

Doc. 2938 Evid

Folder 9

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GENERAL HEADQUARTERS  
SUPREME COMMANDER FOR THE ALLIED POWERS  
Public Health & Welfare Section

#2938

7 October 1946

SUBJECT: Survey of Production, Manufacture and Distribution of Narcotic Drugs and Preparations by the Dai Nippon Pharmaceutical Company, Limited (Dai Nippon, Seiyaku Kabushiki Kaisha), Main Office 25, 3-chome, Doshumachi, Higashiku, Osaka, Japan.

1. The following information relative to the Dai Nippon Pharmaceutical Company, Limited, (Dai Nippon, Seiyaku Kabushiki Kaisha) Main Office, located 25, 3-chome, Doshumachi, Higashiku, Osaka, Japan was furnished by R. Okazawa, Acting Director of the Tokyo Branch, Kogiro Saito, Chief Clerk of the Tokyo Branch and Shoroku Iwashi, Pharmaceutical Chemist at the Osaka Laboratories.

2. The Dai Nippon Company was founded in May 1897 at Osaka, Japan under the name of The Osaka Pharmaceutical Company (THE OSAKA SEIYAKU KAISHA), with a capitol stock of ¥ 1,000,000, for the manufacture of official and non official remedies. In 1899 The Osaka Pharmaceutical Company became known as the Dai Nippon Company, Limited, (Dai Nippon Seiyaku Kabushiki Kaisha). The capitol stock was increased from time to time and in 1945 reached a peak of ¥-7,500,000.

3. The Dai Nippon Company manufactured a full line of pharmaceutical preparations but their production of narcotic drugs began in 1917, and continued until 12 October 1945 when SCAP issued a DIRECTIVE prohibiting the manufacture of narcotic drugs.

4. In addition to the factories and branch offices owned and operated by the Dai Nippon Company in Japan proper, in May 1943 they organized the Gowa Pharmaceutical Company, Limited, (GOWA Seiyaku Kabushiki Kaisha) located 36, Fukuzu Street, Changkiakow, Mongolia, with a paid up capitol stock of ¥ 2,000,000, of which 50 % was owned by the Dai Nippon Company. The Gowa Company manufactured and sold preparations of EPHEDRINE.

5. In June 1944 the Dai Nippon Company organized the Greater Manchurian Pharmaceutical Company, Limited, (Daiman Seiyaku Kabushiki Kaisha) located 902 Wajungai Wajunku, Shinkiang, Manchuria with a paid up capitol stock of ¥ 2,000,000. The entire stock was owned by the Dai Nippon Company. The Greater Manchurian Pharmaceutical Company, manufactured INDUSTRIAL CHEMICALS AND NON-NARCOTIC MEDICINAL PREPARATIONS. Both of these foreign factories became a TOTAL LOSS TO the Dai Nippon Company following the surrender of Japan.

6. On 15 June 1946 the following personnel comprised the Board of Directors of the Dai Nippon Company:

Isamu Takino,	President
Ryoji Takino,	Managing Director
Shigenobu Inagaki,	Managing Director
Gisaburo Shiono,	Director
Gohei Tanabe,	Director
Chobei Takeda,	Director *
Junkichi Toyoshima	



Ichibei Ono,  
Yasuzo Konishi,  
Masuzo Mori,

Auditor  
Auditor  
Auditor

\* Chobei Takeda is the PRESIDENT of the Takeda  
Pharmaceutical Company, Limited, Osaka, Japan.

7. As of June 1946 the Dai Nippon Company owned and operated the following drug manufacturing plants and branch offices:

- a. Factory. Located, 1 Kemi-2-chome, Ebie, Fukushima, Osaka. Here they produced Heroin Hydrochloride, Morphine hydrochloride, Codeine Phosphate, Residue of Opium, Camphorated Tincture of Opium (Paregoric) and Dover's Powder.
- b. Factory. Located, 1589 Enokizaka, Tarumi, Suita, Osaka Prefecture. Tablets and other NON-narcotic Preparations.
- c. Factory. Located, 14 Nozakicho, Kitaku, Osaka. Tablets and other NON-narcotic preparations.
- d. Main Office. Located, 25, 3 chome, Doshumachi, Higashiku, Osaka.
- e. Factory. Located, 186, 4-chome, Yanakahasunecho, Shitayaku, Tokyo. Tincture of Opium, Camphorated Tincture of Opium, Dover's Powder and Galenical Preparations.
- f. Factory. Located, 2183 Shimura Hasunecho, Itabashiku, Tokyo. Non-narcotic Galenical Preparations.
- g. Branch Office. Located, 716, 2-chome, Honcho, Nihonbashi-ku, Tokyo.
- h. Branch Office. Located, 10 Nishi-8-chome, Minami-Sanjo, Sapporo, Japan.

8. The factory located, 1 Kemi-2-chome, Ebie, Fukushima, Osaka, Japan manufactured and produced all the morphine hydrochloride and heroin hydrochloride sold by the Dai Nippon Company. From 1930 thru 1945 the Dai Nippon Company (Exclusive of its foreign branches, which records are not available) sold ¥ 97,559,553 OF NON-NARCOTIC DRUGS AND PREPARATIONS and ¥ 11,695,126 OF NARCOTIC DRUGS AND PREPARATIONS THEREOF. During this period the NARCOTIC SALES AVERAGED 10.81 % of total sales. This information is set out in detail in tables (1) thru (3). See pages (3) thru (4).



TABLE NUMBER (1)

ANNUAL AMOUNT OF SALES

<u>YEAR</u>	<u>TOKYO FACTORIES</u> <u>NON NARCOTIC</u> <u>IN YEN</u>	<u>TOKYO FACTORIES</u> <u>NARCOTICS</u> <u>IN YEN</u>	<u>TOTAL</u>
1930	1,093,770	28,003	1,121,773
1931	989,113	113,812	1,102,925
1932	995,603	155,861	1,151,464
1933	1,192,420	134,883	1,327,303
1934	1,291,342	147,511	1,438,853
1935	1,373,357	94,501	1,467,858
1936	1,351,584	97,790	1,449,374
1937	2,076,633	135,413	2,212,046
1938	2,366,870	97,692	2,464,562
1939	2,893,662	70,306	2,963,968
1940	3,144,136	62,637	3,206,773
1941	3,974,505	108,042	4,082,547
1942	5,084,023	47,842	5,131,865
1943	5,101,691	69,055	5,170,746
1944	5,119,168	57,898	5,177,066
1945	1,348,419	7,668	1,356,087
<u>16 YEARS</u>	<u>39,396,296</u>	<u>1,428,914</u>	<u>40,825,210</u>

TABLE NUMBER (2)

ANNUAL AMOUNT OF SALES

<u>YEAR</u>	<u>OSAKA FACTORIES</u> <u>NON NARCOTIC</u> <u>IN YEN</u>	<u>OSAKA FACTORIES</u> <u>NARCOTICS</u> <u>IN YEN</u>	<u>TOTAL</u>
1930	681,749	748,160	1,429,909
1931	1,159,606	554,145	1,713,751
1932	1,032,240	717,551	1,749,791
1933	1,512,996	834,423	2,347,419
1934	1,942,173	690,807	2,632,980
1935	1,783,747	719,705	2,503,452
1936	2,006,397	483,081	2,489,478
1937	2,382,621	599,153	2,981,774
1938	2,899,561	653,609	3,553,170
1939	3,968,206	605,855	4,574,061
1940	4,067,377	580,268	4,647,645
1941	7,860,179	1,069,264	8,929,443
1942	6,474,705	615,303	7,090,008
1943	7,641,932	585,617	8,227,549
1944	6,986,770	441,417	7,428,187
1945	5,762,998	165,265	5,928,263
<u>16 YEARS</u>	<u>58,163,257</u>	<u>10,333,623</u>	<u>68,496,880</u>



TABLE NUMBER (3)

ANNUAL AMOUNT OF SALES

<u>YEAR</u>	<u>ALL FACTORIES NON NARCOTIC IN YEN</u>	<u>ALL FACTORIES NARCOTICS IN YEN</u>	<u>TOTAL ANNUAL SALES ALL PURPOSES IN YEN</u>
1930	1,775,519	709,752	2,485,271
1931	2,148,719	667,957	2,816,676
1932	2,027,843	872,412	2,900,255
1933	2,705,416	969,306	3,674,722
1934	3,233,515	838,318	4,071,833
1935	3,157,104	814,206	3,971,310
1936	3,357,981	580,871	3,938,852
1937	4,459,254	734,566	5,193,820
1938	5,266,431	751,301	6,017,732
1939	6,861,868	676,161	7,538,029
1940	7,211,513	642,905	7,854,418
1941	11,834,684	1,177,306	13,011,990
1942	11,558,728	663,145	12,221,873
1943	12,743,623	924,672	13,668,295
1944	12,105,938	499,315	12,605,253
1945	7,111,417	172,933	7,284,350
<u>16 YEARS</u>	<u>97,559,553</u>	<u>11,695,126</u>	<u>108,254,679</u>



9. The following information relative to the manufacture, sale and distribution of the narcotic drugs produced by the Dai Nippon Company was furnished this section by R. Okazawa, Acting Director of the Tokyo Branch, Kogiro Saito, Chief Clerk, of the Tokyo Branch, Shoroku Iwashi, Pharmaceutical Chemist, Osaka Laboratories and Tokujiro Miyatake, Charge of Production of the Osaka Factories. For convenience this information is segregated as to the narcotic drugs and preparations produced by the Osaka and Tokyo factories and set out in the following tables.

TABLE NUMBER (4)

PURCHASES FOR OSAKA FACTORIES

<u>YEAR</u>	<u>CRUDE OPIUM PURCHASED GRAMS</u>	<u>PERCENTAGE MORPHINE CONTENT</u>	<u>RAW MORPHINE PURCHASED GRAMS</u>	<u>PERCENTAGE MORPHINE CONTENT</u>
1930	4,012,800	15.65	450,000	66.34
1931	3,363,210	15.61	135,000	69.49
1932	4,020,900	14.93	460,986	68.2
1933	5,594,000	13.5	460,000	66.84
1934	5,397,500	13.52	430,000	66.16
1935	5,807,783	12.76	460,000	66.07
1936	4,284,071	14.2	300,000	69.13
1937	5,124,374	12.69	893,333	70.48
1938	1,035,005	13.71	427,629	65.95
1939	1,789,584	10.51	1,037,480	63.93
1940	1,745,289	10.97	922,022	66.49
1941	1,026,246	11.19	1,185,428	73.60
1942	8,263,910	10.0	176,026	78.51
1943	7,230,551	10.37	000,000	00.00
1944	2,089,205	10.88	000,000	00.00
1945	6,302,688	12.34	16,000	66.31
<u>16 YEARS</u>	<u>67,092,116 *</u>	<u>202.83 **</u>	<u>7,353,904 ***</u>	<u>****</u>

\* Purchased from the Hygienic Laboratory, Tokyo, for the entire organization.

\*\* The MORPHINE CONTENT averaged 12.67 Per Cent.

\*\*\* Purchased from the Formosan Opium Monopoly Bureau thru Tokyo Hygienic Laboratory for the entire organization.

\*\*\*\* THE MORPHINE CONTENT averaged 68.39 Per Cent.



TABLE NUMBER (5)

PRODUCTION OF OPIUM ALKALOIDS  
OSAKA FACTORIES

<u>YEAR</u>	<u>MORPHINE HYDROCHLORIDE</u> <u>GRAMS</u>	<u>HEROIN HYDROCHLORIDE</u> <u>GRAMS</u>	<u>CODEINE PHOSPHATE</u> <u>GRAMS</u>
1930	500,000	400,000	2,247
1931	170,100	671,000	7,175
1932	229,500	823,000	0,000
1933	250,000	651,000	374,845
1934	250,000	651,000	333,200
1935	230,316	651,000	340,640
1936	250,000	516,824	149,715
1937	330,650	850,542	339,200
1938	215,692	325,500	000,000
1939	250,000	325,500	420,000
1940	250,000	325,500	458,000
1941	237,050	325,500	000,000
1942	250,000	315,500	850,250
1943	144,680	152,530	411,750
1944	163,890	124,800	150,000
1945	36,000	000,000	110,000
<u>16 YEARS</u>	<u>3,757,878</u>	<u>7,109,196</u>	<u>3,947,022</u>

TABLE NUMBER (6)

<u>YEAR</u>	<u>POWDERED OPIUM</u> <u>PURCHASED FROM</u> <u>THE HYGIENIC</u> <u>LABORATORY,</u> <u>OSAKA</u> <u>FOR ALL</u> <u>PURPOSES</u> <u>GRAMS</u>	<u>TINCTURE</u> <u>OF OPIUM</u> <u>PRODUCED</u> <u>GRAMS</u>	<u>POWDERED OPIUM</u> <u>USED IN THE</u> <u>MANUFACTURE</u> <u>OF TINCTURE</u> <u>OPIUM</u> <u>GRAMS</u>	<u>TINCTURE OF</u> <u>BENZOATE</u> <u>OF OPIUM</u> <u>PRODUCED</u> <u>GRAMS</u>	<u>POWDERED OPIUM</u> <u>USED IN THE</u> <u>MANUFACTURE</u> <u>OF TINCTURE</u> <u>BENZOATE</u> <u>OF OPIUM</u> <u>GRAMS</u>
1930	67,500	224,000	22,500	000,000	000,000
1931	180,000	1,003,000	100,300	490,000	2,450
1932	187,500	1,187,500	118,750	252,500	1,262
1933	275,000	1,550,000	152,000	747,500	3,737
1934	300,000	1,260,000	125,000	000,000	000,000
1935	250,000	1,430,000	143,000	100,000	0,500
1936	250,000	1,564,000	157,000	1,100,000	5,500
1937	200,000	1,300,000	130,000	000,000	000,000
1938	300,000	1,247,575	124,800	000,000	000,000
1939	400,000	1,968,625	200,000	500,000	2,500
1940	300,000	1,597,500	160,000	000,000	000,000
1941	400,000	2,399,500	240,000	500,000	2,500
1942	250,000	1,150,000	115,000	000,000	000,000
1943	311,300	1,569,400	157,000	000,000	000,000
1944	150,700	715,000	75,000	000,000	000,000
1945	150,000	825,000	82,500	000,000	000,000
<u>16 YEARS</u>	<u>3,972,000</u>	<u>20,991,100</u>	<u>2,102,850</u>	<u>3,690,000</u>	<u>18,449</u>



TABLE NUMBER (7)

<u>YEAR</u>	<u>DOVER'S POWDER PRODUCED OSAMA, FACTORY GRAMS</u>	<u>POWDERED OPIUM USED IN THE MANUFACTURE OF DOVER'S POWDER GRAMS</u>
1930	746,000	75,000
1931	694,425	69,750
1932	894,775	89,750
1933	946,525	95,015
1934	1,288,275	129,485
1935	742,050	74,500
1936	887,725	89,500
1937	695,300	70,000
1938	1,736,900	175,000
1939	1,618,375	163,000
1940	2,223,725	224,500
1941	2,058,550	207,500
1942	1,338,900	135,000
1943	1,534,000	154,300
1944	748,075	75,700
1945	675,000	67,500
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16 YEARS	18,828,600	1,895,500

TABLE NUMBER (8)

<u>YEAR</u>	<u>PRODUCED BY OSAMA FACTORIES RESIDUE OF OPIUM GRAMS</u>	<u>PERCENTAGE OF MORPHINE CONTENT</u>
1930	2,370,540	3.38
1931	1,882,000	3.19
1932	1,906,360	3.35
1933	1,961,800	2.67
1934	1,932,280	2.74
1935	1,690,600	2.69
1936	1,709,000	2.31
1937	0,000,000	0.00
1938	0,000,000	0.00
1939	0,000,000	0.00
1940	0,000,000	0.00
1941	0,000,000	0.00
1942	0,000,000	0.00
1943	0,000,000	0.00
1944	0,000,000	0.00
1945	0,000,000	0.00
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16 YEARS	13,452,580	

\* Average MORPHINE CONTENT 2.90



TABLE NUMBER (2)

PRODUCED BY OSAKA  
FACTORIES

<u>YEAR</u>	<u>BULSTIN *</u> <u>COTARNINE</u> <u>HYDROCHLORIDE</u> <u>GRAMS</u>	<u>BULSTOL **</u> <u>COTARNINE</u> <u>PHTHALATE</u> <u>GRAMS</u>
1930	0,122	0,000
1931	0,399	0,201
1932	0,185	0,100
1933	0,616	0,200
1934	1,051	0,110
1935	4,271	0,100
1936	4,785	0,202
1937	0,200	0,065
1938	0000	0000
1939	0000	0000
1940	0000	0000
1941	0000	0000
1942	0000	0000
1943	0000	0000
1944	0000	0000
1945	0000	0000
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16 YEARS	11,629	0,978

\* Similar to STYPTICIN. Hemostatic

\*\* Similar to STYPTOL. Hemostatic

ANALYSIS OF THE TABLES

CRUDE OPIUM

TABLE (4)

10. The Crude Opium used for the manufacture of narcotic drugs was purchased by the Dai Nippon Company from the Home Ministry and later from the Ministry of Health and Social Affairs, thru the Tokyo Hygienic Laboratory, Tokyo, Japan. The Crude Opium was obtained by the Ministry from the opium poppy crop produced in Japan proper, Manchuria, Mongolia and Formosa. The morphine content of the Crude Opium produced in Japan averaged from 9 to 15 %, the Mongolian and Manchurian from 9 to 10 % and the Formosan from 9 to 15 %. The morphine content of the Crude Opium purchased over a period of 16 years, AVERAGED 12.67 %.

11. The following narcotic drugs were produced from CRUDE OPIUM by the Dai Nippon Company in their Japan plants:



- (a) Morphine Hydrochloride
- (b) Heroin Hydrochloride
- (c) Codeine Phosphate
- (d) Dover's Powder
- (e) Tincture of Opium
- (f) Residue of Opium
- (g) Tincture Benzoate of Opium (Modified Paregoric)
- (h) Cotarnine Hydrochloride, for the production of Bulstin, similar to Stypticin
- (i) Cotarnine Phthalate, for the production of Bulstol, similar to Styptol.

12. 100 Grams of CRUDE OPIUM of 10 % morphine content produced the average yield of the following opium derivatives:

Morphine Hydrochloride	10.5
Heroin Hydrochloride	11.04
Codeine Phosphate	9.70

13. The following information applies to the fluctuations in the amounts of CRUDE OPIUM obtained annually from the Ministry. The Home Ministry and later the Ministry of Health and Social Affairs each year set the amount of narcotic drugs to be produced by EACH LICENSED MANUFACTURER and they were dependent upon the Ministry for the CRUDE NARCOTIC DRUGS.

14. 1938 thru 1941 : Decrease due to reduction in the production of Morphine Hydrochloride and Heroin Hydrochloride.

15. 1942 : Increase due to the small amount of RAW MORPHINE received from the Ministry and increase in production of Codeine Phosphate.

16. 1943 : This large amount due to NO RAW MORPHINE received from the Ministry and the Codeine Production.

17. 1944 : Decrease. Due to NO RAW MORPHINE received from the Ministry and the decrease in the production of Morphine Hydrochloride, Heroin Hydrochloride and Codeine Phosphate.

18. 1945 : Early in the spring of this year, the Ministry of Health and Social Affairs directed the Tokyo Hygienic Laboratory to apportion their reserve narcotic drug stocks to the various licensed narcotic drug manufacturers, in an effort to save it from total destruction by Air Raids.

RAW MORPHINE  
TABLE NUMBER (1)

19. THE RAW MORPHINE purchased by the Dai Nippon Company from 1930 thru 1945 was supplied by the Ministry of Health and Social Affairs thru the Tokyo Hygienic Laboratory, and was of FORMOSAN origin. Over a period of 16 years the Raw Morphine averaged 69.39 % of PURE MORPHINE content. The entire amount of RAW MORPHINE was processed at the Dai Nippon plant in Osaka. The following narcotic drugs were produced from the RAW MORPHINE:

- (a) Morphine Hydrochloride
- (b) Heroin Hydrochloride
- (c) Codeine Phosphate



20. 100 GRAMS OF RAW MORPHINE of 65 % morphine content produced the average yield of the following opium derivatives:

Morphine Hydrochloride, average increase of 15 % or a total of 74.75 grams.

Heroin Hydrochloride, average increase of 25 % or a total of 81.25 grams.

Codeine Phosphate, average increase of about 10 % or a total of 71.5 grams.

21. The following information applies to the fluctuations in the amounts of RAW MORPHINE obtained annually from the Ministry:

22. 1931 : Decrease due to the decrease in the production of Morphine Hydrochloride and the stock pile left over from 1930.

23. 1932 : Increase due to the increased production of Heroin Hydrochloride.

24. 1936 : Small decrease due to decreased production of Heroin Hydrochloride and Codeine Phosphate.

25. 1937 : The Home Ministry allotted the Dai Nippon Company a certain amount of RAW MORPHINE for the manufacture of MORPHINE HYDROCHLORIDE and HEROIN HYDROCHLORIDE, with specific instructions to deliver the MORPHINE AND HEROIN HYDROCHLORIDE to the Manchukuo (Manchurian) government. The manufacture of this HEROIN AND MORPHINE HYDROCHLORIDE WAS NOT REPORTED TO THE OPIUM ADVISORY COMMITTEE OF THE LEAGUE OF NATIONS BY THE JAPANESE GOVERNMENT AND FOR THAT REASON IS TO BE MADE THE SUBJECT OF A SPECIAL REPORT.

26. 1939 : Increase due to the increased production of Codeine Phosphate and the low morphine content of Crude Opium and Raw Morphine.

27. 1941 : Increase due to DECREASE in amount of Crude Opium.

28. 1942 : Decrease due to the large INCREASE amount of Crude opium.

29. 1943 and 1944 : Could not offer any explanation, other than the Ministry of Health and Social Affairs did not furnish the usual allotment. (Remarks by Writer: The other manufacturers stated the reason for the failure of the Ministry to furnish Raw Morphine during this period was due to the effective blockade of Japan and Formosa maintained by the American Armed Forces.)

30. 1945 : Decrease due to the effective blockade maintained by the American Armed Forces.

MORPHINE HYDROCHLORIDE  
TABLE (5)

31. Morphine Hydrochloride was produced from Crude Opium and Raw Morphine. The following information applies to the fluctuations in the amount of Morphine Hydrochloride produced annually.



32. 1931 : Decrease due to the increased production of Heroin Hydrochloride and Codeine Phosphate.

33. 1937 : Increase due to production of Morphine Hydrochloride for the Manchukuo (Manchurian) government at the instructions of the Japanese Government.

34. 1943 thru 1945 : Decrease due to the effective blockade maintained by the American Armed Forces.

35. Morphine Hydrochloride was distributed to the trade in the following manner:

- 5 Gram Bottles
- 28 Gram Boxes, containing 8 - 3.5 gram bottles.
- 225 Gram Tin Cans
- 450 Gram Tin Cans

36. These bulk packages were produced at the Osaka factory. The factory in Tokyo produced AMPouLES containing 1 % of Morphine Hydrochloride and will be discussed under Tokyo factories. SEE TABLE NUMBER (12).

HEROIN HYDROCHLORIDE  
TABLE (5)

37. The Heroin Hydrochloride manufactured by the Dai Nippon Company was produced from the Crude Opium and Raw Morphine. The following information applies to the fluctuations in the amounts of RAW MORPHINE obtained annually from the Ministry.

38. 1931 : Increase due to decrease in amount of Morphine Hydrochloride.

39. 1932 : Increase due to NO Codeine Phosphate produced.

40. 1937 : Increase due to the fact the Home Ministry allotted the Dai Nippon Company a certain amount of RAW MORPHINE for the manufacture of HEROIN HYDROCHLORIDE and MORPHINE HYDROCHLORIDE, with specific instructions to deliver HEROIN AND MORPHINE HYDROCHLORIDE to the Manchukuo (Manchurian) government. The manufacture of this Heroin and Morphine Hydrochloride was NOT REPORTED TO THE OPIUM ADVISORY COMMITTEE OF THE LEAGUE OF NATIONS BY THE JAPANESE GOVERNMENT AND FOR THAT REASON IS TO BE MADE THE SUBJECT OF A SPECIAL REPORT.

41. 1943 thru 1945 : Decrease due to the effective blockade maintained by the American Armed Forces.

42. Heroin Hydrochloride was distributed to the trade in the following manner:

- 5 Gram Bottles
- 25 Gram Bottles
- 700 Gram Tin Cans



CODEINE PHOSPHATE  
TABLE (4)

43. The entire production of Codeine Phosphate was produced for and at the direction of the Ministry of Health and Social Affairs. The Tokyo Hygienic Laboratory owned, operated and controlled by the Ministry produced Codeine Phosphate for the medical needs of Japan. As their laboratory facilities were limited, the Ministry from time to time was required to call upon licensed drug manufacturers to produce certain quantities of Codeine Phosphate to meet medical needs. THE AMOUNT OF CODEINE PHOSPHATE PRODUCED EACH YEAR WAS DEPENDENT UPON THE REQUEST MADE BY THE MINISTRY.

POWDERED OPIUM  
TABLE (6)

44. The POWDERED OPIUM ALSO KNOWN AS MEDICINAL OPIUM was purchased by the Dai Nippon Company from the Hygienic Laboratory, Osaka, operated and owned by the Ministry of Health and Social Affairs. The entire quantity purchased in Osaka was used by the Osaka Plants in manufacturing various preparations of MEDICINAL OPIUM.

45. The League of Nations Convention for Limiting the manufacture, etc., of Narcotic Drugs concluded at Geneva, 1931 defined MEDICINAL OR MEDICAL OPIUM, WHICH IS COMMONLY KNOWN AS POWDERED OPIUM, meant the raw opium which has undergone the processes necessary to adapt it for medicinal use in accordance with requirements of the national pharmacopoeia, whether in powder form or granulated or otherwise mixed with neutral materials. The 5th edition of the Japanese Pharmacopoeia places the opium content of medicinal opium as NOT LESS THAN 10 % and not more than 11 %.

46. The amount of Powdered Opium allotted to the Dai Nippon Company, Osaka, fluctuated from time to time. The amount of the allotment was arbitrarily controlled by the Ministry of Welfare and Social Affairs.

47. Powdered Opium was used by the Osaka Plants to produce the following preparations:

- (a) Tincture of Opium
- (b) Tincture Benzoate of Opium (Modified Paregoric)
- (c) Dover's Powder

TINCTURE OF OPIUM  
TABLE (6)

48. From 1931 thru 1941 the production of Tincture Opium remained fairly constant. In 1942 it increased due to the war needs. In 1944 and 1945 the production was greatly decreased due to the effective blockade maintained of Japan by the American Armed Forces. Formula for Tincture Opium as set out in the 5th edition of the Japanese Pharmacopoeia.

Powdered Opium 10 grams  
Dilute Alcohol 47 grams  
Distilled Water 47 grams.



49. Note: Dilute Alcohol defined in the Japanese Pharmacopoeia as containing 60 to 61 % of Pure Ethyl alcohol.

50. Tincture of Opium was distributed to the trade in

25 Gram Bottle, Price Yen. 0.62  
500 Gram Bottle, Price, Yen 9.36.

TINCTURE BENZOATE OF OPIUM  
TABLE (6)

51. Tincture of Benzoate of Opium is listed in the 5th edition of the Japan Pharmacopoeia as "TINCTURA OPII BENZOICA" and is a preparation similar to the American preparation known as "PAINEXTRIC" and listed in the United States Pharmacopoeia as "TINCTURA OPII CAMPHORATA". The following is the formula for Tincture Benzoate of Opium as set out in the Japan Pharmacopoeia:

Opium Powder	parts	1
Benzoic Acid	parts	4
Campher	parts	2
Oil Fennel	parts	1
Dilute Alcohol	parts	192

52. Note: Dilute Alcohol is defined in the Japan Pharmacopoeia as containing from 60 to 61 % of Ethyl Alcohol. Percentage of powdered opium present 0.5 %. The American preparation contains approximately 0.43 % of Powdered Opium and Oil of Anise in place of Oil of Fennel.

53. Tincture Benzoate of Opium is sold to the trade in

25 Gram Bottles, Price Yen 0.42  
500 Gram Bottles, Price Yen 6.07

DOVER'S POWDER  
TABLE (7)

54. Dover's Powder is listed in the 5th., edition of the Japan Pharmacopoeia as "PULVIS DOVERII" and is similar to the American preparation of the same name. The following is the formula set out in the 5th, edition of the Japan Pharmacopoeia:

Opium Powder	parts	1
Fine Ipecac Powder	Parts	1
Potassium Sulphate	Parts	8

55. This formula is similar to the American preparation other than the Japanese use Potassium Sulphate in place of Lactose. Potassium Sulphate is listed as a cathartic and purgative, the dose being from 15 to 45 grains.



RESIDUE OF OPIUM  
T.B.L. (8)

56. Residue of Opium is Crude Opium from which certain narcotic drug alkaloids had been extracted and was to contain a minimum of 3% OPIUM CONTENT. This Residue of Opium was produced by the Narcotic Drug Manufacturers located in Japan proper for the Formosan (Taiwan) Government. The Formosan Government consummated certain contracts with the various Narcotic Drug Manufacturers, located in Japan proper, with the approval of the Home Ministry and later the Ministry of Health and Social Affairs, to sell the stipulated quantities of Crude Opium which had been produced in Formosa. The Drug Manufacturers committed themselves to extract certain narcotic alkaloids from the Crude Opium, and reship the RESIDUE OF OPIUM, containing a minimum of 3% OPIUM CONTENT, to the Opium Monopoly Section located in Tainku, Formosa. The Manufacturers were also required to furnish the Ministry with a record of the amount of CRUDE OPIUM they received, the amount processed, the amount of the RESIDUE OF OPIUM and its OPIUM CONTENT furnished the Formosan Government. The amount of Crude Opium processed for this purpose by the manufacturers was in relation to the amount of Crude Opium furnished.

57. Residue of Opium was usually shipped by the drug manufacturers in form of the consistency of thick molasses in 5 gallon tin cans, addressed to the Opium Monopoly Section of the Formosan Government located in Tainku. The Formosan Government processed this residue of opium into opium for smoking purposes which was sold by the Government to the smokers of opium residing in Formosa. From 1937 the Formosan Government failed to request the Dai Nippon Company to produce Residue of Opium, as the company was informed the Formosan Government did not desire additional supplies of residue of Opium because of the decrease in the number of smokers of opium. The Residue of Opium processed by the Dai Nippon Company from 1930 thru 1936 AVERAGE OPIUM CONTENT OF 2.90%.

BULSTIN  
T.B.L. (9)

58. Bulstin chemically known as COTARIN CALORIDE is produced by the Dai Nippon Company from COTARIN and OPIUM derivative and sold to the trade under the name of BULSTIN. It is a HEMOSTATIC and similar in its pharmacological effect as STYPTIC. Bulstin is sold to the trade in Powder, Tablets and Ampoules.

BULSTIN IN POWDER

1 gram packages, Price, Ten 0.40  
5 gram packages, Price, Ten 1.50  
Oral dose, 0.02 to 0.05 grams. From  
1/3 to 5/4 grains, approximately.

BULSTIN TABLETS

20 Tablets to each package, Price, Ten 0.60  
Each tablet contains 0.05 grams.  
Dose 1 tablet. Approximately 5/4 of a grain.



BULSTIN IN AMPULES

Produced as a 10% solution in 1.1 cc AMPULES.  
Packed 6 ampoules to a box. Dose of each ampoule  
Grains 0.11 or approximately 1.69 Grains.

59. No Bulstin was produced after 1937. This preparation was prepared from the Crude Opium furnished by the Formosan Government for the production of RESIDUE OF OPIUM. After 1936 the Formosan Government ceased furnishing the Crude Opium.

BULSTOL  
TABLETS (2)

60. Bulstol chemically known as OCTARNINE PHTHALATE was produced by the Dai Nippon Company from MARIUETINE, an O.T.C. derivative, and sold to the trade under the name of BULSTOL. It is a MARIUETIC and similar in its effect as STYLOL. Bulstol is sold to the trade in tablets and powder.

BULSTOL TABLETS

Packed 20 tablets to a package  
Price each package Yen 1.  
Each tablet contains Bulstol,  
0.05 Grams or approximately 3/4  
of a grain. Maximum dose 2 tablets.

BULSTOL POWDER

5 Gram packages, only. Price ¥ 2.50  
Dose of Bulstol one tablet containing  
0.1 gram or approximately 1 1/2 grains.

61. No Bulstol was produced after 1936 for the same reason as outlined under Bulstin. See page 15, paragraph 59.

TOYO PRODUCTION

62. The following preparations of MARIUETIC DRUGS were produced by the Toyo Factory located 186, 4-chome, Yamakhasuncho, Shitayaku, Tokyo and set out in the following tables, 10 taru 13:



TABLE NUMBER (10)

PRODUCED BY TOKYO, FACTORY					
YEAR	POWDERED OPIUM PURCHASED FROM METROPOLITAN POLICE BOARD TOKYO GRAMS	TINCTURE OF OPIUM PRODUCED GRAMS	POWDERED OPIUM USED IN THE MANUFACTURE OF TINCTURE OF OPIUM GRAMS	TINCTURE OF BENZOATE OF OPIUM PRODUCED GRAMS	POWDERED OPIUM USED IN THE MANUFACTURE OF TINCTURE OF BENZOATE OF OPIUM GRAMS
1930	000,000	000,000	000,000	000,000	000,000
1931	36,500	360,000	36,000	90,000	0,470
1932	55,050	319,000	31,900	99,000	0,500
1933	75,000	500,000	50,000	000,000	0,000
1934	75,000	470,000	47,000	99,000	0,500
1935	90,500	650,000	65,000	99,000	0,500
1936	75,500	525,000	52,500	100,000	0,510
1937	95,500	595,000	59,500	102,000	0,530
1938	100,000	650,000	65,000	000,000	0,000
1939	150,500	825,000	82,500	98,000	0,500
1940	100,500	875,000	87,500	99,000	0,500
1941	119,100	605,000	60,500	99,000	0,500
1942	186,200	587,000	58,700	000,000	0,000
1943	160,000	1,000,000	100,000	96,000	0,490
1944	152,000	1,365,500	136,550	000,000	0,000
1945	000,000	0,000,000	000,000	000,000	0,000
16 YRS.	1,471,350	9,326,500	932,650	981,000	5,000



TABLE NUMBER (11)

PRODUCED BY TOKYO, FACTORY

<u>YEAR</u>	<u>DOVER'S POWDER</u> <u>GRAMS</u>	<u>POWDERED OPIUM USED IN THE</u> <u>MANUFACTURE OF DOVER'S POWDER</u> <u>GRAMS</u>
1930	000,000	000,000
1931	000,000	000,000
1932	221,000	22,100
1933	250,000	25,000
1934	275,000	27,500
1935	250,000	25,000
1936	225,000	22,000
1937	355,000	35,500
1938	350,000	35,000
1939	425,000	42,500
1940	375,000	37,500
1941	586,000	58,600
1942	775,000	77,500
1943	1,000,000	100,000
1944	250,000	25,000
1945	000,000	000,000
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16 YEARS	5,337,000	533,700

TABLE NUMBER (12)

PRODUCED BY TOKYO, FACTORY

<u>YEAR</u>	<u>1 % SOLUTION MORPHINE</u> <u>HYDROCHLORIDE PRODUCED</u> <u>FOR USE IN AMPOULES</u> <u>KILOLITERS</u>	<u>AMOUNT OF MORPHINE</u> <u>HYDROCHLORIDE USED</u> <u>PRODUCTION OF AMPOULES</u> <u>GRAMS</u>
1930	126.000	1,647
1931	141.940	1,842
1932	118.810	1,616
1933	143.780	1,936
1934	134.600	1,787
1935	117.470	1,501
1936	159.780	1,993
1937	166.950	2,086
1938	185.000	2,318
1939	299.700	3,842
1940	559.200	7,457
1941	552.770	8,231
1942	138.940	1,592
1943	213.880	2,932
1944	55.370	0,815
1945	000.000	0,000
-----	-----	-----
16 YEARS	3,114.190	41,595



TABLE NUMBER (13)

PRODUCED BY TOKYO, FACTORY

<u>YEAR</u>	<u>1 % SOLUTION COCAINE HYDROCHLORIDE PRODUCED FOR USE IN AMPOULES KILOLITERS</u>	<u>AMOUNT OF COCAINE *** HYDROCHLORIDE USED PRODUCTION OF AMPOULES GRAMS</u>
1930	3.540	0,050
1931	0.000	0,000
1932	3.000	0,042
1933	3.000	0,039
1934	0.000	0,000
1935	3.000	0,039
1936	0.000	0,000
1937	4.800	0,061
1938	5.140	0,057
1939	0.780	0,017
1940	6.000	0,078
1941	0.000	0,000
1942	0.000	0,000
1943	0.000	0,000
1944	16.500	0,214
1945	0.000	0,000
<u>16 YEARS</u>	<u>45.760</u>	<u>0,597</u>

\*\*\* Cocaine Hydrochloride purchased from the Takeda Pharmaceutical Company, Limited, Osaka, Japan.

POWDERED OPIUM  
TABLE (10)

63. POWDERED OPIUM also known as MEDICINAL OPIUM was purchased by the Dai Nippon Company for use in its Tokyo Factory from the METROPOLITAN POLICE BOARD, TOKYO. See paragraph 44 of this report which defines POWDERED or MEDICINAL OPIUM. This powdered opium was used for the Manufacture of Tincture of Opium, Tincture of Benzoate of Opium and Dover's Powder. The amount of opium purchased annually was dependent upon the demand of the preparations of opium. None was purchased in 1945 due to the fact the plant producing the preparations of Powdered Opium was destroyed by air raid April 16, 1945.

TINCTURE OF OPIUM  
TABLE (10)

64. The amount of Tincture of Opium produced was dependent upon the demands of the drug trade. The increase in 1943 and 1944 was due to the demand of the armed forces. The formula for the Tincture of Opium is set out on paragraph 48 of this report.



TINCTURE BENZOATE OF OPIUM  
TABLE (10)

65. Tincture of Benzoate of Opium is listed in the 5th. edition of the Japan Pharmacopoeia as "TINCTURA OPII BENZOICA" and is a preparation similar to the American preparation known as "PARAGORIC". See page 19 for the formula of the Japanese preparation. The amount of this preparation produced was dependent upon the demands of the drug trade. In the years when none was produced the demand was limited and the supply was furnished by the preceding year's production. The plant producing this preparation was destroyed by AIR RAIDS April 16, 1945.

DOVER'S POWDER  
TABLE (10)

66. Dover's Powder is listed in the 5th. edition of the Japan Pharmacopoeia as "PULVIS DOVERI" and is similar to the American preparation of the same name. See paragraph 54 for the formula of this preparation. The amount produced was dependent upon the demands of the trade. None was produced in 1945 due to the destruction of the Tokyo plant on April 16, 1945 by air raids.

AMPOULES CONTAINING 1 %  
SOLUTION MORPHINE HCL  
TABLE (12)

67. The Morphine Hydrochloride used for the manufacture of the ampoules was produced by the Osaka Factory and shipped to the Tokyo Factory. The amount of ampoules produced fluctuated with the demands of trade and were sold in

5 Ampoules to box	Price	Yen 0.28
10 Ampoules to box	Price	Yen 0.55
50 Ampoules in box	Price	Yen 2.30

68. Each ampoule contained 0.01 gram of Morphine Hydrochloride or approximately 1/6 Grains.

AMPOULES CONTAINING 1 %  
SOLUTION COCAINE HCL  
TABLE (13)

69. The Cocaine Hydrochloride used for the production of ampoules of Cocaine Hydrochloride was purchased from the Takeda Pharmaceutical Company, Limited, Osaka, Japan. The amount of ampoules produced fluctuated with the demands of the trade and were sold in 5 ampoules to a box, price Yen 0.27. Each ampoule contained 0.01 grams of Cocaine Hydrochloride or approximately 1/6 grains.

70. 11 December 1945 the following narcotic drugs were seized from the Dai Nippon Company at Osaka, Japan by Occupation Forces and stored in the Imperial Mint at Osaka:

Crude Opium	Kilograms	4846.47
Crude Morphine	Kilograms	16.00



71.

RECAPITULATION TO COVER  
PERIOD FROM 1930 thru 1945

CRUDE DRUGS PURCHASED

CRUDE OPIUM	67,092.116	KILOGRAMS
RAW MORPHINE	7,353.904	KILOGRAMS

PURCHASES POWDERED OPIUM

From the Hygienic Laboratory, Osaka	3,972.000 Kilograms
From the Metropolitan Police Board, Tokyo	1,471.350 Kilograms
	-----
Total	5,443.350 Kilograms

Cocaine Hydrochloride purchased from the Takeda Pharmaceutical Company, Limited, Osaka, 0.597 Kilograms.

CRUDE OPIUM PURCHASED	67,092.116	Kilograms
CRUDE OPIUM SLIZED by 8th Army 11 December 1945	4,846.47	Kilograms
CRUDE OPIUM ACTUALLY USED FOR PRODUCTION PURPOSES.	62,245.646	Kilograms

RAW MORPHINE PURCHASED	7,353.904	Kilograms
RAW MORPHINE SLIZED by 8th Army, 11 December 1945	16.000	Kilograms
RAW MORPHINE ACTUALLY USED FOR PRODUCTION PURPOSES	7,337.904	Kilograms

NARCOTIC FINISHED PRODUCTS

Codeine Phosphate	3,947.022	Kilograms
Morphine Hydrochloride	3,757.878	Kilograms
Heroin Hydrochloride	7,109.196	Kilograms
Residue of Opium	13,452.580	Kilograms
Tincture of Opium	30,317.600	Kiloliters
Tincture Benzate of Opium	4,671.000	Kiloliters
Dover's Powder	24,165.600	Kiloliters
1 % Solution Morphine Hydrochloride for Ampoules	3,114.190	Kiloliters
1 % Solution Cocaine hydrochloride for Ampoules	45.760	Kiloliters
Cotarnine Hydrochloride (Bulstin)	11.629	Kilograms
Cotarnine Phthalate (Bulstol)	0.970	Kilograms

72. The Dai Nippon Company furnished this section with a detailed list of their sales of Narcotic Drugs to cover period from 1930 thru 1945. At some later date an investigation will be made of these sales records. No evidence of diversion by the Dai Nippon Company of the narcotic drugs manufactured was disclosed at this time.

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