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PRODUCTION OF CONCENTRATED MILK, CANADA, DECEMBER, 1936

Statistics of the production of concentrated milk in Canada in December, 1936, are based on returns from the thirty-five firms whose factories manufactured during the month any of the various items included in the classification "concentrated milk", viz., condensed milk, evaporated milk, milk powder, etc.

Production.- The manufacture of all items of concentrated milk, combined, in the month of December, amounted to 6,835,241 pounds, an increase over the preceding month of 432,710 pounds, or 7 per cent, and an increase over December, 1935, of 1,652,864 pounds, or 32 per cent. This is the largest production recorded for December in any one of the past seven years.

Cumulative Production.- The combined production of all items of concentrated milk in the 12 months ended December 31, 1936, was 108,500,480 pounds, compared with a total of 104,752,550 pounds in the corresponding period of 1935.

Foreign Trade.- The export of concentrated milk products in December was slightly above that of the preceding month and larger also than the export of December, 1935. Evaporated milk, the principal item, shows an increase of 369,500 pounds, or 69 per cent over December of last year, but the exports of condensed milk and milk powder were less.

Storage Holdings.- Little change is shown in total storage stocks at date of January 1, in comparison with December 1 or with January 1, 1936. The total for all items, combined, at date of January 1 was 12,014,046 pounds, compared with 12,293,684 pounds at December 1, and with 12,958,436 pounds at January 1, 1936. The principal items are evaporated milk and skim milk powder.

1. Concentrated Milk Production for December, 1936, with Comparative Statistics for November, 1936 and December, 1935.

Kind	December, 1936 Lb.	November, 1936 Lb.	December, 1935 Lb.
Condensed milk (sweetened)			
Case goods	296,415	409,055	310,143
Bulk goods	248,345	209,923	191,664
Condensed skim milk.....	274,095	328,379	367,891
Evaporated milk (unsweetened)			
Case goods	4,437,236	3,817,023	2,912,531
Bulk goods	11,367	11,610	17,644
Evaporated skim milk	13,152	11,100	8,000
Whole milk powder	110,049	164,767	109,959
Skim milk powder	1,177,648	1,178,219	1,044,954
Cream powder	4,810	2,170	1,979
Buttermilk powder	184,640	127,903	150,104
Condensed buttermilk	25,779	45,534	-
Casein	40,585	85,178	62,618
Sugar of milk	11,120	11,670	4,890
TOTAL	6,835,241	6,402,531	5,182,377

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The following is a summary of the work done during the course of this investigation. The details of the experimental procedure and the results obtained are given in the following pages.

The first part of the work was devoted to the synthesis of the compound described in the title. This was accomplished by the reaction of _____ with _____ in the presence of _____ as a catalyst. The reaction was carried out at _____ degrees Celsius for _____ hours. The product was purified by _____ and its identity was confirmed by _____ analysis.

The second part of the work was devoted to the study of the properties of the compound. It was found that the compound is soluble in _____ and insoluble in _____. It has a melting point of _____ degrees Celsius. The infrared spectrum of the compound shows a strong absorption at _____ cm⁻¹, which is characteristic of _____ groups. The NMR spectrum shows a multiplet at _____ ppm, which is characteristic of _____ protons.

The results of this investigation are summarized in the following table:

Property	Value	Notes
Melting Point	_____ °C	_____
Boiling Point	_____ °C	_____
Refractive Index	_____	_____
Density	_____ g/cm ³	_____
IR (cm ⁻¹)	_____	_____
NMR (ppm)	_____	_____
Elemental Analysis	C: _____, H: _____, N: _____	_____

2. Cumulative Production of Concentrated Milk for the Twelve Months ended December 31, 1936, with Comparative Statistics for the Twelve Months ended December 31, 1935.

Kind	Twelve Months ended December 31	
	1 9 3 6 Lb.	1 9 3 5 Lb.
Condensed milk: (Sweetened)		
Case goods	4,808,910	5,683,466
Bulk goods	2,952,135	3,227,778
Condensed skim milk	4,450,440	3,981,593
Evaporated milk: (Unsweetened)		
Case goods	70,662,528	66,220,181
Bulk goods	225,945	212,570
Evaporated skim milk	149,827	139,622
Whole milk powder	3,029,057	2,421,093
Skim milk powder	17,879,176	18,671,798
Cream powder	82,540	24,109
Buttermilk powder	2,508,991	2,602,791
Condensed buttermilk	666,558	356,424
Casein	958,704	1,067,055
Sugar of milk	125,669	144,070
TOTAL	108,500,480	104,752,550

3. Production by Months of Condensed Milk, Evaporated Milk and Skim Milk Powder for the period January to December, 1936.

Month	Condensed Milk		Evaporated Milk		Skim Milk Powder Lb.
	Case Goods Lb.	Bulk Goods Lb.	Case Goods Lb.	Bulk Goods Lb.	
January	410,957	177,354	2,696,802	12,391	1,058,806
February	338,703	192,641	2,038,030	25,770	833,961
March	395,418	264,631	4,452,383	17,343	1,024,604
April	391,344	188,564	5,923,752	14,865	1,301,842
May	509,406	311,737	7,760,047	12,305	2,008,482
June	415,809	146,606	9,134,398	53,146	2,605,154
July	358,923	182,993	8,326,951	20,881	2,146,108
August	599,760	192,408	7,479,980	9,306	1,826,126
September	174,828	456,177	7,415,505	22,194	1,453,404
October	508,292	380,756	6,180,421	14,767	1,264,822
November	409,055	209,923	3,817,023	11,610	1,178,219
December	296,415	248,345	4,437,236	11,367	1,177,648

4. Imports and Exports of Concentrated Milk Products, December, 1936, with Comparative Statistics for November, 1936 and December, 1935 (a).

Kind	Quantity Imported			Quantity Exported		
	December 1936 Lb.	November 1936 Lb.	December 1935 Lb.	December 1936 Lb.	November 1936 Lb.	December 1935 Lb.
Condensed milk	(b)	648	300	72,200	176,800	102,600
Evaporated milk	-	-	-	908,100	889,000	538,600
Milk powder	(b)	20,191	298	372,400	333,200	489,900
Casein	(b)	38,146	18,226	-	2,800	-

5. Concentrated Milk Products in Cold Storage Warehouses, January 1, 1937, with Comparative Statistics for December 1, 1936 and January 1, 1936 (c)

Kind	January 1, 1937 Lb.	December 1, 1936 Lb.	January 1, 1936 Lb.
Condensed milk	482,415	521,460	457,701
Condensed skim milk	111,095	178,814	452,904
Evaporated milk	9,507,936	9,138,375	9,356,829
Evaporated skim milk	-	35,373	-
Whole milk powder	512,501	648,103	591,614
Skim milk powder	1,315,367	1,634,955	1,814,661
Buttermilk powder	38,172	57,967	-
Cream powder	7,549	7,143	8,202
Casein	39,011	71,494	276,525

- (a) External Trade Branch - "Imports and Exports of Milk and Its Products and Eggs"
- (b) Not yet available.
- (c) Agricultural Branch - "Cold Storage Holdings in Canada".

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