \text{ Cu kontrol} &= \frac{1}{HQ} \times WC \\ &= \frac{1}{0,0004} \times 20,8400 \text{ g/minggu} \\ &= 50589,0005 \text{ g/minggu} = 24321,6349 \text{ ekor/minggu} \end{aligned}$$

LAMPIRAN 12. Sertifikat *High Methoxyl Citrus Pectin Rapid Set*



Issue 1

Date: 13 May 2008

Product Description/Specification

Pectin, Jam, (Citric, Rapid-Set)

E 440

	high methylester Citrus Pectin, standardized with dextrose. Degree of esterification min. 70 %.
Sensory:	light beige powder, neutral smell.
Solubility:	In water to a viscous and colloidal solution; in organic solvents insoluble.
pH-Value:	3.3 +/- 0.3 in a 2.5 % solution in dist. water at 20 °C (68 °F).
Purity:	see "regulations for purity requirements of pectins".
Standardization:	150 +/- 5 *USA-Sag. constant breaking strength in a standard gel with Herbstreith-Pektinometer. constant setting time.
Characteristics:	rapid set.
Typical Application:	Jams, Marmalades and Fruit Preparations soluble solids range: >= 58 % pH-range: 2.9-3.3 recommended dosage: 0.25 - 0.50 %

These directions for application are without obligation and have to be adjusted to the individual parameters for processing and formulation (e.g. kind of fruit, pH-value, can size etc.).

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