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Table 7Flaxseed, acreage planted, harvested, vi	eld, production, and value, United States, 1985-93
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Year	Planted	Harvested	Yield	Production	Value
			Bushels	1,000	
	1,000	acres	per acre	bushels	\$1,000
1985	620	584	14.2	8,293	41,912
1986	720	683	16.9	11,538	39,962
1987	470	463	16.1	7,444	25,188
1988	275	226	7.1	1,615	12,200
1989	195	163	7.5	1,215	8,724
1990	260	253	15.1	3,812	21,108
1991	356	342	18.1	6,200	21,845
1992 1/	171	165	19.9	3,288	13,543
1993 2/	206	191	18.2	3,480	14,641

1/ Preliminary. 2/ Forecast.

Table 8Linseed oil, sup	lv and disappearance	. United States.	1985/86-1993/9
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Year		Supply		Disappearance				
beginning	Beginning						Ending	
June 1	stocks	Production	Total	Exports	Domestic	Total	stocks	
	·····		••	Million pounds-	•			
1985/86	33	205	238	15	184	199	39	
1986/87	39	201	240	6	183	189	51	
1987/88	51	217	268	8	219	227	41	
1988/89	41	170	211	12	151	163	48	
1989/90	48	165	213	12	164	176	37	
1990/91	37	176	213	6	167	173	40	
1991/92	40	182	222	12	170	182	40	
1992/93 1/	40	172	212	8	150	158	54	
1993/94 2/	54	176	230	6	164	170	60	

1/ Preliminary. 2/ Forecast.

Table 9Linseed meal, supply	and disappearance,	United States,	1985/86-1993/94	
Year	Supply			

Year		Supp	Disappearance					
beginning	Beginning							Ending
June 1	stocks	Production	Imports	Total	Exports	Domestic	Total	stocks
				1,000 sh	ort tons			
1985/86	3	184	3	190	75	110	185	5
1986/87	5	185	2	192	63	127	190	2
1987/88	2	198	2	202	59	140	199	3
1988/89	3	156	11	170	63	102	165	5
1989/90	5	153	9	167	23	139	162	5
1990/91	5	162	3	170	41	124	165	5
1991/92	5	167	0	172	40	127	167	5
1992/93 1/	5	159	2	166	55	106	161	5
1993/94 2/	5	161	2	168	45	118	163	5

1/ Preliminary. 2/ Forecast.

I able 10Hapeseed, acreage planted, harvested, yield, production, and	l value	a. United States	, 1987-93
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Year	Planted	Harvested	Yield	Production	Value
	1,000	acres	Bushels per acre	1,000 pounds	Million dollars
1987	20.0	19.4	22.7	21.981	N.A.
1988	13.5	13.1	24.1	15.822	N.A.
1989	14.0	13.6	28.2	19.143	2.01
1990	15.0	14.5	31.2	22.717	2.33
1991	18.2	15.6	20.7	16,146	1.63
1992 1/	12.0	9.8	29.5	14,455	1.45
1993 2/	7.2	6.1	24.4	7,442	0.92

N.A. = Not available.

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1/ Preliminary. 2/ Forecast.

Table Tre-Industrial Tabeseed, Supply, disappearance, and price, Ormed States, 1507700-155075	Table	11l	ndustrial	rapeseed,	supply,	, disappearance,	and price.	United States,	1987/88-1993/
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Year	Supply				Price			
beginning	Beginning						Ending	Minn-
June 1	stocks	Production	Total	Exports 1/	Domestic	Total	stocks	eapolis
			••	Million pounds-				Cents/lb.
1987/88	2,198	21,981	24,179	0	23,072	23,072	1,107	10.00
1988/89	1,107	15,822	16,929	0	16,188	16,188	741	11.10
1989/90	741	19,143	19,884	0	19,003	19,003	882	10.50
1990/91	882	22,717	23,599	0	22,319	22,319	1,279	10.30
1991/92	1,279	16,146	17,425	0	17,158	17,158	267	10.10
1992/93 2/	267	14,455	14,722	0	14.522	14,522	200	10.00
1993/94 3/	200	7,442	7,642	0	7,492	7,492	150	12.40

1/ Trade data does not distinguish between industrial and edible (canola) exports, therefore all exports were allocated to canola. 2/ Preliminary. 3/ Forecast.

Table 12Industrial	rapeseed oil,	supply,	disappearance,	, and price,	United States,	1987/88-1993/94
	apoooa on,	o oppiy,	alouppour a loo,		orniod ordioo,	1001/00-1000/04

Year		Sup	ply				Price		
beginning	Beginning							Ending	Minn-
June 1	stocks	Production	Imports	Total	Exports 1/	Domestic	Total	stocks	eapolis
				Million	ounds				Cents/lb.
1987/88	800	6,785	17,637	25,222	0	22,699	22,699	2,522	23.60
1988/89	2,522	6,858	35,274	44,654	0	40,188	40,188	4,465	25.60
1989/90	4,465	8,184	29,407	42,056	0	37,851	37,851	4,206	27.80
1990/91	4,206	6,960	20,657	31,823	0	28,640	28,640	3,182	24.50
1991/92	3,182	5,705	8,647	17,534	0	15,780	15,780	1.753	22.60
1992/93 2/	1,753	3,707	9,968	15,429	0	13,886	13,886	1,543	24.30
1993/94 3/	1,543	3,390	11,218	16,157	0	14,536	14,536	1,615	

1/ Trade data does not distinguish between industrial and edible (canola) exports, therefore all exports were allocated to canola. 2/ Preliminary. 3/ Forecast.

Table 13--Industrial rapeseed meal, supply, disappearance, and price, United States, 1987/88-1993/94

Year		Sup	ply			Disappe	arance		Price
beginning	Beginning							Ending	Minn-
June 1	stocks	Production	Imports	Total	Exports	Domestic	Total	stocks	eapolis
				Million p	ounds				Cents/lb.
1987/88	300	10,624	0	10,924	0	10,711	10,711	212	168.00
1988/89	212	10,738	0	10,950	0	10,736	10.736	215	177.00
1989/90	215	12,815	0	13,030	0	12,773	12.773	256	149.00
1990/91	256	10,897	0	11,153	0	10.935	10.935	218	145.00
1991/92	218	8,933	0	9,151	0	9.017	9.017	134	151.00
1992/93 1/	134	5.805	0	5.939	Ō	5.852	5.852	87	155.00
1993/94 2/	87	5,308	Ō	5,395	Ō	5,315	5,315	80	160.00

1/ Preliminary. 2/ Forecast.

Table 14Canola oil prices.	Midwest	markets.	1989-94
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Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Avg
						Ce	ents/poun	d					
1989	25.00	25.30	26.40	26.25	25.55	23.44	22.50	22.38	23.00	23.19	25.31	25.60	24.49
1990	26.69	27.50	28.94	29.25	31.15	27.19	25.31	26.90	18.38	24.38	24.63	23.13	26.12
1991	24.00	23.56	24.38	24.88	24.25	23.75	22.90	23.94	24.56	23.05	23.38	22.42	23.76
1992	22.25	21.75	21.75	20.75	22.00	22.31	20.94	20.69	22.90	22.19	24.38	23.08	22.08
1993	24.69	23.81	23.94	23.63	N.A.	N.A.	N.A.	N.A.	24.50	23.38	26.42	29.35	24.96
1994	30.17	30.31	30.50	29.50									

N.A. = Not available.

Source: Milling and Baking News.

Table 15--Castor oil prices, raw No. 1, tanks, Brazilian, 1989-94

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Avg
						Ce	ents/poun	d					
1989	51.00	51.75	51.90	51.50	51.50	51.50	51.50	51.50	41.20	51.50	51.50	53.75	50.84
1990	54.50	53.50	52.60	52.00	51.20	51.00	51.00	51.00	45.00	42.40	39.63	39.63	48.62
1991	39.30	36.00	36.75	37.00	37.00	36.50	35.50	35.00	35.00	35.40	35.00	37.50	36.33
1992	37.50	37.50	37.50	36.00	34.50	34.50	34.50	34.50	34.00	34.00	34.00	34.00	35.21
1993	34.00	32.00	32.00	32.00	37.00	37.00	37.00	37.00	38.50	44.00	44.00	44.00	37.37
1994	44.00	41.75	41.00	41.00									

Source: Chemical Marketing Reporter.

Table 16	-Cocoa butt	er spot pr	ices, 198	9-94									
Year	Jan	Feb	Mar	Apr	Мау	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Avg
						Do	llars/pour	id					
1989	1. 62	1.62	1.72	1.72	1.55	1.45	1.45	1.45	1.35	1.35	1.35	1.35	1.50
1990	1.35	1.30	1.30	1.30	1.30	1.52	1.50	1.50	1.60	1.60	1.60	1.61	1.46
1991	1.61	1.61	1.53	1.53	1.53	1.33	1.22	1.22	1.22	1.22	1.22	1.22	1.37
1992	1.22	1.22	1.22	1.22	1.22	1.22	1.22	1.29	1.29	1.29	1.29	1.29	1.25
1993	1.29	1.29	1.35	1.35	1.35	1.35	1.35	1.35	1.40	1.40	1.45	1.45	1.37
1994	1.45	1.45	1.45	1.45	1.45								

Source: Chemical Marketing Reporter.

Table 17--Coconut oil prices, crude, tanks, f.o.b. New York, 1989-94

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Avg
						Ce	ents/poun	d					
1989	26.75	27.63	27.90	28.94	29.90	29.56	28.94	27.75	28.63	27.25	26.35	24.81	27.87
1990	24.31	23.69	22.10	21.63	21.30	20.31	19.16	18.58	18.26	18.18	20.45	20.13	20.67
1991	20.22	20.31	20.50	19.38	19.69	21.69	26.19	25.63	25.63	28.50	31.50	32.38	24.30
1992	39.33	36.00	34.57	34.75	33.56	32.13	29.63	27.31	27.88	26.94	27.00	25.50	31.22
1993	24. 9 4	24.33	23.65	23.25	24.13	24.95	25.35	25.61	24.44	23.88	25.62	33.06	25.27
1994	52.30	30.94	29.56	30.19									

Source: Chemical Marketing Reporter.

Table 18Edible	tallow p	rices, Ch	icago, 1	989-94
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Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Avg
						Ce	ents/poun	d					
1989	16.50	16.07	16.25	15.75	16.19	16.00	15.73	15.33	16.50	16.18	N.A.	N.A.	13.37
1990	16.77	17.16	15.46	14.25	14.20	14.28	14.21	10.53	13.76	14.55	15.00	15.28	14.62
1991	15.88	14.28	14.43	14.80	13.02	13.25	13.70	14.61	14.37	14.60	14.09	14.00	14.25
1992	14.05	14.00	14.15	14.28	14.66	15.37	15.87	16.00	16.05	16.88	18.18	17.00	15.54
1993	16.08	15.39	16.07	17.15	17.08	16.03	15.18	16.00	16.21	16.95	16.53	16.50	16.26
1994	16.75	16.50	16.75	16.75									

N.A. = Not available.

Source: Grain and Feed Marketing News.

Table 19--Flaxseed, average price received by farmers, United States, 1989-94

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Avg
		· · · · · · · · · · · ·				Do	llars/bush	el		•			
1989	8.34	8.70	8.09	7.78	7.54	6.79	5.90	6,49	7.07	7.09	7.15	7.14	7.29
1990	7.24	7.69	8.03	8.60	8.23	8.31	7.56	5.86	5.36	5.15	5.16	5.15	5.53
1991	5.12	4.80	4.90	4.66	4.33	3.98	3.91	3.69	3.55	3.40	3.31	3.46	3.57
1992	3.39	3.43	3.52	3.53	3.61	3.67	3.70	3.71	4.12	4.09	4.10	4.21	3.94
1993	4.12	4.47	4.54	4.41	4.35	4.44	4.29	3.80	4.25	4.09	4.05	4.18	4.25
1994	4.40	4.55	4.60	4.55									
Sauraa Ma	tional A aniaut	turnel Ctentin	lant Comin	- 11004									

Source: National Agricultural Statistical Service, USDA.

Table 20--Industrial rapeseed oil prices, refined, tanks, New York, 1989-94

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Avg
						Ce	ents/poun	d					
1989	70.00	70.00	80.25	80.25	80.25	80.25	80.25	80.25	80.25	64.20	80.25	80.25	77.20
1990	81.75	82.25	82.25	82.25	82.25	82.25	82.25	82.25	79.75	77.25	77.25	81.00	81.06
1991	82.25	82.25	82.25	82.25	82.25	82.25	82.25	82.25	82.25	82.25	82.25	82.25	82.25
1992	82.25	82.25	82.25	82.25	82.25	82.25	82.25	82.25	67.25	62.25	62.25	62.25	76.00
1993	62.25	62.25	62.25	62.25	55.88	53.75	53.75	53.75	53.75	53.75	53.75	53.75	56.76
1994	53.75	53.75	53.75	53.75				_		_			

Source: Chemical Marketing Reporter.

Table 21--Inedible tallow prices, Chicago, 1989-94

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Avg
	Cents/pound												
1989	14.90	16.00	14.86	14.60	14.70	15.10	14.48	13.52	14.13	10.94	14.75	14.25	14.35
1990	14.87	14.50	14.47	13.50	13.51	14.01	13.50	10.12	13.50	13.42	14.09	14.50	13.67
1991	14.53	12.91	13.63	13.57	12.25	12.36	12.96	14.001	3.50	13.68	13.08	12.50	13.25
1992	N.A.	12.63	12.68	13.25	13.75	13.98	14.75	15.42	15.25	15.73	16.75	13.52	14.34
1993	15.09	14.69	15.24	15.94	15.00	15.11	14.95	14.58	14.54	14.68	14.50	14.94	14.94
1994	15.25	15.33	15.25	15.00						_		_	

N.A. = Not available.

Source: Grain and Feed Marketing News.

Table 22--Jojoba oil prices, 1 metric ton or more, f.o.b. Arizona, 1989-94 1/

Year	Jan	Feb	Mar	Apr	Мау	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Avg
						Do	ollars/kiloç	gram					
1989	14.18	14.18	14.18	14.18	14.18	14.18	15.25	15.25	15.25	15.25	15.25	15.25	14.72
1990	15.25	20.02	20.02	20.02	20.02	20.02	26.00	26.00	25.00	25.00	24.00	24.00	22.11
1991	24.00	24.00	24.00	24.00	24.00	24.00	24.00	24.00	21.00	15.50	15.50	15.50	21.63
1992	15.50	15.50	15.50	15.50	15.50	15.50	15.50	13.50	13.50	11.99	11.99	11.99	14.29
1993	11.99	11.99	11.99	11.99	12.02	12.02	12.02	12.02	10.03	10.03	10.03	10.03	11.35
1994	10.03	10.03	10.03	9.02	9.02								

1/ Price quotes are the low end of a range.

Source: Chemical Marketing Reporter.

Table 23--Linseed oil prices, tanks, Minneapolis, 1989-94

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Avg
						Ce	ents/poun	d					
1989	41.00	41.00	41.40	42.00	42.00	39.75	39.00	39.00	39.50	40.00	40.00	39.50	40.35
1990	40.00	40.00	41.60	42.00	42.00	43.00	44.00	40.40	39.75	36.80	36.00	36.00	40.13
1991	36.00	36.00	36.00	36.00	36.50	36.00	36.00	36.00	36.00	30.00	30.00	30.00	34.54
1992	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	32.00	32.00	32.00	32.00	28.17
1993	32.00	32.00	32.00	32.00	32.00	28.50	32.00	32.00	32.00	32.00	32.00	32.00	31.71
1994	32.00	32.00	32.00	32.00									

Source: Grain and Feed Marketing News.

Table 24--Linseed meal prices, bulk, 34-percent protein, Minneapolis, 1989-94

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Avg
Dollars/ton													
1989	164.00	151.25	150.00	155.00	156.00	162.50	158.75	161.00	145.00	129.00	126.25	128.75	148.96
1990	132.50	124.50	126.25	133.75	143.00	142.50	136.00	126.25	116.25	133.00	143.75	133.50	132.60
1991	131.00	131.25	120.00	121.00	126.25	134.25	133.00	131.25	116.25	128.00	113.75	127.80	126.15
1992	122.00	124.00	115.00	117.50	120.00	125.00	123.50	126.25	131.00	141.25	152.50	137.40	127.95
1993	136.70	142.50	135.40	125.50	125.00	123.20	133.75	150.00	148.75	147.50	161.80	140.00	139.18
1994	140.00	130.00	126.00	125.00									
ALA MAL	and the late												

N.A. = Not available.

Source: Grain and Feed Marketing News.

Table 2	25Palm	kernel oil	prices.	bulk. c.i.	f. U.S.	ports.	1989-94
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Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Avg
Cents/pound													
1989	25.00	25.00	23.00	23.00	24.00	24.00	24.00	24.00	24.00	24.00	24.00	24.00	24.00
1990	21.00	21.00	21.00	21.00	21.00	21.00	21.00	21.00	21.00	21.00	21.00	21.00	21.00
199 1	17.00	17.00	17.00	17.00	17.00	17.00	17.00	17.00	17.00	17.00	17.00	17.00	17.00
1992	17.00	17.00	17.00	17.00	17.00	17.00	17.00	17.00	17.00	17.00	17.00	17.00	17.00
1993	23.00	23.00	23.00	23.00	23.00	19.00	19.00	19.00	19.00	19.00	19.00	19.00	20.67
1994	19.00	19.00	19.00	19.00	19.00								

Source: Chemical Marketing Reporter.

Table 26--Soybean oil prices, crude, tanks, f.o.b. Decatur, 1989-94

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Avg
Cents/pound													
1 9 89	21.13	21.21	22.11	21.97	22.23	20.75	19.66	18.08	18.77	19.02	19.57	19.11	21.09
1990	19.28	20.27	22.80	23.35	24.72	25.03	24.69	25.05	24.45	22.59	21.05	21.55	22.28
1991	21.56	21.66	22.21	21.50	20.23	19.65	19.05	20.23	20.46	19.57	18.78	18.99	20.98
1992	18.77	18.88	19.74	19.00	20.15	20.71	18.82	17.87	18.28	18.36	20.10	20.52	19.13
1993	21.23	20.72	21.00	21.24	21.15	21.30	24.13	23.46	20.93	23.61	22.98	24.22	22.16
1994	29.91	28.85	29.03	27.94									

Source: The Wall Street Journal.

Table 27Selected	nrices for	hiphasod	chemicals	and deriv	vativos 1/
Table 27-Gelected	prices for	010000500	Giernicais	anu uem	auves 1/

Item Unit 1989 1960 1991 1992 1993 Aluminum stearate, carload Dolars per pound 1.46 1.46 1.44 1.44 1.44 Atabis saed of, Chinese, drums Dolars per pound 1.85 1.85 1.83 18.30 10.45 Arabic gurn, National Formulary, Dondtrerd, Darbert managelin, Bayol, National Formulary, So 55 percent, drums Dolars per pound 1.85 1.85 2.87 3.44 Dondtrerd, barbert, bleached, white Dolars per pound 13.00 15.25 24.00 25.50 26.00 Bergamot 01, Halan Dolars per pound 10.00 107.08 167.25 18.42 64.17 Buryl olates, disilled, drums, carload, black disilled, drums, towns Cents per pound 10.00 107.08 167.25 18.42 2.50 2.51 Dordrerd, Lob, works Cents per pound 1.80 1.80 2.44 2.50 2.51 Dolars per pound 1.80 1.80 1.80 4.8.0 4.8.0 4.8.0 4.8.0 4.8.0 4.8.0 4.8.0 <			Average annual price 2/					
Aluminum stearate, carload Dollars per pound 1.46 1.46 1.46 1.46 1.46 1.46 1.46 1.46 1.46 1.46 1.46 1.46 1.46 1.46 1.46 1.46 1.46 1.46 1.46 1.45 1.85 1.85 1.85 2.67 3.44 Baitrach, U.S. Pharmacopels, nonsterils, 1.50 nutlor, 1.00 National Formulary, 1.00 Dollars per pound 1.85 1.85 2.40 2.50 2.600 Boy O, National Formulary, 1.00 Dollars per pound 13.0 3.10 3.10 3.12 3.35 Berganot al, full Dollars per pound 10.00 107.08 167.25 184.25 64.17 Duyl dest, disk, technical, 1.00 Cents per pound 55.00	item	Unit	1989	1990	1991	1992	1993	
Allmini startis, Carload Dolars per ploting 1.46		Dellana	4.40	4.40	4.46	4 40	4 5 4	
Parties gum, National Formulary, Parties gum, National Formulary, Bachter, 10, National Formulary, Dollars per pound 1.85 1.85 1.85 1.85 2.67 3.44 Bachter, 11, US, Pharmacopeia, Donsteifie, 11, Dipound cartons Dollars per pound 1.85 1.85 1.85 2.67 3.44 Bachter, 11, US, Pharmacopeia, Dollars per pound 1.80 1.525 24.00 25.00 55.	Aluminum stearate, carload	Dollars per pound	1.46	1.46	1.40	1.48	1.54	
Approx. Dollars per pound 1.85 1.85 1.85 2.67 3.44 Borhtani, U.S. Pharmacopela, monstarile, 1 billion units or more MM units 7.80	Anise seed oil, Chinese, drums Arabia gum, National Formulan	Dollars per kilogram	16.30	10.30	10.30	10.30	10.40	
Bornstein, is the managepia, Bornstein, is the managepia, Bornstein, is the managepia, Bay oil later all formulay, Bay oil later all formulay, Boss percent, drums So S5 percent, drums Bay oil later all formulay, Beservarx, refined, blaenhed, white bricks, 100-pound cantons Dollars per pound Dollars per pound 13.50 7.80 7.80 7.80 7.80 7.80 7.80 7.80 7.50 2.50 26.00 Beservarx, refined, blaenhed, white bricks, 100-pound cantons Dollars per pound 100 3.10 3.10 3.10 3.10 3.10 3.12 3.35 Bergannot oil, hallen Dollars per pound 2014 starstis, tob. works Cents per pound 5.00 55.00 <t< td=""><td>nabic gum, National Formulary,</td><td>Dollars por pound</td><td>1 95</td><td>1 85</td><td>1 85</td><td>2.67</td><td>3 44</td></t<>	nabic gum, National Formulary,	Dollars por pound	1 95	1 85	1 85	2.67	3 44	
Constanting 1: 5 Ultim units 27.80 7.80 7.80 7.80 7.80 7.80 7.80 7.59 Boy oil, National Formulary, So Sparcent, drums Dollars per pound 13.50 15.25 24.00 25.50 26.00 Beawax, refined, black-d, white Dollars per pound 3.10 3.10 3.10 3.12 3.35 Bergamot oil, Italian Dollars per pound 10.00 107.08 167.25 184.25 64.17 Buty lotate, distilled, drums, carloat, 1.05, works Conts per pound 55.00 55.00 55.00 55.00 55.00 55.00 55.70 55.00 55.70 55.50 55.	Bacitracia 11 S. Pharmaconaia	Dollars per pourlo	1.05	1.65	1.05	2.07	0.44	
Bay oil, National Formulary, India India for the formulary, India India formulary, India India formulary, India India formulary, India India formulary, India Bergamot oil, Rallan Dollars per pound 13.60 15.25 24.00 25.50 26.00 Bergamot oil, Rallan Dollars per pound 3.10 3.10 3.10 3.10 3.12 3.35 Bergamot oil, Rallan Dollars per pound 70.00 76.33 83.00 86.75 92.00 2.01 2.01 2.01 2.01 2.01 2.01 2.01 2.01 2.01 2.01 <td>nonsterile 1 hillion unite or more</td> <td>MM unite</td> <td>7 80</td> <td>7 80</td> <td>7 80</td> <td>7 80</td> <td>7 59</td>	nonsterile 1 hillion unite or more	MM unite	7 80	7 80	7 80	7 80	7 59	
50-55 parcent, duma Dollars per pound 13.50 15.25 24.00 25.50 26.00 Bearswar, riftmad, bleachad, white Dollars per kilogram 110.00 107.08 167.25 184.25 64.17 Bury loaste, distlied, duma, Canta per pound 70.00	Bay oil National Formulary		7.00	7.00	7.00	1.00	7.00	
Beaswar, refinad, blackhed, white Dollars per pound 1.10.0 1.00.0 <th1.00.0< th=""></th1.00.0<>	50-55 percent drums	Dollars per pound	13 50	15 25	24.00	25 50	26.00	
brides, 100-pound cartons, international programmer of 1, 10, 10, 10, 10, 10, 10, 10, 10, 10,	Beeswax, refined, bleached, white	Boild o por pourio	10.00	10.20	2.000			
Bergamer of, Italian Dollars per klogram 110.00 107.08 167.25 184.25 64.17 Buryl otest, desliled, drums, carload, t.o.b. works Cents per pound 70.00 72.51 73.33 81.00<	bricks, 100-pound cartons	Dollars per pound	3.10	3.10	3.10	3.12	3.35	
Buryl cleater, distilled, drums, Cents per pound 70.00 <td>Bergamot oil. Italian</td> <td>Dollars per kilogram</td> <td>110.00</td> <td>107.08</td> <td>167.25</td> <td>184.25</td> <td>64.17</td>	Bergamot oil. Italian	Dollars per kilogram	110.00	107.08	167.25	184.25	64.17	
Carroat, f.o.b. works Cents per pound 70.00	Butyl oleate, distilled, drums,							
Butyl stearate, technical, tanks, f.o.b. works Cents per pound 55.00	carload, f.o.b. works	Cents per pound	70.00	70.00	70.00	70.00	70.00	
tanks, t.o.b., works Cents per pound 55.00 55.00 55.00 54.75 calcung gluconste, U.S. Pharmacopeia, powdered, t.o.b. warehouse Dollars per pound 1.80 1.80 2.44 2.50 2.51 camptor, U.S. Pharmacopeia, powdered, t.o.b. warehouse Dollars per pound 5.50	Butyl stearate, technical,							
Calcium gluconate, U.S. Pharmacopeia, powdered, 16.b. warehouse Dollars per pound 1.80 1.80 2.44 2.50 2.51 Camphor, U.S. Pharmacopeia, powdered, Sol-kliogram drums, 10,000 pounds or more Dollars per pound 5.50 5.50 5.50 5.50 5.50 5.50 5.50 5.50 5.50 5.50 5.50 5.50 5.50 5.50 5.50 5.50 5.50 5.50 2.50 2.50 2.50 2.50 2.80 48.00	tanks, f.o.b. works	Cents per pound	55.00	55.00	55.00	55.00	54.75	
powdered, f.o.b. warehouse Dollars per pound 1.80 1.80 2.44 2.50 2.51 Camphor, U.S. Pharmacopela, powdered, 50-kilogram drums, 10,000 pounds or more Dollars per pound 5.50 2.50	Calcium gluconate, U.S. Pharmacopeia,							
Campbor, U.S. Pharmacopela, powdered, Dollars per pound 5.50	powdered, f.o.b. warehouse	Dollars per pound	1.80	1.80	2.44	2.50	2.51	
50-Kilogram drums, 10,000 pounds or more Dollars per pound 5.50	Camphor, U.S. Pharmacopeia, powdered,							
Capric acid, commercial, pure, Cents per pound 68.33 76.33 83.00 86.75 92.00 Caprylia lachol, secondary, 98-percent, Cents per pound 42.00 43.00 48.00 48.00 48.00 Caprylia cald, commercial, pure, tanks Cents per pound 72.83 78.33 83.00 48.00 48.00 Carboxymethyl cellulose (CMC), technical, Gents per pound 1.16 1.39 1.55 1.55 Caranuba wax, Parnahyba, No. 1, yellow, Dollars per pound 2.50 2.88 3.23 3.50 b-Carotene, tablet grade powder, Dollars per pound 2.50 2.50 2.52 2.52 2.55 Cellulose accetate, powdered, bags, Dollars per pound 2.50 2.50 2.52 2.55 Cedavod oll, Chinese, drums, cans Dollars per pound 1.50 1.55 1.66 1.70 Cellulose accetate, powdered, bags, Dollars per pound 1.50 1.58 1.62 1.94 2.12.90 12.90 Cod oll, refined, bulk, f.o.b. Gloucester, MA Cents per pound 1.50	50-kilogram drums, 10,000 pounds or more	Dollars per pound	5.50	5.50	5.50	5.50	5.50	
tank delivery Cents per pound 68.33 76.33 83.00 86.75 92.00 Carpy dicohol, secondary, 98-percent, tank, f.o.b. works Cents per pound 42.00 43.00 48.00 48.00 Carpy dicohol, secondary, 98-percent, tank, f.o.b. works Cents per pound 72.83 78.33 83.00 90.92 102.00 Carboxymethyl cellulose (CMC), technical, 98-percent minimum, low or medium viscosity, bags, 84.000 pounds, 1.05. Hopewell, VA Dollars per pound 1.16 1.39 1.55 1.55 Carnaba wax, Parnahyba, No. 1, yellow, bags, 100 pounds, 1.05. Hopewell, VA Dollars per pound 2.50 2.50 2.52 2.55 Carlandba wax, Parnahyba, No. 1, yellow, bags, to lots Dollars per pound 2.50 2.50 2.52 2.55 Carlandba wax, Parnahyba, No. 1, yellow, bags, to lota bags, truckload, i.f. Dollars per pound 1.50 1.55 1.55 Carlandba way, Parnahyba, Jo. 2.90 2.50 2.50 2.52 2.55 2.52 2.55 Carlandba way, Parnahyba, Jo. 1, sol 1.50 1.58 1.52 1.44 1.20 1.20 1.20 1.20<	Capric acid, commercial, pure,							
Capryl alcohol, secondary, 96-percent, tank, f.ob. works Cents per pound 42.00 43.00 48.00 48.00 Capbrynetryl calcluose (CMC), technical, 98-percent minimum, tow or medium viscosity, bags, 24,000 pounds, t.o.b. Hopewell, VA Dollars per pound 1.16 1.39 1.55 1.55 Caranuba wax, Parnahyba, No. 1, yellow, bags, ton lots Dollars per pound 2.50 2.50 2.88 3.23 3.50 Casein, acid precipitated, ground, 30-mesh, adble, imported, fuckload c.l.f. Dollars per pound 2.50 2.50 2.52 2.55 Ceddwood oil, Chinese, drums, cans Dollars per pound 1.69 1.55 1.66 1.70 Cod oil, refineed, bulk, f.o.b. Gloucester, MA Cents per pound 1.50 1.58 1.62 1.94 2.12 Cod oil, refineed, bulk, f.o.b. dolucester, MA Cents per pound 1.50 3.60 36.00 32.00	tank delivery	Cents per pound	68.33	76.33	83.00	86.75	92.00	
tank, f.o.b. works Cents per pound 42.00 43.00 48.00 48.00 48.00 Carpvice actio, commercial, pure, tanks Cents per pound 72.83 78.33 83.00 90.92 102.00 Carboxymethyl cellulose (CMC), technical, Sepercent minimum, low or medium viscosity, bags, 64.000 1.16 1.39 1.55 1.55 1.55 Carnaba wax, Parnahyba, No. 1, yellow, Dollars per pound 2.50 2.50 2.88 3.23 3.50 b-Carotene, tablet grade powder, Dollars per pound 2.50 2.50 2.52 2.52 2.55 Cedarwood oil, Chinese, delivered east Dollars per pound 1.50 1.58 1.55 1.56 Cedarwood oil, Chinese, delivered east Dollars per pound 1.50 1.58 1.62 1.44 2.12 Cod oil, refined, bulk, f.o.b. Gloucester, MA Cents per pound 1.50 1.58 1.62 1.44 2.12 Cod oil, refined, bulk, f.o.b. Gloucester, MA Cents per pound 1.50 1.58 1.22 12.90 12.90 Cube root, powdered, S-percent-rotenob basis, So-pound bags, truckload, works Dollars per pound	Capryl alcohol, secondary, 98-percent,							
Captylic acid, commercial, pure, tanks Cents per pound 72.83 78.33 83.00 90.92 102.00 Carboxymethyl calulose (CMC), technical, 96-percent minimum, low or medium viscosity, bags, 24,000 pounds, fob. Hopewell, VA Dollars per pound 1.16 1.39 1.55 1.55 1.55 Carnauba wax, Parnahyba, No. 1, yellow, bags, 24,000 pounds, fob. Hopewell, VA Dollars per pound 2.50 2.50 2.88 3.23 3.50 Carnauba wax, Parnahyba, No. 1, yellow, bags, 24,000 pounds, fob. Hopewell, VA Dollars per pound 2.50 2.50 2.50 2.52 2.52 2.55 2.55 2.50 2.55 2.55 2.50 2.50 2.50 2.50 2.50 2.50 2.50 2.50 2.50 2.	tank, f.o.b. works	Cents per pound	42.00	43.00	48.00	48.00	48.00	
Carboxymetryl cellulose (CMC), technical, 96-percent minimum, low or medium viscosity, bags, 24,000 pounds, f.o.b. Hopewell, VA Dollars per pound 1.16 1.39 1.55 1.55 Carnauba wax, Parnahyba, No. 1, yellow, bags, ton lots Dollars per pound 2.50 2.50 2.88 3.23 3.50 b-Carotene, tablet grade powder, 10-percent Dollars per kilogram 70.00 72.51 73.33 81.00 86.00 Cassein, acid precipitated, ground, 30-mesh, edible, imported, truckload c.i.f. Dollars per pound 1.50 1.55 1.66 1.70 Cellarose actate, powdered, bags, truckload, delivered east Dollars per pound 1.50 1.58 1.62 1.94 2.12 Cod il, refined, bulk, f.o. b. Gloucester, MA Cents per pound 1.50 1.50 1.30 1.30 1.30 Cor ol i, refined, bulk, f.o. b. Gloucester, MA Cents per pound 1.60 0.60 1.30 1.30 1.30 Cor ol i, refined, bulk, f.o. b. Gloucester, MA Cents per pound 1.62 1.44 2.90 Cube root, powdered, 5-percent-rotenone basis, 50-pound bags, truckload, works Dollars per pound 1.60 <td< td=""><td>Caprylic acid, commercial, pure, tanks</td><td>Cents per pound</td><td>72.83</td><td>78.33</td><td>83.00</td><td>90.92</td><td>102.00</td></td<>	Caprylic acid, commercial, pure, tanks	Cents per pound	72.83	78.33	83.00	90.92	102.00	
95-percent minimum, two or medium viscosity, bags, 24,000 pounds, f.ob. Hopeweil, VA Dags, 24,000 pounds, f.ob. Hopeweil, VA Dollars per poundDollars per pound1.161.391.551.551.55Canauba wax, Parnahyba, No. 1, yellow, bags, ton lotsDollars per pound2.502.502.883.233.50Casein, acid precipitated, ground, 30-mesh, edible, imported, truckload c.i.f.Dollars per pound2.502.502.502.522.55Cedawood oil, Chinese, drums, cansDollars per pound1.501.551.661.70Truckload, delivered eastDollars per pound1.501.581.621.942.12Cod oil, refined, bulk, to. b. Gloucester, MA Cont pags, truckload, worksCents per pound11.2211.6412.9012.9012.90Cube root, powdered, spercent-rotenone basis, S0-pound bags, truckload, worksDollars per pound0.600.601.301.301.30Dentured alcohol, ethyl (ethanol), CD18, CD19, tanks, delivered eastDollars per pound2.5925.5025.5025.5025.50Dibuty i sebacate, tanks, worksDollars per pound1.741.791.791.791.791.79Diglycol aurate, drums, ton lotsCents per pound2.502.5025.5025.5025.50Diglycol aurate, drums, ton lotsCents per pound2.502.5025.5025.50Diglycol aurate, drums, ton lotsCents per pound2.741.791.791.791.79Fruckload, drums <td>Carboxymethyl cellulose (CMC), technical,</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>	Carboxymethyl cellulose (CMC), technical,							
bags, 24,000 pounds, 1.0.6. Hopewell, VA carnauba wax, Parnahyba, No. 1, yellow, bags, ton lotsDollars per pound1.161.391.551.551.55b-Carotene, tablet grade powder, 10-percentDollars per pound2.502.502.883.233.50b-Carotene, tablet grade powder, edible, imported, truckload ci.f.Dollars per pound2.502.502.502.522.52Cedarwood cil, Chinese, drums, cansDollars per pound1.691.501.551.661.70Cellulose acetate, powdered, bags, truckload, delivered eastDollars per pound1.501.581.621.942.12Cod cil, refined, bulk, f.o.b. Gloucester, MACents per pound11.2211.6412.9012.9012.90Cube root, powdered, 5-percent-rotenone basis, 50-pound bags, truckload, worksDollars per pound0.600.601.301.301.30Deatured alcohol, ethyl (ethanol), CD18, CD19, tanks, delivered eastDollars per pound2.092.112.082.022.02Dextrose, hydrated, commercial, bags, carload, delivered New YorkCents per pound31.0132.0032.0032.0032.00Dibuly Isebactate, tanks, worksCents per pound2.5025.5025.5025.5025.50Dibuly sebactate, tanks, worksCents per pound32.941.4551.4751.475Dibuly sebactate, tanks, worksCents per pound32.9062.0062.0062.0062.0062.0062.0062.0062.00<	96-percent minimum, low or medium viscosity,	Dellers and sound	4.40	4 00	4.55	4.55	4 66	
Cartinuous wax, ramanyola, No. 1, yencw, bags, ton lotsDollars per pound2.502.502.883.233.50b-Carotene, tablet grade powder, 10-percentDollars per kilogram70.0072.5173.3381.0086.00Casein, acid precipitated, ground, 30-mesh, edible, imported, truckload c.l.f.Dollars per pound2.502.502.502.522.55Cedarwood oil, Chinese, drums, cansDollars per pound1.691.501.581.661.70Cellulose acetate, powdered, bags, truckload, delivered eastDollars per pound1.501.581.621.942.12Cod oil, refined, bulk, to.b. Gloucester, MACents per pound31.5036.0036.0037.2539.00Coron syrup, 42 DE, tanks, f.o.b. worksCents per pound11.2211.6412.9012.9012.90Cube root, powdered, 5-percent-rotenone basis, 50-pound bags, truckload, worksDollars per gallon2.092.112.082.022.02Dextrin, com, canary dark, paper bags, carload, worksCents per pound31.0132.0032.0032.0032.00Dibutyl sebacate, tanks, worksDollars per pound1.741.791.791.791.79Dibutyl sebacate, tanks, worksCents per pound32.5032.5032.5032.50Dibutyl sebacate, tanks, worksCents per pound32.0032.0032.0032.00Diglycol laurate, drums, ton lotsCents per pound32.5032.5032.5032.5032.50	bags, 24,000 pounds, f.o.b. Hopewell, VA	Dollars per pound	1.16	1.39	1.55	1.55	1.55	
Decays, functsDollars per pound2.502.502.603.233.5010-percentDollars per kilogram70.0072.5173.3381.0086.00Casein, acid precipitated, ground, 30-mesh, edible, imported, truckload c.l.f.Dollars per pound2.502.502.502.522.55Cedarwood oil, Chinese, drums, cansDollars per pound1.691.501.551.661.70Cellulose acetate, powdered, bags, truckload, delivered eastDollars per pound1.501.581.621.942.12Cod oil, refined, bulk, f.o.b. Gloucester, MACents per pound11.2211.6412.9012.9012.90Cube root, powdered, 5-percent-rotenone basis, 50-pound bags, truckload, worksDollars per pound0.600.601.301.301.30Denatured acbohl, ettryl (ethanol), CD18, CD19, tanks, delivered eastDollars per pound2.092.112.082.022.02Dextrose, hydrated, commercial, bags, carload, delivered New YorkCents per pound1.741.791.791.79Diglycol lavate, drums, ton lotsCents per pound25.2925.5025.5025.5025.00Diglycol stearate, S00-pound drums, truckload truckload, f.o.b. plantCents per pound2.941.45014.5614.7514.75Diglycol stearate, f.ob. plantCents per pound25.0932.5032.5032.5032.5032.00Diglycol stearate, f.ob. plantCents per pound1.741.791.79 </td <td>baga top leta</td> <td>Dellars par neurod</td> <td>0.50</td> <td>2 50</td> <td>0.00</td> <td>a aa</td> <td>2 50</td>	baga top leta	Dellars par neurod	0.50	2 50	0.00	a aa	2 50	
Dotation (r, table power), 10-percentDollars per kilogram70.0072.5173.3381.0086.00Casein, acid precipitated, ground, 30-mesh, edible, imported, truckload c.i.f.Dollars per pound2.502.502.522.522.55Cedarwood oil, Chinese, drums, cansDollars per pound1.691.501.551.661.70Cellulose acetate, powdered, bags, truckload, delivered eastDollars per pound31.5036.0036.0037.2539.00Cord oil, refined, bulk, f.o.b. Gloucester, MACents per pound11.2211.6412.9012.9012.90Cube root, powdered, 5-percent-rotenone basis, 50-pound bags, truckload, worksDollars per pound0.600.601.301.301.30Destrin, corn, canary dark, paper bags, carload, worksCents per pound21.012.082.022.02Dextrin, corn, canary dark, paper bags, carload, worksCents per pound25.2925.5025.5025.5025.50Diblars per pound2.5032.0032.0032.0032.0032.0032.0032.00Dextrose, hydrated, commercial, bags, carload, delivered New YorkCents per pound25.2925.5025.5025.5025.50Dibly sebacate, tanks, worksDollars per pound22.5032.0032.0032.0032.00Dibly col starate, 500-pound furms, truckloadCents per pound25.032.5032.5035.50Dibly col starate, 500-pound furms, truckloadCents per pound <t< td=""><td>bays, ion iois b-Caratapa, tablet grada powdar</td><td>Dollars per pouno</td><td>2.50</td><td>2.50</td><td>2.00</td><td>3.23</td><td>3.50</td></t<>	bays, ion iois b-Caratapa, tablet grada powdar	Dollars per pouno	2.50	2.50	2.00	3.23	3.50	
Conserved	10-percept	Dollare per kilogram	70.00	72 51	73 33	81.00	86.00	
ConstructionDollars per pound2.502.502.502.522.522.55Cedawood oil, Chinese, drums, cansDollars per pound1.691.501.551.661.70Cellulose acetate, powdered, bags, truckload, delivered eastDollars per pound1.501.581.621.942.12Cod oil, refined, bulk, f.o.b. Gloucester, MACents per pound31.5036.0036.0037.2539.00Corn syrup, 42 DE, tanks, f.o.b. worksCents per pound11.2211.6412.9012.9012.90Cube root, powdered, 5-percent-rotenone basis, 50-pound bags, truckload, worksDollars per pound0.600.601.301.301.30Denatured alcohol, ethyl (ethanol), CD18, CD19, tanks, delivered eastDollars per pound25.2925.5025.5025.5025.50Dextrose, hydrated, commercial, bags, carload, delivered New YorkCents per pound25.2925.5025.5025.5025.50Diglycol larate, drums, ton lotsCents per pound32.5032.5032.5032.5032.50Diglycol larate, drums, ton lotsCents per pound25.2025.5025.5025.5025.50Fir oil, Caanada, drumsCents per pound32.5434.5534.7534.75Dollars per pound25.2925.5025.5025.5025.5025.50Diglycol lavate, drums, 500 pounds or more Fir oil, Caanada, drumsCents per pound32.5414.5514.7514.75Fir oil, Caanada,	Casein acid precipitated ground 30-mesh	Dollars per Niogram	70.00	72.51	73.33	81.00	00.00	
Cedarwood oil, Chinese, drums, cans Dollars per pound Cedarwood oil, Chinese, drums, cans Dollars per pound Cedarwood oil, Chinese, drums, cans Dollars per pound 1.69 1.50 1.55 1.66 1.70 Cellulose acetate, powdered, bags, truckload, delivered east Dollars per pound Corn syrup, 42 DE, tanks, f.o.b. works Cents per pound Corn syrup, 42 DE, tanks, f.o.b. works Cents per pound Dollars per pound Dollars per pound 11.22 11.64 12.90 12.90 12.90 12.90 12.90 12.90 12.90 12.90 12.90 12.90 12.90 12.90 12.90 12.90 12.90 12.90 12.90 12.90 2.11 2.08 2.02 2.02 Dextrin, com, canary dark, paper bags, carload, works Dollars per pound Dollars per pound Dollars per pound Dollars per pound 1.60 0.60 0.60 1.30 1.30 1.30 1.30 1.30 1.30 1.30 Dextrose, hydrated, commercial, bags, carload, delivered New York Dibutyl sebacate, tanks, works Dollars per pound Dibutyl sebacate, tanks, works Dollars per pound 1.74 1.79 1.79 Diglycol laurate, drums, ton lots Cents per pound 25.29 25.50 25.	edible imported truckload c if	Dollars per pound	2 50	2 50	2 50	2 52	2 55	
Collars per pointCollars per point1.501.501.501.601.10Cod oil, refined, bulk, f.o.b. Gloucester, MADollars per pound1.501.581.621.942.12Cod oil, refined, bulk, f.o.b. Gloucester, MACents per pound31.5036.0036.0037.2539.00Cube root, powdered, 5-percent-rotenone basis, 50-pound bags, trucklead, worksDollars per pound11.2211.6412.9012.9012.90Denatured alcohol, ethyl (ethanol), CD18, CD19, tanks, delivered eastDollars per gallon2.092.112.082.022.02Dextrose, hydrated, commercial, bags, carload, delivered New YorkCents per pound31.0132.0032.0032.0032.00Dibutyl sebacate, tanks, worksDollars per pound25.2925.5025.5025.5025.50Dibutyl sebacate, tanks, worksDollars per pound32.5032.5032.5032.50Diglycol laurate, drums, ton lotsCents per pound62.0062.0062.0062.00Diglycol stearate, 500-pound drums, truckloadCents per pound62.0062.0062.0062.00Etry vanillin, 25-pound drums, 500 pounds or more Dollars per pound9.759.759.7510.9412.98Fructose, crystallized, dry, 50-pound bags, truckload, f.o.b. plantCents per pound9.7077.3379.0079.00Gelatin, edible, 100 AOAC test, drums, less truckload, deliveredDollars per pound9.5095.0095.0094.0089.	Cedarwood oil Chinese drums cans	Dollars per pound	1 69	1.50	1.55	1 66	1 70	
truckload, delivered eastDollars per pound1.501.581.621.942.12Cod oil, refined, bulk, f.o.b. Gloucester, MACents per pound31.5036.0036.0037.2539.00Corn syrup, 42 DE, tanks, f.o.b. worksCents per pound11.2211.6412.9012.9012.9012.90Cube root, powdered, Spercent-rotenone basis, 50-pound bags, truckload, worksDollars per pound0.600.601.301.301.30Denatured alcohol, ethyl (ethanol), CD18, CD19, tanks, delivered eastDollars per gallon2.092.112.082.022.02Dextrin, corn, canary dark, paper bags, carload, worksCents per pound31.0132.0032.0032.0032.00Dextrin, corn, canary dark, worksDollars per pound1.741.791.791.79Dibutyl sebacate, tanks, worksDollars per pound25.2925.5025.5025.50Dibutyl sebacate, tanks, worksDollars per pound32.0032.0032.00Diglycol laurate, drums, ton lotsCents per pound25.2925.5032.5032.50Diglycol stearate, 500-pound drums, truckloadCents per pound32.944.5044.5044.50Fir oil, Canada, drums500 pounds or more Dollars per pound9.759.759.7510.9412.08Furuckload, f.o.b. plantCents per pound90.0060.2568.7539.0039.00Furuckload, delivered Glue, bone, extracted, green, 85 jellygrams, bags, carload </td <td>Cellulose acetate, powdered, bags,</td> <td></td> <td>1.00</td> <td>1.00</td> <td>1.00</td> <td></td> <td></td>	Cellulose acetate, powdered, bags,		1.00	1.00	1.00			
Cod oil, refined, bulk, f.o.b. Gloucester, MACents per pound31.5036.0036.0037.2539.00Corn syrup, 42 DE, tanks, f.o.b. worksCents per pound11.2211.6412.9012.9012.90Cube root, powdered, 5-percent-rotenone basis, 50-pound bags, truckload, worksDollars per pound0.600.601.301.301.30Denatured alcohol, ethyl (ethanol), CD18, CD19, tanks, delivered eastDollars per gallon2.092.112.082.022.02Dextrin, corn, canary dark, paper bags, carload, worksCents per pound31.0132.0032.0032.0032.00Dextrin, corn, canary dark, paper bags, carload, worksCents per pound25.2925.5025.5025.5025.50Dibutyl sebacate, tanks, worksDollars per pound1.741.791.791.791.79Diglycol laurate, drums, ton lotsCents per pound32.5032.5032.5032.5035.50Diglycol stearate, 500-pound drums, truckloadCents per pound23.9414.5014.5614.7514.75Fir oil, Canada, drumsDollars per pound9.759.759.0079.0079.0079.0079.00Furdose, crystallized, dry, 50-pound bags, truckload, fo.b. plantCents per pound75.0077.3379.0079.0079.00Gelatin, edible, 100 AOAC test, drums, less truckload, deliveredDollars per pound1.501.541.681.70Glue, bone, extracted, green, 85 jellygrams, bags, carload	truckload, delivered east	Dollars per pound	1.50	1.58	1.62	1.94	2.12	
Corn syrup, 42 DE, tanks, f.o.b. worksCents per pound11.2211.6412.9012.9012.90Cube root, powdered, 5-percent-rotenone basis, 50-pound bags, truckload, worksDollars per pound0.600.601.301.301.30Denatured alcohol, ethyl (ethanol), CD18, CD19, tanks, delivered eastDollars per gallon2.092.112.082.022.02Dextrin, corn, canary dark, paper bags, carload, worksCents per pound31.0132.0032.0032.0032.00Dextrose, hydrated, commercial, bags, carload, delivered New YorkCents per pound25.2925.5025.5025.50Dibutyl sebacate, tanks, worksDollars per pound1.741.791.791.79Diglycol lavrate, drums, ton lotsCents per pound62.0062.0062.0062.0062.00Ethyl vanillin, 25-pound drums, 500 pounds or more Fir cil, Canada, drumsCents per pound9.759.759.7510.9412.08Fructose, crystallized, dry, 50-pound bags, truckload, f.o.b. plantCents per pound90.0060.2568.7539.0039.00Furfural, tanks, f.o.b. plantCents per pound90.0060.2568.7539.0039.00Glue, bone, extracted, green, 85 jellygrams, bags, carloadCents per pound1.501.541.681.70Glue, bone, extracted, green, 85 jellygrams, bags, carloadCents per pound95.0095.0094.0089.00Glycerine, natural, refined, U.S. Pharmacopeia, 99.7-percent, tanks,	Cod oil, refined, bulk, f.o.b. Gloucester, MA	Cents per pound	31.50	36.00	36.00	37.25	39.00	
Cube root, powdered, 5-percent-rotenone basis, 50-pound bags, truckload, worksDollars per pound0.600.601.301.301.30Denatured alcohol, ethyl (ethanol), CD18, CD19, tanks, delivered eastDollars per gallon2.092.112.082.022.02Dextrin, com, canary dark, paper bags, carload, worksCents per pound31.0132.0032.0032.0032.00Dextrin, com, canary dark, paper bags, carload, worksCents per pound25.2925.5025.5025.50Dibutyl sebacate, tanks, worksDollars per pound1.741.791.791.79Diglycol laurate, drums, ton lotsCents per pound32.5032.5032.5032.50Diglycol stearate, 500-pound drums, truckloadCents per pound62.0062.0062.0062.00Eth vanillin, 25-pound drums, 500 pounds or more Fir cil, Canada, drumsDollars per pound9.759.759.7510.9412.08Furctose, crystallized, dry, 50-pound bags, truckload, f.o.b. plantCents per pound90.0060.2568.7539.0039.00Furdival, tanks, f.o.b. plantCents per pound75.0077.3379.0079.0079.00Glue, bone, extracted, green, 85 jellygrams, bags, carloadCents per pound1.501.541.681.70Glue, bone, extracted, green, 85 jellygrams, bags, carloadCents per pound95.0095.0095.0094.0089.00Glycerine, natural, refined, U.S. Pharmacopeia, 99.7-percent, tanks, deliveredC	Corn syrup, 42 DE, tanks, f.o.b. works	Cents per pound	11.22	11.64	12.90	12.90	12.90	
50-pound bags, truckload, worksDollars per pound0.600.601.301.301.30Denatured alcohol, ethyl (ethanol), CD18, CD19, tanks, delivered eastDollars per gallon2.092.112.082.022.02Dextrin, corn, canary dark, paper bags, carload, worksCents per pound31.0132.0032.0032.0032.0032.00Dextrose, hydrated, commercial, bags, carload, delivered New YorkCents per pound25.2925.5025.5025.5025.50Dibutyl sebacate, tanks, worksDollars per pound32.5032.5032.5032.5035.50Diglycol laurate, drums, ton lotsCents per pound62.0062.0062.0062.0062.00Diglycol stearate, 500-pound drums, truckloadCents per pound13.9414.5014.5614.7514.75Fir oil, Canada, drumsDollars per pound9.759.759.7510.9412.08Furctose, crystallized, dry, 50-pound bags, truckload, f.o.b. plantCents per pound90.0060.2568.7539.0039.00Furdural, tanks, f.o.b. plantCents per pound1.501.541.681.70Glue, bone, extracted, green, 85 jellygrams, bags, carloadCents per pound95.0095.0094.0089.00Glycerine, natural, refined, U.S. Pharmacopeia, 99.7-percent, tanks, deliveredCents per pound79.0075.9264.0056.6364.08See footnotes and definitions at end of table.Cents per pound79.0075.92	Cube root, powdered, 5-percent-rotenone basis,	• •						
Denatured alcohol, ethyl (ethanol), CD18, CD19, tanks, delivered eastDollars per gallon2.092.112.082.022.02Dextrin, corn, canary dark, paper bags, carload, worksCents per pound31.0132.0032.0032.0032.00Dextrose, hydrated, commercial, bags, carload, delivered New YorkCents per pound25.2925.5025.5025.5025.50Dibutyl sebacate, tanks, worksDollars per pound1.741.791.791.791.79Diglycol laurate, drums, ton lotsCents per pound32.5032.5032.5032.5032.50Diglycol stearate, 500-pound drums, truckloadCents per pound62.0062.0062.0062.0062.00Dilars per pound13.9414.5014.5614.7514.7514.75Fir oil, Canada, drumsDollars per pound9.759.759.7510.9412.08Fructose, crystallized, dry, 50-pound bags, truckload, f.o.b. plantCents per pound75.0077.3379.0079.00Furfural, tanks, f.o.b. plantCents per pound1.501.541.681.70Glue, bone, extracted, green, 85 jellygrams, bags, carloadDollars per pound95.0095.0095.0094.0089.00Glycerine, natural, refined, U.S. Pharmacopeia, 99.7-percent, tanks, deliveredCents per pound79.0075.9264.0056.6364.08	50-pound bags, truckload, works	Dollars per pound	0.60	0.60	1.30	1.30	1.30	
tanks, delivered eastDollars per gallon2.092.112.082.022.02Dextrin, corn, canary dark, paper bags, carload, worksCents per pound31.0132.0032.0032.0032.00Dextrose, hydrated, commercial, bags, carload, delivered New YorkCents per pound25.2925.5025.5025.5025.50Dibutyl sebacate, tanks, worksDollars per pound1.741.791.791.791.79Diglycol laurate, drums, ton lotsCents per pound32.6032.0062.0062.0062.0062.00Diglycol stearate, 500-pound drums, truckloadCents per pound62.0062.0062.0062.0062.0062.00Ethyl vanillin, 25-pound drums, 500 pounds or moreDollars per pound13.9414.5014.5614.7514.75Fir oil, Canada, drumsDollars per pound9.759.759.7510.9412.08Fructose, crystallized, dry, 50-pound bags, truckload, f.o.b. plantCents per pound90.0060.2568.7539.0039.00Furfural, tanks, f.o.b. plantCents per pound1.501.501.541.681.70Glue, bone, extracted, green, 85 jellygrams, bags, carloadCents per pound95.0095.0095.0094.0089.00Glycerine, natural, refined, U.S. Pharmacopeia, 99.7-percent, tanks, deliveredCents per pound79.0075.9264.0056.6364.08	Denatured alcohol, ethyl (ethanol), CD18, CD19,							
Dextrin, corn, canary dark, paper bags, carload, worksCents per pound31.0132.0032.0032.0032.00Dextrose, hydrated, commercial, bags, carload, delivered New YorkCents per pound25.2925.5025.5025.5025.50Dibutyl sebacate, tanks, worksDollars per pound1.741.791.791.791.79Diglycol laurate, drums, ton lotsCents per pound32.5032.5032.5032.5035.50Diglycol stearate, 500-pound drums, truckloadCents per pound62.0062.0062.0062.0062.00Ethyl vanillin, 25-pound drums, 500 pounds or moreDollars per pound13.9414.5014.5614.7514.75Fir oli, Canada, drumsDollars per pound9.759.759.7510.9412.08Fructose, crystallized, dry, 50-pound bags, truckload, f.o.b. plantCents per pound75.0077.3379.0079.00Gelatin, edible, 100 AOAC test, drums, less truckload, deliveredDollars per pound1.501.541.681.70Glue, bone, extracted, green, 85 jellygrams, bags, carloadCents per pound95.0095.0094.0089.00Glycerine, natural, refined, U.S. Pharmacopeia, 99.7-percent, tanks, deliveredCents per pound79.0075.9264.0056.6364.08	tanks, delivered east	Dollars per gailon	2.09	2.11	2.08	2.02	2.02	
carload, worksCents per pound31.0132.0032.0032.0032.0032.00Dextrose, hydrated, commercial, bags, carload, delivered New YorkCents per pound25.2925.5025.5025.5025.50Dibutyl sebacate, tanks, worksDollars per pound1.741.791.791.791.79Diglycol laurate, drums, ton lotsCents per pound32.5032.5032.5032.5032.50Diglycol stearate, 500-pound drums, truckloadCents per pound62.0062.0062.0062.0062.00Ethyl vanillin, 25-pound drums, 500 pounds or moreDollars per pound13.9414.5014.5614.7514.75Fir oil, Canada, drumsDollars per pound9.759.759.7510.9412.08Fructose, crystallized, dry, 50-pound bags, truckload, f.o.b. plantCents per pound90.0060.2568.7539.0039.00Furfural, tanks, f.o.b. plantCents per pound75.0077.3379.0079.0079.00Gelatin, edible, 100 AOAC test, drums, less truckload, deliveredDollars per pound1.501.541.681.70Glue, bone, extracted, green, 85 jellygrams, bags, carloadCents per pound95.0095.0094.0089.00Glycerine, natural, refined, U.S. Pharmacopeia, 99.7-percent, tanks, deliveredCents per pound79.0075.9264.0056.6364.08See footnotes and definitions at end of table.Cents per pound79.0075.9264.0056.63 <td>Dextrin, corn, canary dark, paper bags,</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>· ·</td>	Dextrin, corn, canary dark, paper bags,						· ·	
Dextrose, hydrated, commercial, bags, carload, delivered New YorkCents per pound25.2925.5025.5025.5025.5025.50Dibutyl sebacate, tanks, worksDollars per pound1.741.791.791.791.791.79Diglycol laurate, drums, ton lotsCents per pound32.5032.5032.5032.5032.5035.00Diglycol stearate, 500-pound drums, truckloadCents per pound62.0062.0062.0062.0062.0062.0062.00Ethyl vanillin, 25-pound drums, 500 pounds or moreDollars per pound13.9414.5014.5614.7514.75Fir oil, Canada, drumsDollars per pound9.759.759.7510.9412.08Fructose, crystallized, dry, 50-pound bags, truckload, f.o.b. plantCents per pound75.0077.3379.0079.0079.00Gelatin, edible, 100 AOAC test, drums, less truckload, deliveredDollars per pound1.501.501.541.681.70Glue, bone, extracted, green, 85 jellygrams, bags, carloadCents per pound95.0095.0095.0094.0089.00Glycerine, natural, refined, U.S. Pharmacopeia, 99.7-percent, tanks, deliveredCents per pound79.0075.9264.0056.6364.08	carload, works	Cents per pound	31.01	32.00	32.00	32.00	32.00	
delivered New YorkCents per pound25.2925.50	Dextrose, hydrated, commercial, bags, carload,							
Dibutyl sebacate, tanks, worksDollars per pound1.741.791.791.791.791.79Diglycol laurate, drums, ton lotsCents per pound32.50<	delivered New York	Cents per pound	25.29	25.50	25.50	25.50	25.50	
Digiycol laurate, drums, ton lotsCents per pound32.5062.0062.0	Dibutyl sebacate, tanks, works	Dollars per pound	1.74	1.79	1.79	1.79	1.79	
Digiycol stearate, 500-pound drums, truckloadCents per pound62.00<	Diglycol laurate, drums, ton lots	Cents per pound	32.50	32.50	32.50	32.50	3.50	
Ethyl Vanillin, 25-pound drums, 500 pounds or more Fir oil, Canada, drumsDollars per pound13.9414.5014.5614.7514.75Fir oil, Canada, drumsDollars per pound9.759.759.759.7510.9412.08Fructose, crystallized, dry, 50-pound bags, truckload, f.o.b. plantCents per pound90.0060.2568.7539.0039.00Furfural, tanks, f.o.b. plantCents per pound75.0077.3379.0079.0079.00Gelatin, edible, 100 AOAC test, drums, less truckload, deliveredDollars per pound1.501.541.681.70Glue, bone, extracted, green, 85 jellygrams, bags, carloadCents per pound95.0095.0094.0089.00Glycerine, natural, refined, U.S. Pharmacopeia, 99.7-percent, tanks, deliveredCents per pound79.0075.9264.0056.6364.08	Diglycol stearate, 500-pound drums, truckload	Cents per pound	62.00	62.00	62.00	62.00	62.00	
Fir oil, Canada, drumsDollars per pound9.759.759.759.7510.9412.08Fructose, crystallized, dry, 50-pound bags, truckload, f.o.b. plantCents per pound90.0060.2568.7539.0039.00Furfural, tanks, f.o.b. plantCents per pound75.0077.3379.0079.0079.00Gelatin, edible, 100 AOAC test, drums, less truckload, deliveredDollars per pound1.501.541.681.70Glue, bone, extracted, green, 85 jellygrams, bags, carloadCents per pound95.0095.0095.0094.0089.00Glycerine, natural, refined, U.S. Pharmacopeia, 99.7-percent, tanks, deliveredCents per pound79.0075.9264.0056.6364.08	Ethyl vanillin, 25-pound drums, 500 pounds or more	Dollars per pound	13.94	14.50	14.56	14.75	14.75	
Fructose, crystallized, dry, 50-pound bags, truckload, f.o.b. plantCents per pound90.0060.2568.7539.0039.00Furfural, tanks, f.o.b. plantCents per pound75.0077.3379.0079.0079.00Gelatin, edible, 100 AOAC test, drums, less truckload, deliveredDollars per pound1.501.541.681.70Glue, bone, extracted, green, 85 jellygrams, bags, carloadCents per pound95.0095.0095.0094.0089.00Glycerine, natural, refined, U.S. Pharmacopeia, 99.7-percent, tanks, deliveredCents per pound79.0075.9264.0056.6364.08	Fir oil, Canada, drums	Dollars per pound	9.75	9.75	9.75	10.94	12.08	
truckload, 1.0.5. plantCents per pound90.0060.2568.7539.0039.00Furfural, tanks, f.o.b. plantCents per pound75.0077.3379.0079.0079.00Gelatin, edible, 100 AOAC test, drums, lessDollars per pound1.501.501.541.681.70Glue, bone, extracted, green, 85 jellygrams, bags, carloadDollars per pound95.0095.0095.0094.0089.00Glycerine, natural, refined, U.S. Pharmacopeia, 99.7-percent, tanks, deliveredCents per pound79.0075.9264.0056.6364.08	Fructose, crystallized, dry, 50-pound bags,	Ocate and and		<u> </u>	aa 75			
Gelatin, edible, 100 AOAC test, drums, less Cents per pound 75.00 77.33 79.00 89.00 80.00 89.00 80.00 80.00 80.00	Truckidad, 1.0.0. plant	Cents per pound	90.00	60.25	68.75	39.00	39.00	
Certain, eucloie, 100 ACAC test, drams, less truckload, delivered Dollars per pound 1.50 1.50 1.54 1.68 1.70 Glue, bone, extracted, green, 85 jellygrams, bags, carload Cents per pound 95.00 95.00 95.00 94.00 89.00 Glycerine, natural, refined, U.S. Pharmacopeia, 99.7-percent, tanks, delivered Cents per pound 79.00 75.92 64.00 56.63 64.08 See footnotes and definitions at end of table. Centinued Centinued Centinued	Colatin edible 100 AOAC test drume loss	Cents per pound	75.00	//.33	79.00	79.00	/9.00	
Glue, bone, extracted, green, 85 jellygrams, Donars per pound 1.50 1.50 1.54 1.68 1.70 Glue, bone, extracted, green, 85 jellygrams, bags, carload Cents per pound 95.00 95.00 94.00 89.00 Glycerine, natural, refined, U.S. Pharmacopeia, 99.7-percent, tanks, delivered Cents per pound 79.00 75.92 64.00 56.63 64.08 See footnotes and definitions at end of table.	truckload delivered	Dollars par pound	1 50	1 50	1 5 4	1.00	1 70	
bags, carload Cents per pound 95.00 95.00 94.00 89.00 Glycerine, natural, refined, U.S. Pharmacopeia, 99.7-percent, tanks, delivered Cents per pound 79.00 75.92 64.00 56.63 64.08 See footnotes and definitions at end of table. Cents per pound 79.00 75.92 64.00 56.63 64.08	Glue hone extracted areas 85 jellugrame	Donais per pourio	1.50	1.50	1.54	1.08	1.70	
Glycerine, natural, refined, U.S. Pharmacopeia, 99.7-percent, tanks, delivered Cents per pound 79.00 75.92 64.00 56.63 64.08 See footnotes and definitions at end of table. Cents per pound 79.00 75.92 64.00 56.63 64.08	baos, carload	Cents per pound	95.00	05 00	05.00	04.00	<u>80 00</u>	
99.7-percent, tanks, delivered Cents per pound 79.00 75.92 64.00 56.63 64.08 See footnotes and definitions at end of table.	Givcerine, natural, refined U.S. Pharmaconeia	Course hor horing	33.00	33.00	90.00	54.00	09.00	
See footnotes and definitions at end of table.	99.7-percent, tanks, delivered	Cents per pound	79 00	75 92	64 00	56 62	64 08	
	See footnotes and definitions at end of table	her hours	,		V-7.VV	00.00	ntinuad	

Table 27Selected prices for biobased chemicals and derivatives 1/continu
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	······································	Average annual price 2/					
Item	Unit	1989	1990	1991	1992	1993	
Guar gum, industrial, high viscosity, bags,							
carload, f.o.b. shipping point	Cents per pound	35.00	35.00	35.00	35.00	35.00	
Juniperberry oil, Italian	Dollars per kilogram	95.00	91.83	179.25	228.83	264.00	
Karaya gum, No. 1, powdered, drums	Dollars per pound	3.50	3.31	3.25	3.25	3.25	
Lactic acid, technical, 88-percent, tankcar,							
freight equaled	Cents per pound	1.03	1.03	1.03	1.03	1.03	
Lanolin, anhydrous, pharmaceutical,	D H						
400-pounds drums, works	Dollars per pound	0.90	1.01	1.00	1.25	1.25	
Lauric acio, commercial, pure, bags, truckload	Cents per pound	57.67	62.50	57.25	62.38	65.00	
Lecturin, unbreached, buik, tess carbad, works	Cents per pound	37.00	35.00	29.00	28.00	25.75	
Menhaden oil, bulk, Gulf ports	Cents per pound	11.33	10.94	4.75	4.70	4.03	
Menthol, natural, Chinese, drums	Dollars per kilogram	24.50	24 02	18.68	19.65	11.24	
Myristic acid, commercial, pure, bags, truckload	Dollars per pound	0.88	0.79	0.67	1.10	1.25	
Neatsfoot oil, 20 degrees F, drums, truckload,							
f.o.b. Philadelphia	Cents per pound	54.00	62.00	70.00	70.83	65.63	
1-Octadecanol, synthetic, tanks, f.o.b.	Cents per pound	76.17	92.50	92.50	92.50	92.50	
Oiticica oil, liquid, drums	Cents per pound	47.17	48.50	51.00	75.08	80.83	
Oleic acid, double distilled (white), tanks	Cents per pound	54.00	54.00	54.00	54.00	60.42	
Pectin, nigh methoxyl Belargenia acid avathatia tanka fa h	Dollars per pound	3.30	3.30	3.30	4.03	4.75	
freight allowed	Conta nor pound	07.00	07.00	07.00	07.00	100 50	
Pine oil 80-percent minimum alcohol content	Cents per pound	97.00	97.00	97.00	97.00	103.50	
bulk, f.o.b. works	Cents ner nound	60 50	68 33	72.00	72.00	76 67	
Pyrethrum, purified, 20-percent pyrethrins.	Callia hai honun	00.50	00.00	72.00	72.00	/0.0/	
drums, works	Dollars per pound	37.50	37.50	37.00	37.00	37.00	
Quinine hydrochloride, National Formulary,		01.00	07.00	07.00	07.00	07.00	
1,000-ounce drums, 2,000 ounces or more	Dollars per ounce	2.33	2.30	2.30	2.37	2.50	
Quinine sulfate, U.S. Pharmacopeia XVIII,							
1,000-ounce drums, 2,000-ounces or more	Dollars per ounce	2.33	2.12	2.10	2.17	2.30	
Rose oil, natural, National Formulary,							
Bulgarian otto, botties	Dollars per kilogram	7,575	7,600	5,308	5,060	5,060	
drume worke	On the second	~~ ~~					
Sandalwood oil East Indian	Cents per pound	38.00	38.00	51.00	51.00	51.00	
Sebacic acid, chemically pure bags	Dollars per kilogram	169.58	170.00	197.08	181.67	248.72	
carload, works	Dollars per pound	1 98	2.05	2.05	2.05	2.05	
Sodium lauryl sulfate, 30-percent, drums,	boliaio poi pouna	1.50	2.00	2.00	2.00	2.05	
truckload, f.o.b. works	Cents per pound	38.33	43.00	43.00	43.00	47 75	
Sorbitol, U.S. Pharmacopeia, regular, 70-percent	· ·····			10.00	10.00	47.70	
aqueous, drums, carload, f.o.b. shipping point	Cents per pound	39.58	40.17	33.29	33.00	33.00	
Stearic acid, single pressed, bulk	Cents per pound	37.00	38.17	36.00	37.42	44.00	
Sucrose, refined, white, bags, carload, f.o.b.							
refinery, east	Cents per pound	35.28	36.00	36.00	36.00	36.00	
Sucrose acetate isobutyrate, 90-percent, drums,							
truckidad, delivered Sucrose acta-acetato, depaturing grado	Dollars per pound	1.33	1.33	1.33	1.33	1.33	
100-pound drume fob worke	Dellers per kilegrem	10 50	10.50	10 50	40.50		
Tall oil crude. Southeast taoks works	Dollars per kilogram	12.50	12.50	12.50	12.50	12.50	
freight equaled	Dollars per top	140.00	125 /2	150 17	150.92	110 17	
Tallow fatty acids, technical, tanks, delivered	Cents per ton	29.00	20.00	24.88	150.63	119.17	
Tannic acid, National Formulary, fluffy, barrels,	conto por pound	29.00	2.9.00	24.00	23.50	23.50	
1,000-pound lots	Dollars per pound	6.09	6.09	6.09	6.09	6.09	
Tragacanth gum, No. 1, ribbons, 100-pound drums	Dollars per pound	36.00	36.00	36.00	36.00	36.83	
Turpentine, crude sulfate, tanks, f.o.b.	• • • •						
Southeast works	Dollars per gallon	2,05	1.75	1.36	0.88	0.68	
Undecylenic acid, 425-pound drums, 5,000 pounds						=	
or more, f.o.b. works	Dollars per pound	3.00	3.30	3.30	3.30	3.30	
Vanimin, U.S. Pharmacopeia, drums, f.o.b. works	Dollars per pound	7.08	7.25	7.30	7.30	6.90	
fob works	0 "		_				
	Dollars per pound	5,65	5.65	5.65	5.65	5.74	

See next page for footnotes and definitions.

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1/ Spot and/or list prices from the *Chemical Marketing Reporter* for selected chemicals and related materials on a New York or other indicated basis. These prices do not represent bid, asked, or actual transaction prices. Variations from these prices may occur for differences in quantity, quality, and location.

2/ Some prices are from the low end of a range.

Chemical definitions:

Aluminum stearate is made by reacting aluminum salts with stearic acid for use in paints and varnishes, lubricants and greases, cosmetics, pharmaceuticals, and as a waterproofing agent and cement additive.

Anise seed oil is distilled from anise seed for use in perfumes, flavors, licorice candies, and color photography.

Arabic gum is a dried, water-soluble exudate from the stems of *Acacia senegal* and related species that is used in pharmaceuticals, adhesives, inks, textile printing, cosmetics, and confectionery and food products.

Bacitracin is produced by Bacillus subtilis for use as an antibacterial agent and feed supplement.

Bay oil is an essential oil obtained from bay leaves for use in fragrances and flavors.

Beeswax is a byproduct of honey production used for cosmetics and candles.

Bergamot oil is an essential oil used in perfumes.

Butyl oleate is obtained by alcoholysis of olein or esterification of oleic acid with butanol for use in coatings, polishes, and water-proofing compounds, and as a plasticizer for polyvinyl chloride.

Butyl stearate is obtained by alcoholysis of stearin or esterification of stearic acid with butanol for use in polishes, special lubricants, and coatings and as a plasticizer and emollient in cosmetics and pharmaceuticals.

Calcium gluconate is made by the neutralization of gluconic acid, a glucose derivative, with lime for use in vitamin tablets and as a buffer and sequestering agent.

Camphor is obtained by steam distilling camphor tree (*Cinnamomum camphora*) wood for use in medicines, insecticides, and moth and mildew proofings, and as a plasticizer for cellulose nitrate.

Capric acid is a fatty acid obtained from coconut oil that is used as a base for wetting agents and intermediate chemicals.

Capryl alcohol is obtained by distilling sodium ricinoleate, a castor oil derivative, with an excess of sodium hydroxide for solvents, plasticizers, wetting agents, and petroleum additives.

Caprylic acid is a fatty acid obtained from coconut oil for use in synthesizing dyes, drugs, perfumes, antiseptics, and fungicides.

Carboxymethylcellulose is produced by reacting cellulose with sodium chloroacetate for food, cosmetics, paper products, and drilling muds.

Carnauba wax is a hard commercial wax obtained from leaves of *Copernica cerifera* for shoe, furniture, and floor polishes; leather finishes; varnishes; electric-insulating compounds; and carbon paper.

b-Carotene is extracted from carrots and palm-oil concentration for pharmaceuticals, butter and margarine coloring, and a feed and food additive.

Casein is a coagulated and dried milk protein for adhesives and plastics.

Cedarwood oil is an essential oil distilled from Juniperus virginiana for perfumes.

Cellulose acetate is made by reacting cellulose from wood with acetic acid for rayon textiles and cigarette filters.

Corn syrup is made by hydrolysis of cornstarch for use as a sweetener, thickener, or bodying agent in soft drinks.

Cube root contains rotenone, which is used in insecticides, flea powders, fly sprays, and moth-proofing agents.

Denatured ethyl alcohol is made by yeast fermentation of carbohydrates or by hydrolysis of ethylene for solvents, cosmetics, and as an oxygenated gasoline additive.

Dextrin is obtained by heating acidified dry starch for adhesives and paper products.

Dextrose is obtained from cornstarch hydrolysis for use in foods and as a fermentation substrate.

Dibutyl sebacate is a sebacic acid ester used in dielectric liquid, cosmetics, and perfumes, and as a plasticizer and rubber softener.

Diglycol laurate is a lauric acid ester used to size and finish textiles, paper, and leather, and as an emulsifying agent for oils and hydrocarbon solvents.

Diglycol stearate is a stearic acid ester used as a emulsifying agent for oils, solvents, and waxes, and a lubricating agent for paper and cardboard.

Ethyl vanillin is chemically modified vanillin from lignin for food flavoring.

Fir oil is steam distilled from Picea nigra for perfumes.

Fructose is derived from beet sugar or cornstarch for foods and medicines.

Furfural is obtained by steam distillation of acidified plant materials for polymers and foundry binders.

Gelatin is water extracted from bones and hides for photographic emulsions and food.

Glue (bone) is obtained by steam treatment and water extraction of bones for glue and mineral flotation processes.

Glycerine is a byproduct of splitting or saponification of fats and oils, or made by petrochemical synthesis for cosmetics, food, drugs, and polyurethane polymers.

Guar gum is a water-soluble plant mucilage used in paper coatings, cosmetics, and pharmaceuticals, and as a food thickener and emulsifier.

Juniperberry oil is obtained from the dried fruit of juniper trees for use in gin, liqueurs, and medicines.

Karaya gum is a hydrophilic polysaccharide from Indian trees of the genus *Sterculia* for use in pharmaceuticals, textile coatings, ice cream and other food products, and adhesives.

Lactic acid is obtained by fermenting starch, whey, molasses, etc. for use in cultured dairy products, plasticizers, adhesives, pharmaceuticals, and in dyeing wool.

Lanolin is extracted from wool for cosmetics, leather dressing, and lubricants.

Lauric acid is the major fatty acid in coconut oil (45 to 50 percent), which is used in alkyd resins, wetting agents, soaps, detergents, and cosmetics.

Lecithin is a byproduct of soy oil extraction used as an emulsifying agent and antioxidant in foods.

Locust bean gum is a polysaccharide plant mucilage from seeds of *Ceratonia siliqua* used in cosmetics, textiles sizings and finishes, and drilling fluids, and in foods as a stabilizer, thickener, and emulsifier.

Menhaden oil is obtained from menhaden fish for soaps, rubber compounding, printing inks, animal feed, and leather-dressing lubricants.

Menthol is derived by freezing peppermint oil or hydrogenation of thymol for perfumes, cigarettes, liquors, and chewing gum.

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Myristic acid is obtained by fractional distillation of coconut and other vegetable oils for soaps, cosmetics, and synthesis of esters for flavors and perfumes.

Neatsfoot oil is extracted from the feet/hoofs of slaughtered animals for specialty leather dressings.

1-Octadecanol is made by the reduction of stearic acid for perfumes, cosmetics, intermediate chemicals, surfactants, lubricants, and resins.

Oiticica oil is expressed from seeds of the Brazilian oiticica tree for use as a drying oil in paints and varnishes.

Oleic acid is obtained by fractional crystallization from mixed fatty acids for candles, soaps, and synthesis of other surfactants.

Pectin is obtained from citrus fruit rinds for use in jellies, foods, cosmetics, and drugs.

Pelargonic acid is obtained by oxidation of nonyl alcohol or nonyl aldehyde or oxidative cleavage of erucic acid, the dominant fatty acid in crambe and industrial rapeseed oils, for use in lacquers, plastics, pharmaceuticals, synthetic flavors and odors, and flotation agents.

Pine oil is obtained by steam distillation from pine stumps or synthesized from turpentine for household cleansers, coated paper, mineral flotation, and perfume.

Pyrethrum is extracted from chrysanthemum flowers native to Kenya, Ecuador, and Japan for use in household insecticides.

Quinine hydrochloride and quinine sulfate are obtained from cinchona bark for use as a antimalarial agent in medicine and a flavoring in carbonated beverages.

Rose oil is an essential oil from roses used in perfumes and flavorings.

Rotenone resin is extracted from derris and cube root for insecticides, flea powders, fly sprays, and moth-proofing agents.

Sandalwood oil is an essential oil used in fragrances, perfumes, and flavorings.

Sebacic acid is made by high-temperature cleavage of castor oil for use as an intermediate chemical in the manufacture of polymers and plasticizers.

Sodium lauryl sulfate is synthesized from fatty acids for use in toothpaste and as a food additive and wetting agent for textiles.

Sorbitol is obtained by hydrogenation of glucose for foods, cosmetics, and polyester polymers.

Stearic acid is obtained by hydrogenation of oils and fats for lubricating greases, soaps, and lubricants.

Sucrose is obtained from sugar beets and sugarcane for use in foods, soft drinks, pharmaceuticals, and chemical intermediates for detergents.

Sucrose acetate isobutyrate is made by controlled esterification of sucrose with acetic and isobutyric anhydrides for hot-melt coating formulations and extrudable plastics.

Sucrose octa-acetate is used as a plasticizer for cellulose esters and plastics, and in adhesive and coating compounds.

Tall oil (crude) is a byproduct of paper production (chemical pulping) for refining into rosin and fatty acids.

Tallow fatty acids are made from splitting tallow for direct use as lubricants or in greases, and for separation into pure fatty acids.

Tannic acid is extracted from powdered nutgalls with water and alcohol for use in chemicals, tanning, textile mordants and fixatives, and electroplating.

Tragacanth gum is polysaccharides from Astragalus bushes for use in pharmaceutical emulsions, adhesives, leather dressing, textile printing and sizing, dyes, and printing inks.

Turpentine (crude sulfate) is obtained by steam distillation of pine gum recovered from pulping softwoods (for paper production), which is used for alpha and beta pinene.

Undecylenic acid is made by destructive distillation of castor oil for perfumes, flavorings, plastics, plasticizers, and lubricant additive.

Vanillin is extracted from vanilla bean or derived from lignin for use in perfumes, flavorings, and pharmaceuticals.

Xanthan gum is a synthetic, water-soluble polymer made by fermentation of carbohydrates for use in drilling fluids, ore floatation, foods, and pharmaceuticals.

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