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ASSESSING THE AVAILABILITY OF RAW MATERIALS FOR
THE BASIC PRODUCTION OF 20 ESSENTIAL DRUGS *

REGION: LATIN AMERICA

COUNTRIES: MEXICO, COLOMBIA, VENEZUELA,
PERU AND ARGENTINA/.

by

000113

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INTRODUCTION

UNIDO initiated the study to assess the availability locally of raw materials for the production of 20 essential drugs in the developing countries in the regions of Africa, Asia and Latin America. This study will form an important input to the Global Preparatory Meeting on Pharmaceuticals and Global consultations on Pharmaceuticals scheduled for 1980. This report pertains to the study in respect of Mexico, Peru, Colombia, Venezuela and Argentina undertaken during August and September 1979. The purpose of the project and duties of the expert are outlined in the Job Description enclosed in Annex XV.

The pharmaceutical industry registered a phenomenal growth in Latin America both in terms of quantity as well as variety of pharmaceuticals manufactured in recent years. The accelerated development of the petrochemical industry in some Latin American countries has opened new abundant sources of basic chemicals and intermediates required by the pharmaceutical industry for backward integration into basic production of active ingredients.

At the Second Meeting of Panel of Experts on the Pharmaceutical Industry convened by UNIDO in 1978 to prepare for consultations on this industry a list of 20 drugs was prepared. The Interregional meeting to prepare for consultations on the pharmaceutical industry held in Cairo in 1979 recommended the illustrative list of 20 essential drugs for local basic production of active ingredients from intermediates and raw materials.

MEXICO

A. General

Mexico has a population of 67 million with a surface area of 1.973 million sq.kilometers. The exports from the country amounted to US\$ 3,030 million as against imports of US\$ 6,030 million. The per capita GNP is US\$ 650. The birth rate is 35 births as against 6.5 deaths per 1000. The life expectancy at birth is 62 years. The exchange rate is 1 US\$ = 22.70 Mexican Pesos.¹

Health

The expenditure on health programmes amounted to US\$ 600 million while that on medicinal products in 1977 amounted to US\$ 152 million which represents 28 per cent of the total market. There are 96,253 hospital beds, 35000 practicing physicians, 73,500 registered nurses and 8,750 retail drug stores. Amongst the communicable diseases, the most prevalent are gastroenteritis, influenza, amoebic dysentery, measles, malaria, whooping cough, tuberculosis and gonorrhoea.

Economy

Since 1978 the Mexican economy continued to improve. Inflation rate was reduced from 21 per cent in 1977 to 16.2 per cent in 1978. The abridged version of the 1979-1982 National Industrial Development Plan sets forth the bases for economic development during the next four years and on through 1990.

Due to a balance of payment problem, Mexico adopted a policy of import substitution. Raw material exports were not growing at a fast rate thus limiting the ability to import manufactured goods with the

1. Europa Year Book 1979

result that the country continued to depend on foreign sources for the supply of machinery, equipment and intermediate goods. The opportunities to overcome this crisis lie in the financial potential offered by the surpluses earned through exports of hydrocarbons.

Incentives to industry and National Industrial Development Plan

The production sectors in which the export development policy would operate were selected based, among others, on the ability of the industries to bring added value to locally available raw materials or process basic industrial inputs, such as secondary petrochemicals, chemicals and metal products.² A new decree issued in 1978 provides a subsidy equal to 30 per cent of the Government authorized price for energy to be granted to new companies or new industrial installations and on purchase of basic petrochemicals (provided the producer made certain export commitments). Secondary petrochemical firms benefitting from the 30 per cent discount must agree to sell their output to industrial firms located in Mexico at a 10 per cent discount from the FOB price or at a price that takes account of the discounts on energy prices.

Priority sectors in industry

The priority sectors are divided into two categories. The first category comprises industries which produce food stuffs, and those which supply machinery and equipment to these sectors and industries of strategic importance. The second category covers all remaining activities which generate basic consumer goods. The projected growth rates for industries are as follows:³

2. New implementing Decree for the National Industrial Development Plan (NIDP) 1978.
3. Abridged version of the 1979-1982 National Industrial Development Plan.

Annual growth rates of total demand (%)

	<u>1979-82</u>	<u>1983-90</u>
Intermediate goods		
Manufacture of petrochemical products	19.0 - 20.0	18.0 - 19.0
Products for basic list Medicines	16.0 - 17.0	17.0 - 18.0
Products and other raw materials for the basic list of medications of the public sector.		

The expansion of industrial markets, 1982/73 and 1990/82 (Plan trajectory) for the pharmaceutical industry is as follows:

<u>% Average annual growth rates</u>				<u>Imports/Total demand</u>				
<u>Total demand</u>		<u>Domestic demand</u>		<u>Imports</u>		<u>Ratios</u>		
<u>1982/78</u>	<u>1990/82</u>	<u>1982/78</u>	<u>1990/82</u>	<u>1982/78</u>	<u>1990/82</u>	<u>1978</u>	<u>1982</u>	<u>1990</u>
11.5	12.5	11.7	12.5	4.2	6.5	7.4	7.8	2.1

Government Policy - Guidelines for future development of the Pharmaceutical Industry

The Mexican Government issued in 1979 guidelines for the development of the pharmaceutical industry in the future regarding production, exports, imports, national involvement, prices, technical development and assistance. An important feature of these guidelines is the imposition of a ceiling of 1 per cent of total sales value for the technical know how in respect of pharmaceutical enterprises and 3 per cent of sales value for the chemico-pharmaceutical industries. The details of the government directive are given in Annex I.

Pharmaceutical Industry

The formulation of pharmaceuticals in Mexico commenced in the thirties while the actual manufacture of drugs started in the forties particularly during World War II. There are 617 units in Mexico producing pharmaceuticals out of which 473 are in the national sector while 144 are foreign enterprises. However, the national sector has only 10 per cent of the market share while the remaining 90 per cent is shared by the foreign subsidiaries. The present status of the pharmaceutical industry is indicated in Annex II. A disturbing factor is that 81 per cent of all the pharmaceutical industry is concentrated in Mexico City.

A statement indicating the value of production, imports and exports of groups of drugs is shown in Annex III. Hormones and antibiotics constitute the highest volume groups. While the imports of antibiotics have more or less remained unchanged during the decade, the production as well as the export of these drugs have registered phenomenal increases. Similar is the case with hormones, although in this case a number of cortico steroids early intermediates produced within the country are exported to Europe for final processing and imported into Mexico as active ingredients. Until recently Mexico was meeting about 50 per cent of the requirements of the world market for steroids. However, as described elsewhere, due to finding alternative sources for diosgenin, and the development of sophisticated technology to obtain steroids from other sources at competitive prices, the steroid exports have declined steeply from a world market share of 50 per cent in 1974 to about 15 per cent in 1977.

Range of drugs manufactured

A wide range of drugs is produced locally. Out of about 250 active ingredients produced in Mexico, over 100 belong to the steroid group. A statement showing the variety of active ingredients produced nationally indicating against each the name of the enterprise concerned with its production is given in Annex IV.

A list of basic chemicals, intermediates, as well as active ingredients produced along with the names of concerned enterprises is given in Annex V.

A statement showing the names of the enterprises indicating whether nationally owned or foreign subsidiary, the range of active ingredients produced and their selling prices is shown in Annex VI. A list of active ingredients produced by the North American units is given in Annex VII.

From the above, it is obvious that the pharmaceutical industry in Mexico is at an advanced stage of development and is perhaps the most diversified in this sector amongst the Latin American countries.

Mexico has adopted a national list of drugs called "Cuadro Básico de Medicamentos" in 1977 which includes 426 generic drugs.

20 Essential Drugs

The status of production in respect of the ^{list} illustrated list of essential drugs is given in Annex VIII. It can be observed from the same that seven active ingredients are manufactured locally while the remaining thirteen active ingredients are imported and formulated locally.

Availability of raw materials and intermediates

Raw materials and intermediates from petrochemical industry

The petrochemical industry in Mexico has made significant advances in recent years and constitutes a major source for raw materials and intermediates required for the drug industry. Petroleos Mexicanos (PEMEX) is the government owned petroleum monopoly which is granted exclusive rights to manufacture basic petrochemicals and certain intermediates. Fertimex, the government owned fertilizer company, is the most important producer of secondary petrochemicals. Important private producers include Celanese Mexicana, the CYDSA group and Industrial Resistol. PEMEX is also involved in two petrochemical joint ventures: Tetraetilo de Mexico, S.A. (with Du Pont) and Hules Mexicanos, S.A. (with Polysar of Canada).

The following is a breakdown of PEMEX petrochemical production in 1972, 1976, 1977 and 1978 (figures are in thousands of metric tons (MT) per year):

<u>PRODUCT</u>	<u>1978</u>	<u>1977</u>	<u>1976</u>	<u>1972</u>
Carbonic Anhydride	1979.1	1262.8	1155.7	746.0
Ammonia	1579.0	943.8	864.8	504.7
Ethane	496.1	415.5	352.3	158.6
Ethylene	258.0	229.9	227.9	82.6
Sulphur	168.0	146.0	96.0	62.0
Propylene	138.4	137.5	113.6	83.3
Toluene	123.8	116.3	132.3	83.6
Methanol	102.8	33.1	32.2	22.5
Dichlorethane	96.5	98.2	104.3	38.3
Low density polyethylene	96.4	95.0	93.7	65.2
Benzine	78.8	74.5	99.2	61.8
Meta and Paraxylene	76.1	62.3	66.4	40.2
Dodecylbenzene	62.3	62.5	63.1	53.3
Vinyl Chloride	55.6	55.7	60.2	16.1
Acetaldehyde	45.3	44.0	46.6	30.6
Heavy Aromatics	44.9	42.1	33.7	44.2
Tetramer	39.1	38.4	50.2	41.0
Styrene	37.8	36.4	34.9	32.1
Cyclohexane	37.6	38.0	43.2	4.6
Paraxylene	37.3	35.5	39.2	-
Ethyl Benzene	36.6	31.7	33.7	27.7
Hydrochloric Acid	34.7	38.3	34.7	-
Hexane	29.2	29.9	30.1	18.5
Ethylene Oxide	26.3	26.8	24.5	5.0
Muriatic Acid	19.3	13.1	12.6	39.8
Acrylonitrile	19.1	19.3	22.0	17.3
Butadiene	18.3	23.2	18.6	-
Orthoxolene	16.7	14.2	19.2	13.6
Ammonium Sulfate	12.3	12.4	14.9	4.6
Heavy Alkyl Aromatic	6.1	5.5	6.1	6.5
Heptane	4.0	5.0	5.1	3.8
High Density Polyethylene	3.3	-	-	-
Petrochemical Specialties	3.2	2.2	2.6	-
Hydrocyanic Acid	2.8	3.4	3.9	2.7
Isopropanol	1.4	3.7	3.6	7.1
Aromina 100 (light aromatic)	1.1	3.5	4.1	-
Perchloroethylene	0.4	0.3	-	-

70 plants were in operation at the end of 1978. The total value of petrochemicals produced during 1978 was US\$ 505.5 million and domestic sales were US\$ 436.9 million. PEMEX was able to export US\$ 64.2 million worth of ammonia and US\$ 3.3 million worth of methane. Mexico has now achieved full self-sufficiency in ammonia and will become a permanent exporter of ammonia.

Imports

The imports of petrochemicals and intermediates by PEMEX in 1977 and 1978 are listed below:

<u>Imported Products</u>	<u>1978</u>	<u>1977</u>
	<u>(1000's of MT)</u>	
Vinyl Chloride	56.9	18.9
Paraxylene	42.9	59.4
Butadiene	39.7	18.6
Styrene	36.5	35.9
Low density Polyethylene	36.4	41.3
Ethylene Oxide	35.3	29.4
Acrylonitrile	33.6	25.6
Toluene	24.2	13.5
Isopropanol	21.5	13.8
Propylene Tetramer	18.5	22.9
Acetaldehyde	16.7	13.9
Methanol	15.7	36.4
Dodecylbenzene	15.3	26.5
Dichloroethane	14.7	13.7
Benzene	13.8	21.5
Perchloroethylene	12.9	10.5
Cyclohexane	11.9	9.8
Orthoxylene	11.6	6.6
Ethylbenzene	10.3	14.9
Xylene	6.2	10.5
Aromatic solvents	5.3	5.8
Hexane	2.8	-
High density Polyethylene	2.4	2.4
Propylene	0.6	2.5
Butane	-	5.9
TOTAL	<u>485.4</u>	<u>460.4</u>

Expansion plans

PEMEX expects to open a new petrochemical plant each month during 1979. There are currently 38 plants under construction, 22 in the engineering stage and 9 in the project stage (many of these plants will produce two or more products). By 1982 Mexico is expected to be virtually self sufficient in petrochemicals.

The following is a list of PEMEX petrochemical plants under construction (C), in the engineering stage(E), or in project (P), as of December 31, 1978. Completion dates are given when available. Capacities are given in thousands of metric tons per year unless otherwise specified.

PEMEX PETROCHEMICAL EXPANSION PLANS AS OF DECEMBER 31, 1978.

LOCATION	PRODUCT	CAPACITY	STATUS
Morelos, Ver.	Acetaldehyde	100	P
	Butadiene	100	P:1981
	Ethylene	500	E:1981
	Fractionator - Ethane, 704.9	2012	
La Cangrejera, Veracruz	-Natural Gasoline, 400.6		
	LPG	10,000 BPD	C
	Benzene and Toluene	299/371	C
	Meta and Paraxylenes	370	C
	Orthoxylene and Heavy Aromatics	55/50	C
	Paraxylene	240	C
	Heptane and Hexane	11/35	C
	Ethylene	500	C:1980
	Low-Density Polyethylene	240	C:1980
	Ethylbenzene	187.5	C:1981
	Styrene	150	C:1981
	Ethylene Oxide	100	C:1980
	Cumen	40	C:1981
	Oxygen and Nitrogen	200/20	C:1979
	Xylene production and processing (four plants).	unannounced	C
	Acetaldehyde	100	C:1979
Pajaritos, Veracruz	Dichloroethane	330	E:1980
	Vinyl Monomer	200	E:1980
	Perchloroethylene and Carbon Tetrachloride	16/16	E:1980
Salina Cruz, Oaxaca	Sulphur (two plants)	48.1	C/P
San Martin Tex- melucan, Puebla	Tetramer	80	E:1980
	Dodecylbenzene	70	E:1980
	Acrylic Acid	30	E:1980
	Acrylonitrile and Hydrocyanic Acid	100/15	P

LOCATION	PRODUCT	CAPACITY	STATUS	
Morcos, Ver.	- Propane, 588.7			
	- Butane, 317.9			
	- Natural Gasoline, 400.6			
	Oxygen and Nitrogen	270/20	P	
	Ethylene Oxide	?	E:1982	
	Propylene Oxide	60	P	
	High-Density Polyethylene	100	E:1981	
	Propylene	300	E	
	Polypropylene	100	E	
Cactus, Chiapas	Hydrosulfuric Acid and Sulphur (four plants)	255.2/ 105.6	C:1980	
	Cyrogenics (four plants)	182,000BPD	C:1980	
	Gas Sweeteners (two)	48,000BPD	C:1980	
	Fractionator	1361.2	C	
	- Propane, 588.7			
	- Butane, 371.9			
	- Natural Gasoline, 400.6			
Cosoleacaque, Veracruz	Ammonia and Carbonic Anhydride (two plants)	890/1,120	C:1981	
Luis Gil Pérez, Tabasco	Ammonia and Carbonic Anhydride (two plants)	890/1,120	P	
	Cyrogenics (three plants)	246,000BPD	E	
	Gas Sweeteners (two)	48,000BPD	E	
	Ethylene	500	P	
	Hydrosulphuric Acid and Sulphur (two plants)	255/238	E	
	Fractionator	1361.2	E	
	-Propane, 588.7			
	-Butane, 371.9			
		-Natural Gasoline, 400.6		
	Fractionator	2012	E	
	-Ethane, 704.9			
	-Propane, 588.7			
	-Butane, 317.9			
	-Natural Gasoline, 400.6			
La Cangrejera, Veracruz	Crude Stabilizer	200,000BPD	C	
	Fractionator	2012	C	
	-Ethane, 704.9			
	-Propane, 588.7			
	-Butane, 317.9			

LOCATION	PRODUCT	CAPACITY	STATUS
Topolobampo, Sin.	Ammonia	20	C
Las Truchas, Mich.	Ammonia	20	P
Dos Bocas, Tab.	Ammonia	20	P

PIPELINES

Cactus-Tabasco	Butane	100,000 BPD	C
Cactus-La Cingrejera	Liquids	6,400 T/D	C
Cactus-Tabasco	Propane	100,000 BPD	C
Minatitlan, Veracruz	Sulphur	26.4	C:1979
Cadereyta, Nuevo Leon	Sulphur	26.1	C:1979
Tula, Hidalgo	Acrylonitrile and Hydrocyanic Acid	50/7.5	C:1979
	Acetonytrile	2	E

STORAGE AND PORT FACILITIES

Pajaritos, Ver.	Ethylene	8	C
Salina Cruz, Oax.	Ammonia	20	C

It is also anticipated that Mexico will be an important exporter of petrochemicals by 1985 and the following are tentative figures for expansion during the period 1982-85:

P R O D U C T	CAPACITY	START UP DATE
Acetaldehyde	100	1982
Acrylonitrile	150	1982-85
Sulphur	200	1982
Benzene	183	1984
Butadiene	55	1983
Vinyl Chloride	200	1983
Cumen	40	1985
1, 2 Dichloroethane	330	1983
Styrene	150	1984
Ethylbenzene	188	1984
Isopropanol	50	1981
Methanol	150	1984
Low-Density Polyethylene	140	1983
Toluene	362	1984
Xylenes	403	1985
Orthoxylene	55	1985
Paraxylene	200	1985

Prices of imported raw materials and intermediates

An illustrative list of imported raw materials and intermediates and their prices is given in Annex X.

Imports of Drugs

A statement showing the quantities of drugs imported in 1974 and which might be suitable for local production and their value is given in Annex IX.

Drugs of plant origin

Diosgenin has been an important steroid for the pharmaceutical industry and until recently it was the principal starting material for the synthesis of cortico-steroids and contraceptive sex hormones. At one time diosgenin was produced solely from wild yam *Barbasco* primarily found in Mexico. Nationalising the collection and sale of *Barbasco* in 1974 through the state owned *Productos Quimicos Vegetales Mexicanos (PROQUIVEBEX)* resulted in a steep increase in its price and the pharmaceutical industry found alternative sources of supply for diosgenin as well as alternative ways of producing the pharmacological steroids through synthesis without the use of diosgenin. This resulted in sudden drop in the market share of diosgenin for which the possibility of extending markets to other Latin American countries has to be investigated. A statement showing the steroids produced within the country along with the name of the enterprises producing the same is given in Annex XI.

Royalties

The royalties on formulations range between 1% to 3% in Mexico as indicated in Annex I.

Patents

Processes and inventions can obtain patent protection for ten years according to the Law of Inventions and Trademarks enforced in 1976.

Trained Personnel

Mexico has the necessary infrastructure to train personnel with the result that adequate number of trained and highly qualified personnel is available within the country.

Financial Aspects

A recent banking reform in Mexico allows banks to perform multiple services which can lead to a reduction in the number of banks. At present Mexico is closed to foreign banks with the exception of City Bank which established its residence before the law providing for representative office was promulgated. The supervisory authority has commissioned Nacional Bankaria Y de Seguros. The central bank is Banco de Mexico S.A. There are eight state banks. The Nacional Financiera S.A. and the recently organised 'Somex' specialise in industrial financing and their 'modus operandi' are indicated in Annexes XII and XIII. It is interesting to note that there are no limits on loans for pharmaceutical industry obtained through Nacional Financiera (FOGAIN) and could be up to 8.5% cheaper. The collateral is unusually rentable for the newly created industrial units and the 33% ceiling can be increased. Loans for large scale production of raw materials will be granted easily to existing industries under the Programme of Support for the small and medium size industry. The newly formed holding organisation 'Somex' is specially geared for supporting the production of raw materials. With a guarantee from FOMEX, other banks will lend money at 11.1% interest for modernisation of existing pharmaceutical units and up to 15.4% interest for the construction of new ones. The fact that SOMEX is ready to borrow for the projects which involve production of raw materials up to 6 points below the national commercial level is encouraging. The governmental

support to such enterprises is evident from the March 6, 1979 decree of the Secretariat of Patrimonio and Industrial Development whereby a five per cent tax credit was established to the firms purchasing Mexican made goods. Such a list will include any raw material, early or late intermediates for the production of raw materials.

Evaluation and Recommendations

Availability of raw materials and intermediates and their prices

A statement indicating the status of the availability of raw materials is given in Annex XIV. As described earlier, out of the twenty essential drugs in question, seven drugs (active ingredients) are produced locally, while the remaining 13 are imported for local formulation. An analysis of the situation with regard to the availability of raw materials for the twenty drugs reveals that while basic chemicals derived particularly from the petrochemical industry are available, organic intermediates are not available as a rule. It is pertinent to quote a Mexican bank for foreign trade at this juncture to appreciate the factors responsible for hindering the growth of the pharmaceutical industry in Mexico: *

"The international market for raw materials and intermediates is monopolistic in character. As far as the foreign subsidiaries of multinational corporations are concerned, they obtain raw materials and intermediates from their principals. The multinationals also exchange certain materials between themselves and make them available to their subsidiaries. The problem is completely different with the national sector enterprises as they have difficulties in having access to raw materials and intermediates and very often are unable to procure them at reasonable prices. The nationally owned enterprises cannot obtain the raw materials and intermediates from the multinationals since they are not offered for sale in the open market. This problem can be solved in three ways as described below:

a) To acquire the raw material after the expiry of the patent. This is possible in the cases of drugs which have been in use over a long period of time and which are expected to continue to be used in the foreseeable future. This is the case with drugs meant for mass consumption,

* Translated from Comercio Exterior, Banco Nacional de Comercio Exterior, S.A. 27,8, Mexico, Agosto de 1977.

b) The second possibility is that the materials in question are available from countries with centrally planned economies such as Poland and Hungary without any preconditions. Similar is the case with certain materials from Italy.

c) The third possibility is local production of raw materials and intermediates of the requisite quality and available at reasonable prices.

Independent national producers very often encounter a situation when the price of the intermediate is invariably higher than the finished active ingredient and the local production of the concerned drugs becomes uneconomical. However, the multinational suppliers argue that it is uneconomical for them to sell intermediates. In view of this national enterprises prefer the integration of local production of raw materials and intermediates and vertical integration of technologies between themselves to ensure the availability of these materials."

Out of the three alternatives mentioned above for solving the problem relating to the availability of raw materials and intermediates, local production of these of the requisite quality at reasonable prices appears to be the one offering long lasting solution. The suggestion regarding the integration of local production of raw materials and integration of indigenous technologies is also worth consideration. Added to these, there are favourable factors such as sound petrochemical industry base, infrastructure, availability of trained personnel and big market. Besides the Government is providing various incentives in the form of tax credits, favourable terms for granting loans and price subsidies to the pharmaceutical industry and this augurs well for the rapid growth and development of the pharmaceutical industry.

In the short term it is necessary to hold consultations with developed countries to make available the raw materials and intermediates required for backward integration into production of active ingredients at reasonable prices.

Production of synthetic drugs

Considering the large variety of basic chemicals derived from the petrochemical industry and the large scale expansion projects in this sector under implementation and planned, there is scope for expansion of synthetic drug industry. An illustrative list of drugs being currently imported as shown in Annex IX highlights the wide scope for taking up local production of these drugs. Similarly the availability of raw materials for 20 essential drugs as shown in Annex XIV should facilitate the production of active ingredients being imported at present. For example in the case of Diethyl carbamazine, all the basic chemicals except one intermediate are available locally. Similar is the case with chloroquine.

Multipurpose plant

The multipurpose plant concept is applicable when dealing with the production of a group of synthetic drugs with small individual volumes. The list of imported drugs shown in Annex IX suggests the feasibility of establishing a multipurpose plant for the production of synthetic drugs of small volumes.

Production of antibiotics

Mexico has a wide base in agriculture and a variety of agricultural products required by the fermentation industry and antibiotics industry in particular, is available. In view of this there is good scope for the expansion and diversification of antibiotic industry.

Royalty and Availability of technology

Availability of suitable technology within the royalty ceiling stipulated by the Government is an important factor for the development of the pharmaceutical industry to manufacture intermediates and active ingredients. Since such a technology is available in developed countries, the latter should make it available to developing countries even if they are not in a position to make available intermediates at reasonable prices.

ANNEX I

The programme of development of the pharmaceutical industry for the future could be divided into

- a) pharmaceutical industry and
- b) chemico-pharmaceutical industry where:⁴

a) pharmaceutical industry having the support of the governmental institutions should reach 75% of the population in supplying basic drugs. Therefore it is expected to have a growth rate of 15% annually;

b) chemico-pharmaceutical industry - to achieve independence from the multinationals it is expected that the raw materials' production increase 20% annually especially for the basic drugs.

Export problems for:

- a) pharmaceutical industry - to export at least 5% to the countries where no formulation plants exist e.g. Latin America;
- b) Chemico-pharmaceutical industry. The objective is to achieve 20% of exports mostly to Latin America using its favourable geographical situation;

Imports

- a) pharmaceutical industry should import as little as possible of finished products;
- b) chemico-pharmaceutical industry's objective is not to import the raw materials but to produce them.

Prices of the basic drugs should be adjusted in such a way as to reach the majority of the population in the following way:

- a) prices should be lower than those originated abroad;
- b) prices for basic drugs needed for the public sector should be obtained on basis of cost price study;
- c) indispensable drugs should be sold with an insignificant profit margin, thus the prices should be symbolic.

4. Programa de Fomento Para La Industria Farmaceutica en Mexico -
Direccion General de Industrias, Mexico D.F., abril de 1979

National involvement

The Mexican capital involvement should be increased from the present 27% to 51% using all the possible mechanisms to achieve this. This will permit the involvement of the Mexican pharmaceutical industry up to 50%.

Technical development

In order to be less dependent on the foreign countries it is necessary that the pharmaceutical enterprises have access to the current formulation techniques from the technically advanced countries without upsetting the balance of trade. In the case of the chemico-pharmaceutical sector, it is necessary to have an objective to produce raw materials which are economically feasible for production especially obtained by fermentation and extraction.

Financial capability - necessary to have a solid financial basis.

Technical assistance

Pharmaceutical enterprises should not pay more than 1% of the total sales value for the technical know how.

Chemico-pharmaceutical enterprises should not pay more than 3% of sales value for the technical assistance in case when the owner of the patent (know how) has less than 25% shares of the enterprise, 2% when the owner of the patent has less than 50% shares of the market and 1% when the shares of the patent owner are more than 50%, and 0% when the owner of the technological know how has more than 75% shares of the company.

For export sales a double of the indicator of % of the overall amount of the exported volume would be granted in order to motivate the technologist to promote exports.

ANNEX II

In Mexico, there are 617 pharmaceutical companies from which 473 are Mexican owned with 10% of the market and 144 multinational owned with 90% of the market. Investment: US\$ 572.2 million; persons employed: 46,100 directly in the pharmaceutical industry, 42,000 employed in the distribution and sales which makes 0.5% of the active population and which represents 0.4% of the Gross National Product. From the above 81% of all industry 90.4% of the persons employed and 93.3% of the total net production is concentrated in the federal district of Mexico City.

The number of different pharmaceutical products is 16000. Sales to the public (January/December 1977) US\$ 395 million distributed as follows: US\$ 371 million sold by prescriptions, US\$ 24 million over the counter.

Average price in US\$:

	<u>Year</u>					<u>% increase</u>
	<u>1973</u>	<u>74</u>	<u>75</u>	<u>76</u>	<u>77</u>	
On prescription	0.77	0.84	0.93	0.99	1.17	51
Over the counter	0.27	0.30	0.34	0.35	0.49	80

Total sales in millions of US\$:

1. Pharmacies: 395 = 68%
2. Official sector: 172 = 29.7%
3. Others: 11.5 = 2.3%

Percentage of the market spread of the multinational and national pharmaceutical industry:

5 multinational represent	13.71
10 multinational represent	25.59
25 multinational represent	24.50
23 multinational represent	52.00
3 nationals represent	4.60

Six wholesalers distribute US\$ 248 million to the pharmacies with a 36% profit margin. The pharmacies sell to the public with a 24% profit margin.

ANNEX III

Production, import and export of drugs (1977)

	<u>US\$ million</u>
<u>Antibiotics</u>	
Production	35.82
Imports	10.77
Exports	5.30
<u>Hormones</u>	
Production	37.36
Imports	6.36
Exports	33.65
<u>Vitamins</u>	
Production	1.98
Imports	9.94
Exports	0.35
<u>Anti-infectives-analgesics</u>	
Production	11.92
Imports	2.87
Exports	2.20
<u>Alkaloids</u>	
Production	2.12
Imports	4.90
Exports	-
<u>Unclassified</u>	
Production	15.90
Imports	17.66
Exports	2.91
<u>TOTAL</u>	
Production	105.10
Imports	52.50
Exports	79.06

COMISION NACIONAL CONSULTIVA PARA EL DESARROLLO DE LA INDUSTRIA FARMACEUTICA
Dr. Velasco # 181 - 3er. Piso.
Tel. 5 78 07 03

PRODUCTOS QUIMICOS FARMACEUTICOS DE PRODUCCION NACIONAL

ANNEX IV

F A R M A C O

E M P R E S A

ACEITE DE RICINO U.S.P.

ACEITERA DE OCCIDENTE, S.A.
ACEITES POLIMERIZADOS, S.A.
QUIMICA MICHOACANA, S.A.

ACEITES DE LIMON

UNION NACIONAL DE PRODUCTOS
DE ACEITES DE LIMON
ALIMENTOS DE VERACRUZ
QUIMICA INTERAMERICANA
INSTITUTO BIOTERAPICO MEXICANO.
S.A.

ACEITE ESENCIAL DE MANDARINA

- ACETATO DE AMILO

- ACETATO DE BETAMETASONA

- ACETATO DE BORNILLO

ACETATO DE BUTIL CICLO-HEXIL P-TERCIARIO

ACETATO DE CARUFILO

ACETATO DE CEDRILLO

ACETATO DE CITRONELILO

ACETATO DE CLORMADINONA

QUIMICA INTERAMERICANA
AROMATICOS PETROQUIMICOS
AROMATICOS PETROQUIMICOS
QUIMICA INTERAMERICANA
AROMATICOS PETROQUIMICOS
SYNTEX

ACETATO DE DEHIDROCARVEILO

ACETATO DE DEHIDROXOANDROSTERONA(ACETATO DE DHA)

ACETATO DE PREGNENOLONA

AROMATICOS PETROQUIMICOS
SYNTEX
PROD. QUIMICOS NAT., S.A.

ACETATO DE DEXAMETASONA

INSTITUTO BIOTERAPICO MEXICANO.
S.A.

21-ACETATO DEXAMETAZONA MICRONIZADA

INSTITUTO BIOTERAPICO MEXICANO.
S.A.

ACETATO DE 16 17-2 EPOXI PREGNENOLONA

SYNTEX

ACETATO DE ESTENOBOLONA

PROQUINA

SYNTEX

F A R M A C O

ACETATO DE ESTIRALILO
ACETATO DE ETIL LINALILO
ACETATO DE FENILETILO
ACETATO DE FLUOCINOLONA
ACETATO DE 9-FLUOROHIDROCORTISONA
ACETATO DE 9-FLUOROPREDNISOLONA
ACETATO DE GERANILO
ACETATO DE GUAYACOL
ACETATO DE HIDROXOCOBALAMINA
ACETATO DE ISOBORNILO
ACETATO DE LINALILO
ACETATO DE MEGESTROL
ACETATO DE METILO
ACETATO DE NORETINDRONA
ACETATO DE NOPILO
ACETATO DE 19-NORTESTOSTERONA
ACETATO DE PARAMETASONA
ACETATO DE PREGNENOLONA
ACETATO DE TERPENILO
ACETATO DE TESTOSTERONA

ACETATO DE VETIVERILO
N-ACETIL-P-AMINOFENOL

ACETOFENIDO DE 16, 17-DIHDROXIPROGESTERONA
ACETONIDO DE FLUOCINOLONA
ACETONIDO DE FLURANDRENOLONA
17-ACETOXI PREGNENOLONA

E M P R E S A

QUIMICA INTERAMERICANA
AROMATICOS PETROQUIMICOS
AROMATICOS PETROQUIMICOS
SYNTEX
INSTITUTO BIOTERAPICO MEX., S.A.
INSTITUTO BIOTERAPICO MEX., S.A.
INTERNATIONAL FLAVORS
AROMATICOS PETROQUIMICOS
QUIMICA INTERAMERICANA
KEMIKA INDUSTRIAL
GARSIMEX, S.A.
PROQUIFIN
AROMATICOS PETROQUIMICOS
AROMATICOS PETROQUIMICOS
SEARLE DE MEXICO
AROMATICOS PETROQUIMICOS
SYNTEX
AROMATICOS PETROQUIMICOS
SYNTEX
SYNTEX
SYNTEX
AROMATICOS PETROQUIMICOS
SYNTEX
STEROMEX
GRUPO AROQUIM, S.A.
SIGNA, S.A.
SOMEQUISA
FINE CHEMICALS
SYNTEX
SYNTEX
SYNTEX
SYNTEX

F A R M A C O

E M P R E S A

17-ACETOXI PROGESTERONA
ACIDO ACETIL SALISILICO

ACIDO BENZOICO

ACIDO CITRICO (ANHIDRO E HIDRATADO)

ACIDO FUMARICO

ACIDO 3 NITROARSANILICO

ACIDO 3 NITRO 4-HIDROXI FENIL LARSONICO

ACIDO PICRICO R.A.

ACIDO SALICILICO

ACIDO TIOLICOLICO

ADIPATO DE ESPIRAMICINA

ADIPATO DE PIPERAZINA

AGAR-AGAR

AGUA DE COCIMENTO DE MAIZ

ALBUMINA DE HUEVO

ALBUMINA HUMANA

ALCOHOL BENCILICO

ALCOHOL DEXAMETAZONA MICRONIZADA

ALCOHOL FENILETILICO

ALCOHOL PURO DEXAMETAZONA

ALCOTHION

ALDA DIENO

ALDALTONA

ALDEHIDO AMIL CINAMICO

ALDEHIDO ANISICO

SYNTEX

SALCILATOS DE MEXICO

DOW QUIMICA

SALCILATOS DE MEXICO

CIA. UNIVERSAL DE IND.

QUIMICA MEXAMA

INDUSTRIAS CITRICAS

HEXAQUIMA

NITROG. INDUST. Y ALIMENTICIO

NITROG. INDUST. Y ALIMENTICIO

J. T. BAKER, S.A. DE C. V.

PRODUCTOS QUIM. MONTERREY

SALCILATOS DE MEXICO

DOW QUIMICA MEX.

ORGANIZACION QUIM. MEX.

RHODIA MEXICANA, S. A.

INTERQUIM

AGARMEX

ARANGUREN

MC. CORMICK DE MEX.

LABS. HYLAND, S.A.

LABS. CUTTER

ESTABL. LAUZIER

AROMATICOS PETROQUIMICOS

I. B. M. S. A.

AROMATICOS PETROQUIMICOS

I. B. M. S. A.

CYANAMID DE MEXICO

LABORATORIOS MYN

SEARLE DE MEXICO

SEARLE DE MEXICO

AROMATICOS PETROQUIMICOS

AROMATICOS PETROQUIMICOS

activ. Susceptibles

F A R M A C O

E M P R E S A

AMPICILINA POTASICA LIOF. 4, 110.00/kg. 77
AMPICILINA POTASICA LIOFILIZADA 4, 180.00/kg. 77
AMPICILINA POTASICA LIOFILIZADA ORAL 3, 700.00/kg. 77
AMPICILINA SODICA 3, 970.00 Q. 6000 77
AMPICILINA SODICA LIOFILIZADA ESTERIL 3, 970.00 Q. 6000 77
AMPICILINA TRIHIDRATO 2, 240.00/kg. 0.6000 77

ANDIENOLACTONA
ANDROSTANEDIONA
ANDROSTENEDIOL

ANTITOXINA DIFTERICA

ANTITOXINA TETANICA

AROMATIZANTES Y SABORIZANTES

QUINONAS DE MEXICO
QUINONAS DE MEXICO
QUINONAS DE MEXICO
FERMIC, S.A.
ORSABE, S.A.
KEMKA INDUSTRIAL
PRODUCTOS G. RICHTER
KEMKA, S.A.
QUINONAS DE MEXICO
FERMENTACIONES Y SINTESIS
FERMIC, S.A.
QUINONAS DE MEXICO
SEARLE DE MEXICO
SEARLE DE MEXICO
SEARLE DE MEXICO
SYNTEX, S.A.
SEARLE DE MEXICO
INDUST. NAC. DE HIGIENE
LABS. DR. ZAPATA
LABORATORIOS MYN
INDUST. NAC. DE HIGIENE
LABS. DR. ZAPATA
LABORATORIOS MYN
AROMATICOS PETROQUIMICOS
COLORANTES DEIMAN, S.A.
FERMENICH DE MEXICO
FRIES & FRIES INTERNATIONAL DE
MEXICO, S.A.
FRITZCHE DODGE & OLCOTT DE
MEXICO, S.A.
HEARMANN & REIMER DE MEX.
INTERNATIONAL FLAVORS &
FRAGRANCES DE MEXICO
RHODIA MEXICANA
SALICILATOS DE MEXICO
STANGE PESA, S.A. DE C.V.
U.O.P. FRAGRANCES SA. DE C.V.

F A R M A C O

E M P R E S A

AZUCARES INVERTIDOS

AZUCAR DE MAIZ
AZUFRE U.S.P. SUBLIMADO
BENTONITA BLANCA U.S.P.

BENTAMETAZONA 17 VALERATO
BETAMETASONA
BETAMETASONA ALCOHOL
BETAMETASONA 21 ACETATO
BETAMETASONA 17-21 DIPROPIONATO
BENZALDEHIDO
BENZOIL METRONIDAZOL

BENZOATO DE AMILO
BENZOATO DE BENCILO
BENZOATO DE 8-HIDROXIQUINOLINA
BENZOATO DE ESTRADIOL
BENZOATO DE METILO
BENZOATO DE SODIO

BENZOATO 19-NORTESTOSTERONA
BICARBONATO DE SODIO U.S.P.

N-BUTIL GUANIDINA CLORHIDRATO
RUTIRATO DE AMILO

COMPLEMENTOS ALIMENTICIOS

GLUCOSA, S.A.
ARANGUREN Y CIA.
POLAFARMA, S.A.
POLAFARMA, S.A.
GENERAL MILLS
INST. BIOTERAPICO MEXICANO
INST. BIOTERAPICO MEXICANO
INST. BIOTERAPICO MEXICANO
INST. BIOTERAPICO MEXICANO
INST. BIOTERAPICO MEXICANO
AROMATICOS PETROQUIMICOS
SILANES, S.A.
RHODIA MEXICANA, S.A.
SIGNA, S.A.
HARMAN AND REIMER DE MEX.
AROMATICOS PETROQUIMICOS
SIGNA, S.A.
SYNTEX, S.A.
SALICILATOS DE MEXICO
CIA. UNIVERSAL DE INDUST.
SALICILATOS DE MEXICO
SYNTEX, S.A.
J.T. BAKER, SA. DE C.V.
PRODUCTOS QUIM. MONTERREY
IND. DEL ALCALI, S.A.
QUIMICA UNIVERSAL
LABS. REYMOL
SYNFLEUR DE MEXICO
HARMAN AND REIMER

F A R M A C O

E M P R E S A

BUTIRATO DE EILO

21-TER-BUTIL ACETATO DE DEXAMETAZONA

CAFEINA REFINADA

CAFEINA

CAFEINA SINTETICA

CAFEINA Y SUS SALES

CAOLIN COLOIDAL

CAPRILATO DE ETILO

CAPROATO DE 17 ALFA-HIDROXI PROGESTERONA

CAPROATO DE 19-NORTESTOSTERONA

CARBOXIMETIL CELULOSA

CARBON ACTIVADO

CARBONATO DE CALCIO R. A.

CARBONATO DE MAGNESIO

CARBONATO DE MAGNESIO EXTRA LIGERO

CARBONATO DE MAGNESIO PESADO

CARBONATO DE SODIO MONOHIDRATADO CRISTALINO U.S.P.

CARBONATO DE SODIO ANHIDRO DURO

CARBOXIMETIL CELULOSA SODICA

HAARMAN AND REIMER

I.B.M. S.A.

MEXICANA DE ALCALOIDES

INDUSTRIAL SAN MARTIN

MEXICANA DE ALCALOIDES

MEXICANA DE ALCALOIDES

CAFEINA DE MEXICO, S.A.

INDS. SAN MARTIN

PROD. CORZO

POLAFARMA, S.A.

SYNFI EUR DE MEXICO, S.A.

STEROMEX, S.A.

QUIMICA ESTEROIDAL

SYNTEX, S.A.

DERIVADOS MACROQUIMICOS, S.A.

CLARIFILTRANTES MEX., S.A.

HOOKEER MEXICANA

PRODS. QUIMICOS MONTERREY

LABORATORIOS DEL NORTE, S.A.

J.T. BAKER, S.A.

COYOACAN, QUIMICA

PRODS. QUIM. MONTERREY

TECNICA QUIMICA

J.T. BAKER

DERIVADOS MACROQUIMICOS, S.A.

F A R M A C O

E M P R E S A

CAROTENO 5

**CAPROATO DE 17-HIDROXIPROGESTERONA
CASEINATO DE CALCIO**

CASEINATO DE SODIO

**CEFALEXINA SODICA ESTERIL
CEFALEXINA SODICA ORAL
CIANOCOBALAMINA**

**CICLOPENTIL PROPIONATO DE ESTRADIOL
CICLOPENTIL PROPIONATO DE TESTOSTERONA
CINAMATO DE CLORANFENICOL
CITRAL
CITRATO DE AMONIO R.A. Y PURIF
CITRAL DIMETIL ACETAL
CITRATO DE CAFEINA
CITRATO DE COLINA DIHIDRATADO CRIST. U.S.P.
CITRATO DE PIPERAZINA POLVO U.S.P.**

CITRATO DE POTASIO

**CITRATO DE PIRROLIDIN METIL TETRACICLINA
CITRATO DE SODIO U.S.P.**

**CITRONELAL
CITRONELOL**

**PRODUCTOS DESHIDRATADOS DE
MEXICO
AROMATICOS PETROQUIMICOS
SYNTEX, S.A.
LAB. PROTOLAC, S.A.
COMPLEMENTOS ALIMENTICIOS
GLUCOSA
COMPLEMENTOS ALIMENTICIOS
GLUCOSA
FERMIC, S.A.
FERMIC, S.A.
GARSIMEX
PROQUIFIN, S.A.
SIMBIOTIK
KEMIKA
SYNTEX, S.A.
SYNTEX, S.A.
PRODUCTOS QUIMICOS FINOS
AROMATICOS PETROQUIMICOS
PRODUCTOS QUIM. MONTERREY
AROMATICOS PETROQUIMICOS
MEXICANA DE ALCALOIDES
SYNTORGAN, S.A.
SYNTORGAN, S.A.
INTERQUIM, S.A.
PROD. QUIM. MONTERREY
TECNICA QUIMICA
FERMIC, S.A. DE C.V.
J.T. BAKER
INDUSTRIAS CITRICAS
TECNICA QUIMICA
PRODUCTOS QUIM. MONTERREY
AROMATICOS PETROQUIMICOS
AROMATICOS PETROQUIMICOS**

F A R M A C O

E M P R E S A

CLORANFENICOL LEVOGIRO

**CLORAMIDURO DE MERCURIO
CLORHIDRATO DE DIFENOXILATO
CLORHIDRATO DE FENILEFRINA
CLORHIDRATO DE HIDROXOCOBALAMINA**

CLORHIDRATO DE OXITETRACICLINA BASE ORAL

CLORHIDRATO DE OXITETRACICLINA ESTERIL

CLORHIDRATO DE PIPERAZINA POLVO U.S.P.

CLORHIDRATO DE PIRROLIDIN METIL TETRACICLINA

CLORHIDRATO DE TETRACICLINA

CLORHIDRATO DE TETRACICLINA ESTERIL

CLORURO CUPRICO

CLORURO DE AMONIO U.S.P. Y R.A.

**CENT. IND. BIOQUIMICOS, S.A.
FERMENTACIONES Y SINTESIS
SIGNA, S.A.
PROQUIFIN, S.A.
SIMBIOTIK, S.A.
FARMAQUIMIA, S.A.
SEARLE DE MEXICO, S.A.
MEXICANA DE ALCALOIDES
GARSIMEX, S.A.
KEMKA INDUSTRIAL
PRODUCTOS QUIMICOS FINOS
FERMIC, S.A.
PFIZER, S.A.
FERMIC, S.A.
PFIZER, S.A.
SYNTORGAN, S.A.
INTERQUIM, S.A.
FERMIC, S.A.
QUIMICA HOECHTS
FERMIC, S.A.
PFIZER, S.A.
CYANAMID, DE MEXICO
FERMIC, S.A.
CYANAMID DE MEXICO
J.T. BAKER
SYNTORGAN, S.A.
J.T. BAKER
PRODUCTORA QUIM. MEXICANA
PRODS. QUIM. MONTERREY
TECNICA QUIMICA**

F A R M A C O

B M P R E S A

CLORURO DE BENCILO

CLORURO DE BENZAL

CLORURO DE BENZALCONO (PASTA Y SOLUCION)

CLORURO DE CALCIO DIHIDRATADO U.S.P. ANHIDRO PURO

CLORURO DE COLINA CRISTALIZADO U.S.P.

CLORURO DE COLINA (SOLUCION AL 70%)

CLORURO DE MAGNESIO U.S.P. Y R.A.

CLORURO DE MERCURIO

CLORURO DE MERCURIO PURIFICADO

CLORURO DE IOTASIO U.S.P.

CLORURO DE SODIO U.S.P.

CLORURO DE M-TOLUEN SULFONILO

CLORURO DE P-TOLUEN SULFONILO

CLORURO MERCUROSO (CALOMEL) U.S.P.

CLOROPROPAMIDA

CIA. QUIM. AMEYAL

AROMATICOS PETROQUIMICOS

AROMATICOS PETROQUIMICOS

ORGANO SINTESIS

ROLAFARMA

ROLAQUIMIA

SIGNA, S.A.

J. T. BAKER, S.A.

PROD. QUIM. MONTERREY

SYNTORGAN, S.A.

TECNICA QUIMICA

MITOGENO IND. Y ALIMENTICIO

CATALISIS, S.A.

VRISA

NITROGENO INDS. Y ALIMENT.

J. T. BAKER

PROD. QUIM. MONTERREY

SYNTORGAN

FARMAQUIMIA, S.A.

J. T. BAKER

J. T. BAKER

PROD. QUIM. MONTERREY

TECNICA QUIMICA

REACTIVOS R.M.S.A.

J. T. BAKER

PRODUCTOS QUIM. MONTERREY

TECNICA QUIMICA

FINE CHEMICALS, S.A.

FINE CHEMICALS, S.A.

J. T. BAKER

CIA. UNIVERSAL DE INDS.

PFIZER, S.A.

F A R M A C O

E M P R E S A

CLOROFORMO U.S.P. Y R.A.

CLOPROFEN PIRIMIDINA
DL-CLOPROFEN PIRIDAMINA
CLOROYODOHIDROXIKUINOLEINA

CLORTETRACICLINA
CLOXACICLINA

CLOXACILINA
CLOXACILINA SODICA ORAL Y ESTERIL *vol: 2, y 40.00/kg
Esti: 4, 060.00/kg*

COLOR CARAMELO
CONCENTRADOS PROTEINICOS DE SOYA
COMPLEJO DE HIERRO DEXTRAN

COMPLEJO DE HIERRO -DEXTRAN(10%) VETERINARIO
COMPLEJO DE ALQUILFENOXI-POLIETILENOXIETANOL-YODO
(1.75% Y 20%)
DECANOATO DE 19-NORTESTOSTERONA
DECANOATO DE TESTOSTERONA
DEHIDRO ISO ANDROSTERONA (DHA)

J. T. BAKER
PROD. QUIM. MEX.
PRODS. QUIM. MONTERREY
TECNICA QUIMICA
J. T. BAKER
SINTESIS MEXICANA
CIBA GEIGY MEX.
REY-MOL, S.A.
SIGNA, S.A.
CYANAMID DE MEXICO
DEMIKA INDUSTRIAL
QUINONAS DE MEXICO
FERMENTACIONES Y SINTESIS
ORSABE, S.A.
EUROLATIN PHARMACEUTICALS
QUINONAS DE MEXICO
FERMIC, S.A.
ORSABE, S.A.
GLUCOSA
LABS. GRIFFITH DE MEX.
ANCHOR, S.A.
TECHNIA INTERNACIONAL
FISONS MEXICANA
SIMBIOTIK
POLAFARMA, S.A.
POLAFARMA, S.A.
SYNTEX, S.A.
SYNTEX, S.A.
SYNTEX, S.A.
STEROMEX, S.A.
PROQUINA

F A R M A C O

E M P R E S A

16 DEHIDRO PROGESTERONA GRADO TECNICO
DEHIDROXIAN PROGESTERONA
DEXAMETAZONA
DEXTRINAS
DEXTROSA Y DEXTROSA MONOHIDRATADA

PROQUINA
SYNTEX, S.A.
INST. BIOTERAPICO MEXICANO
ARANGUREN Y CIA.
POLIBASICOS, S.A. DE C.V.
TECNICA QUIMICA, S.A.

DIACETATO -5- NITROFURFURAL
DICLORHIDRATO DE PIPERAZINA
3.5 -DICLORO - 2, 6 -DIMETIL -4- PIRIDINOL
5.7 DICLORO 8 HIDROXIQUINOLEINA

ESQUIM, S.A.
INTERQUIM, S.A.
DOW QUIM, MEX.
REY-MOIL, S.A.
SIGNA, S.A.

DICLOXACILINA

QUINONAS DE MEX.

DICLOXACILINA ORAL

DICLOXACILINA SODICA ORAL Y ESTERIL

01061 J, 570, 00/47
EST: 7, 180, 00/157
a. d. n.

FERMENTACIONES Y SINTESIS

DIHIDROPROGESTERONA

FERMIC, S.A.

DIHIDROPROGESTOSTERONA

ORSABE, S.A.

DIMETIL CLORTETRACICLINA

PROD. QUIM. NATURALES

DIMETIL CLORTETRACICLINA CLORHIDRATO

SYNTEX, S.A.

DIMETIL POLISILOXANO (LIQ.AL 100% O EN EMULSIONES

CYANAMID DE MEX.

ACUOSAS DE 10% Y 30%).

CYANAMID DE MEX.

DIMETIL TETRACICLINA

DOW CORNING DE MEX.

DIMETISTERONA

BAYER DE MEX.

3, 5 -DINITRO -0- TOLUAMIDA (ZUAMIX)

UNION CARBIDE MEX., S.A.

DPIRONA MAGNESICA

CYANAMID DE MEX.

DPIRONA SODICA

SYNTEX, S.A.

DIPROPIONATO DE ESTRADIOL

DOW QUIM, MEX.

DIPROPIONATO DE METIL ANDROSTENDIOL

SOC. MEX. DE QUIM. IND.

PROQUIFIN

PROQUIFIN

SYNTEX, S.A.

SOC. MEX. DE QUIM. IND.

SYNTEX, S.A.

SYNTEX, S.A.

SYNTEX, S.A.

SYNTEX, S.A.

SYNTEX, S.A.

SYNTEX, S.A.

DIYODO HIDROQUINOLEINA

ENANTA TO DE LEHIDROISOANDROSTERONA

ENANTA TO DE ESTRADIOL

ENANTA TO DE 17-HIDROXIPROGESTERONA

ENANTA TO DE 19-NORTEOSTERONA

ENANTA TO DE TESTOSTERONA

ENANTA TO DE ESTRADIOL

ENZIMAS PROTEOLITICAS A BASE DE CULTIVOS (PROTEASAS)

16, 17-EPOXI-16 - METIL PREGNENOLONA

EPOXIPREGNENOLONA

16 ALFA, 17 ALFA EPOXIPREGNENOLONA ACETATO

EPOXIPLOGFSTERONA

16 ALFA, 17 ALFA EPOXIPROGESTERONA

5, 6 -EPOXIDO DE 16-DEHIDROPREGNENOLONA

EQUILENINA

ERITROMICINA BASE

ERITROMICINA ESTOLATO

ESTERATO DE ALUMINIO

ESTERATO DE BUTILO

ESTERATO DE CALCIO

ESTERATO DE ERITROMICINA

ESTERATO DE MAGNESIO U. S. P.

ESTERATO DE SODIO U. S. P.

ESTERATO DE ZINC

ESTERES DE LANOLINA DE BAJO PUNTO DE FUSION

REY MOL, S. A.

SIGNA, S. A.

SYNTEX, S. A.

SYNTEX, S. A.

SYNTEX, S. A.

SYNTEX, S. A.

SYNTEX, S. A.

SYNTEX, S. A.

PFIZER, S. A.

ENMEX

SYNTEX, S. A.

SEARLE DE MEX.

STEROMEX

SYNTEX, S. A.

DYOSINTH, S. A.

SEARLE DE MEX.

STEROMEX

SEARLE DE MEX.

SYNTEX, S. A.

SYNTEX, S. A.

ABBOT

FERMIC, S. A.

FERMIC, S. A.

ABBOT LABS.

PROD. QUIMICA MEX.

PRODUCTOS CORZO

PRODUCTORA QUIM. MEX.

FERMIC, S. A.

ABBOT

PRODUCTORA QUIM. MEX.

PRODUCTORA QUIM. MEX.

PRODUCTORA QUIM. MEX.

PRODUCTOS CORZO

LANOQUIM

F A R M A C O

ESTERES DE SORBITAN
ESTRADIOL
ESTRADIOL BENZOATO
ESTRADIOL DIACETATO
ESTRADIOL DIPROPIONATO
ESTRADIOL 3 METIL ETER
ESTRADIOL VALERATO
ESTREPTOLISINA "O"
ESTRIOL
ESTRONA
ETER GLICERICO DE GUAYACOL
ETER METILICO DE ESTRONA
ETIL CARBONATO DE ERITROMICINA
ETIL LINALOL
ETIL SUCCINATO DE ERITROMICINA

17-ALFA - ETIL ANDROESTENDIOL
ETINIL ESTRADIOL
ETINIL TESTOSTERONA (ETISTERONA)
ETINODIOL
ETISTERONA
ESTEARATO DE MAGNESIO
ESTRONA Y SODIO SULFATO
ESTERATO DE ALUMINIO
EXTRACTO DE MALTA

EXTRACTO DE MALTA Y CEREALES
EXTRACTOS VEGETALES BLANDOS, FLUIDOS Y SECOS
EUGENOL GRADO FARMACEUTICO
EXTRACTO DE MALTA Y CEREALES
FACTOR ANTI-HEMOFILICO
FENACETINA
FENIL BUTAZONA BASE

FENIL BUTAZONA SODICA

E M P R E S A

POLIBASICOS, S.A.
SYNTEX
SEARLE DE MEXICO
SEARLE DE MEXICO
SEARLE DE MEXICO
SEARLE DE MEXICO
SEARLE DE MEXICO
LABORATORIOS BELJ
SYNTEX
SYNTEX
SILANES
SYNTEX
FERMIC
AROMATICOS PETROQUIMICOS
ABBOT LABORATORIOS
FERMIC
SEARLE DE MEXICO
SYNTEX
SYNTEX
SEARLE DE MEXICO
SEARLE DE MEXICO
PRODUCTORA QUIM. MEX.
SYNTEX
PRODUCTORA QUIMICA MEX.
COMPLEMENTOS ALIMENTICIOS
GLUCOSA, S.A.
GLUCOSA, S.A.
SYNTORGAN, S.A.
AROMATICOS PETROQUIMICOS
GLUCOSA
LABORATORIOS HYLAND
SALICILATOS DE MEXICO
TECQUIM
CIBA GEIGY
TECQUIM
CIBA GEIGY

F A R M A C O

E M P R E S A

FENILEFRINA BASE Y CLORHIDRATO
FENILEFRINA Y SUS SALES
FENIL ETANOL
FENIL PROPIONATO DE ESTRADIOL
FENIL PROPIONATO DE 19-NORTEOSTERONA
FENIL PROPIONATO DE TESTOSTERONA
FENOL SULFONATO DE SODIO
FENOL SULFONATO DE ZINC
FLUIZANDRENOLONA
FLUCLOXACILINA

PRECIO: \$6,870.00/kg

PRECIO: 6,270.00/kg

FLUMETALONA
FLUMETAZONA
FLUOCINOLONA
FLUOCINONIDA
FLURANDRENOLIDA

9-ALFA - FLUORO-HIDROCORTISONA
9-ALFA - FLUORO-HIDROCORTISONA ACETATO
9-ALFA - FLUORO PREDNISOLONA
9-ALFA - FLUORO PREDNISOLONA ACETATO
FORMITO DE ETILO
FOSFATO COMPLEJO DE TETRACICLINA
FOSFATO DE AMONIO U.S.P.

FOSFATO DE CALCIO MONO Y DIBASICO U.S.P. Y R.A.

FOSFATO DE DEXAMETASONA
FOSFATO DE SODIO

FOSFATO DICALCICO

FOSFATO SODICO DE BETAMETASONA

MEXICANA DE ALCALOIDES
MEXICANA DE ALCALOIDES
AROMATICOS PETROQUIMICOS
SYNTEX
SYNTEX
SYNTEX
TECQUIM, S.A.
TECNICA QUIMICA, S.A.
SYNTEX

ORSABE, S. A.
QUINONAS DE MEXICO
SYNTEX

SYNTEX
SYNTEX
SYNTEX
SYNTEX
SYNTEX

INST. BIOTERAPICO MEXICANO
INST. BIOTERAPICO MEXICANO
INST. BIOTERAPICO MEXICANO
INST. BIOTERAPICO MEXICANO
GRUPO AROQUIM, S.A.
FERMIC

J.T. BAKER
PROD. QUIM. MONTERREY
TECNICA QUIMICA

J. T. BAKER
PROD. QUIM. MONTERREY
KEMIKA INDUSTRIAL
J.T. BAKER

PROD. QUIM. MONTERREY
TECNICA QUIMICA

ALFBECK DE MEXICO
COMPLEX QUIMICA

INST. BIOTERAPICO MEXICANO

F A R M A C O

E M P R E S A

FOSFATO SODICO DE DEXAMETASONA
FOSFATO DISODICO DE PARA METASONA
FOSFATO DE PIPERAZINA POLVO U. S. P.

FUMARATO FERROSO POLVO FINO

FUMARATO FERROSO POLVO NORMAL

FURALTADONA
FURALTADONA BASE
FURALTADONA CLORHIDRATO
FURALTADONA TARTRATO
FURAZOLIDONA

FURAZONA
FTALIL SULFACETAMIDA

FTALIL SULFATIAZOL

FUMARATO FERROSO
GAMMA GLUBULINA ANTIPERTUSIS HUMANA
GAMMA GLUBULINA NORMAL

GAMMA GLUBULINA ANTITETANICA
GENTAMICINA
GERANIOL
GLICOLIL ARSALINATO DE BISMUTO
GLUCOSA ANHIDRA

GLUCOSA TRIHIDRATADA
GLUCOSAS (ENZIMATICA Y SOLIDA)

INST. BIOTERAPICO MEXICANO
SYNTEX
SYNTORGAN
INTERQUIM

LABS. REY MOL
SIGNA, S.A.

LABS. REY MOL
SIGNA, S.A.

ESQUIM, S.A.

ESQUIM, S.A.

ESQUIM, S.A.

ESQUIM, S.A.

POLAQUIMIA, S.A.

ESQUIM, S.A.

ESQUIM, S.A.

QUIMOFARMA

PRODUCTOS CORZO

SIMBIOTIK

SYNTORGAN

PRODUCTOS CORZO

TECQUIM

REY MOL DE MEXICO

LABS. HYLAND

LABS. HYLAND

CUTTER

LAUZIER

LABS. HYLAND

FERMIC

AROMATICOS PETROQUIMICOS

SIGNA, S.A.

COMPLEMENTOS ALIMENTICIOS

GLUCOSA

GLUCOSA

ARANGUREN Y CIA.

F A R M A C O

E M P R E S A

GOMA ARABIGA REFINADA

GRENETINA U.S.P.

HEPARINA

HEPARINA SODICA

HETACILINA POTASICA ORAL Y ESTERIL *1000 mg 3,580.00/Kg*

HETACILINA BASE *3,580.00/Kg*

HEMISUCCINATO ACIDO DE CLORANFENICOL

HEXACLOROFENO

HEXAHIDRATO DE PIPERAZINA

P-HIDROXIBENZOATO DE ETILO

P-HIDROXIBENZOATO DE METILO

P-HIDROXIBENZOATO DE PROPILO

HIDROXIDO DE ALUMINIO (GEL Y GELSECO)

HIDROXIDO DE ALUMINIO U.S.P. Y R.A.

HIDROXIDO DE AMONIO U.S.P. Y R.A.

19-HIDROXI-DEHIDRO ISOANDROSTERONA

19-HIDROXI-ANDROSTENDIONA

1-(2-HIDROXIETIL)-2-METIL-5-NITRO IMIDAZOL

GLUCOSA Y FECULAS
PRODUCTOS DE MAIZ
QUIMICA INTERAMERICANA
GLUCOSA

COLOIDALES DUCHE

PROD. QUIM. FINOS

PROD. QUIM. FINOS

QUINONAS DE MEXICO

QUINONAS DE MEXICO

KEMIKA INDUSTRIAL

PROD. QUIM. FINOS

ORGANOSINTESIS

SIGNA, S.A.

INTERQUIM

SALICILATOS DE MEXICO

SALICILATOS DE MEXICO

SALICILATOS DE MEXICO

CIA. QUIM. IND. NEWMANN

LABS. DEL NORTE

PRODUCTOS CORZO

QUIMICA MORELOS

PROD. QUIM. MEX.. S.A.

J. T. BAKER

PROD. QUIM. MONTERREY

TECNICA QUIMICA

J. T. BAKER

PROD. QUIM. MEX.. S.A.

PROD. QUIM. MONTERREY

TECNICA QUIMICA

SYNTEX

SYNTEX

LABS. SILANES

SIGNA, S.A.

F A R M A C O

E M P R E S A

HIDROXICOBALAMINA

HIDROXICOBALAMINA BASE
HIDROXICOBALAMINA CLORHIDRATO
HIDROXICOBALAMINA ACETATO
HIDROXIDO DE MAGNESIO U. S. P.
HIDROXIDO DE MAGNESIO (GEL Y GEL SECO)

HIDROXICOBALAMINA ACETATO

HIDROXICOBALAMINA BASE

18-HIDROXIDESOXICORTICOSTERONA
HIDROXIDO DE CALCIO

HIDROXIDO DE ALUMINIO (GEL Y SECO)
HIDROXIDO DE ALUMINIO GEL COMPRIMIDO

HIDROXOCOBALAMINA Y SUS SALES
4-HIDROXIPIRAZOL (3, 4-d- PIRIMIDINA
8-HIDROXIQUINOLEINA
HIDROXICITRONELOL
17-HIDROXIPROGESTERONA

18-HIDROXIPROGESTERONA
INMUNO GAMA GLOBULINA
INOCULANTES PARA LEGUMINOSAS PERTENECIENTES AL
GENERO RHIZOBIUM
INOSITOL N. E.
ISOEUGENOL

PROD. QUIM. FINOS
KEMKA
GARSIMEX
SIMBIOTIK
LABS. SILANES
KEMKA INDUSTRIAL
KEMKA INDUSTRIAL
PRODUCTOS CORZO
LABS. DEL NORTE
CIA. QUIM. IND. NEUMANN
PROD. QUIM. FINOS
SIMBIOTIK
GARSIMEX
PROQUIFIN
GARSIMEX
SIMBIOTIK
SEARLE DE MEXICO
PROD. QUIM. MONTERREY
TECNICA QUIMICA
PRODUCTOS CORZO
LABS. DEL NORTE
PRODUCTOS CORZO
PROD. QUIM. FINOS
LABS. REY MOL
LABS. REY MOL
QUIMICA INTERAMERICANA
SYNTEX
SEARLE DE MEXICO
SEARLE DE MEXICO
ESTABLECIMIENTO LAUZIER
ANDERSON CLAYTON
SHONCO DE MEXICO
AROMATICOS PETROQUIMICOS

F A R M A C O

E M P R E S A

ISOANDROSTERONA
ISOCAPROATO DE 19-NORTEOSTERONA
ISOCAPROATO DE TESTOSTERONA
YODO-NON-IFENOXI POLLETILENOXIETANOL
5-YODO-2-PROPINIL 2,4,5-TRICLORO FENIL ETHER
IONONAS

LANOLINA ANHIDRA U.S.P.

LAURIL SULFATO DEL ESTER PROPIONICO DE ERITROMICINA

LECITINA DE SOYA: FLUIDA
LECITINA DE SOYA GRADO FLUIDO
LECITINA DE SOYA SOLIDA (PLASTICA)
LEVADURA DE CERVEZA DESAMARGADA
LAURIL SULFATO DEL PROPIONATO DE ERITROMICINA

LINALOL
LINCOMICINA
LICINA

MALTA DEXTRINA
MALEATO DE BROMO PROFENPIRIMIDINA
MALEATO DE CLOROPROFENPIRIDAMINA
MALEATO DE DEXTRO CLORO PROFEN PIRIMIDINA
MALEATO DE PROFEN PIRIDAMINA
d-MANNOHEPTOLOSIA
MEFENESINA

METABISULFITO DE POTASIO
METABISULFITO DE SODIO R.A.

SYNTEX
SYNTEX
SYNTEX
POLAQUIMIA
LABS. BRISTOL DE MEXICO.
I.F.F., S.A.
HARMANN AND REIMER
AROMATICOS PETROQUIMICOS
LANOQUIM, S.A.
PRODUCTOS LINDEST
FERMIC
ABBOT LABS.
GALLETERA MEX.
LA POLAR
GALLETERA MEXICANA
CIA.QUIM.INDUST.NEUMANN
ABBOT LABS.
FERMIC
AROMATICOS PETROQUIMICOS
UPJOHN
ALBAMEX
AGINOMOTO DE MEX.
COMPLEMENTOS ALIMENTICIOS
SINTESIS MEXICANA
SINTESIS MEXICANA
SINTESIS MEXICANA
SINTESIS MEXICANA
PROD. QUIM. NATURALES
PROQUIM
TECQUIM, S.A.
PROD.QUIM. MONTERREY
PROD. QUIM. MONTERREY

F A R M A C O

E M P R E S A

MENTONA
 MEPROBAMATO
 MERCURIO TRIDESTILADO

AROMATICOS PETROQUIMICOS
 AMBAR
 J.T. BAKER
 PROD. QUIM. MONTERREY
 TECNICA QUIMICA
 QUIMICA UNIVERSAL
 SYNTEX
 SEARLE DE MEXICO

MERCURO CROMO
 MESTRANOL

2-METIL-5-NITROIMIDAZOL
 METIL TESTOSTERONA
 METOCARBAMOL
 METAMPICILINA

LABS. SILANES
 SYNTEX
 LABS. SILANES
 FERMIC

METAMPICILINA SODICA LIOF. (ORAL Y ESTERIL) *2,700.00/Kg*
 METAMPICILINA SODICA (ORAL Y ESTERIL) *2,200.00/Kg*

P. GEDEON RICHTER AMERICA
 QUINONAS DE MEXICO
 QUINONAS DE MEXICO
 QUINONAS DE MEXICO
 EUROLATIN FARMACEUTICALS
 EUROLATIN FARMACEUTICALS
 QUINONAS DE MEXICO
 STEROMEX

METAMPICILINA SODICA

METANDROSTENOLONA

17 ALFA, METIL-ANDROSTAN 3 BETA, 17 BETA DIOL

17-METILANDROSTENDIOL (MAD)

METILIONONAS

HARMAN REIMER
 INT. FLAVORS FRAGRANCES
 ALIMENTOS BALANCEADOS

METIONINA

METIL-DEHIDRO TESTOSTERONA

17-METIL-DIHDRO TESTOSTERONA (METIL DHT)

16 ALFA-METIL-17-HIDROXIPREGNENOLONA

16 ALFA, METIL-PREGNENOL

16, ALFA, METIL PREGNENOLONA

3(0-METOXIFENOXI) -1,2-PROPANODIOL

METRONIDAZOL

PROQUINA
 SYNTEX
 HARMAN REIMER
 INT. FLAVORS FRAGRANCES
 ALIMENTOS BALANCEADOS
 SYNTEX
 SYNTEX
 SYNTEX
 PROQUINA
 DIOSYNTH
 LABS. SILANES
 LABS. SILANES
 RHODIA MEX
 SIGNA, S.A.

F A R M A C O

E M P R E S A

MEZCLAS CRUDAS DE TRIPSINA Y QUIMOTRIPSINA

J. T. BAKER
CANAFARMA
LABS. WILSON DE MEXICO

MEZCLAS CRUDAS DE TRIPSINA, QUIMOTRIPSINA Y RIBONUCLEASA

J. T. BAKER
CANAFARMA
LABS. WILSON DE MEXICO
LABS. REY MOL
GRUPO AROQUIM
RHODIA MEXICANA
LAB. LABIMA
RIGAR, GHARDAL
QUIMOR

MEZCLA DE CLORO-HIDROXIQUINOLEINA
MEZCLA DE PRODUCTOS ODORIFICOS

MICROESFERAS NEUTRAS

MONOESTEARATO DE GLICERILO "E"

MONOESTERATO DE GLICERILO "F"

MONOHEPTULOSA

MONOPROPIONATO DE ESTRADIOL

MULTIDISCOS

NAPROXENATO DE SODIO

NAPROXEN (ACIDO -d-2-(6'METOXI-2-NAFTIL)-PROPIONILO

NICOTINA MIDA

NITRATO DE AMONIO CRIST. PURO

NITRATO DE MERCURIO

NITRATO DE PIRROLIDIN METIL TETRACICLINA ESTERIL

NITRATO DE PIRROLIDIN TETRACICLINA

NITROFURAZOLIDONA

NITROFURAZONA

19-NORTESTOSTERONA

NORETINDRONA

19-NORANDROSTENDIONA (NAD)

NORETINDRONA O NORETINILESTOSTERONA

19-NORTESTOSTERONA

OXACILINA SODICA

QUINONAS DE MEXICO

F A R M A C O

E M P R E S A

OXACILINA SODICA ESTERIL \$4,300.00/Kg.
OXALATO DE PIPERAZINA
OXALATO DE POTASIO

OXALATO DE SODIO

OXICLORURO DE BISMUTO (NACAR)
OXIDO DE BISMUTO
OXIDO DE MAGNESIO
OXIDO DE MAGNESIO U.S.P.

OXIDO DE MAGNESIO EXTRALIGERO U.S.P.

OXIDO DE MAGNESIO PESADO U.S.P.
OXIDO ROSA Y AMARILLO DE MERCURIO

OXIDO DE ZINC U.S.P.

OXIDO FERRICO
OXIMA
OXIMA ACETATO
OXIMA DEL ACETATO DE 16-DEHIDRO PREGNENOLONA
OXIMA DEL ACETATO DE PREGNADIENOLONA
OXIMA DE PREGNADIENOLONA
OXIMETOLONA
OXITETRACICLINA
OXITETRACICLINA CLORHIDRATO

QUINONAS DE MEXICO
INTERQUIM, S.A.
PRODUCTOS QUIM. MONTERREY
TECNICA QUIMICA
J. T. BAKER
PRODUCTOS QUIM. MONTERREY
TECNICA QUIMICA
FARMAQUIMIA
FARMAQUIMIA
LABS. DEL NORTE
CIA. IND. NEUMANN
QUIMICA DEL MAR, S.A.
COYOACAN QUIMICA
POLAFARMA
COYOACAN QUIMICA
J. T. BAKER
PRODUCTOS QUIM. MONTERREY
QUIMICA MONTERREY
GENERAL PRODUCTOS, S.A.
J. T. BAKER
PRODUCTOS QUIM. MONTERREY
TECNICA QUIMICA
PRODUCTOS QUIM. MONTERREY
STEROMEX
PROD. QUIM. NATURALES
SYNTEX
SYNTEX
SYNTEX
SYNTEX
FERMIC
PFIZER
FERMIC

F A R M A C O

E M P R E S A

OXITETRACICLINA BASE Y CLORHIDRATO ESTERIL, 1.00.00/Kg 74
PALMITATO DE CLORANFENICOL

PAMOATO DE PIRANTEL
PANTOTENATO DE CALCIO (RACEMICO Y DEXTROGIRO)
PENICILINA BENZATINICA
PECTINA CITRICA
PENICILINA G. (PROYECTO)
PENICILINA G. POTASICA (PROYECTO 1978)
PENICILINA G. PROCAINA U. S. P. ESTERIL (PROYECTO)
PEPTONA BACTERIOLOGICA
PIRACINOBUTAZONA
PIROBENZAMIDINA
PIRROLIDINOMETIL TETRACICLINA (BASE, CITRATO, NITRATO)

PIRROLIDINO METIL TETRACICLINA
PIRROLIDINO METIL TETRACICLINA (CITRATO ESTERIL)
PIRROLIDIN METIL TETRACICLINA ORAL
PLASMA NORMAL HUMANO

POLIVINIL PIRROLIDONA
POLIVINIL PIRROLIDONA (PUP) K-30
BETA - PREGNANE - DIONA
PREGNENOLONA

PREGNENOLONA ACETATO
PROGENINA
PROGESTERONA

FERMIC
KEMKA INDUSTRIAL
SIMBIOTIK
PROQUIFIN
PFIZER
NITROG. INDS. Y ALIMENTICIO
QUINONAS DE MEXICO
PECTINA DE MEXICO
CENT. IND. BIOQUIMICO
CENT. IND. BIOQUIMICO
CENT. IND. BIOQUIMICO
GLUCOSA
TECQUIM
SYNTEX
FERMIC
QUIMICA HOECHST
FERMIC
FERMIC
FERMIC
BANCO DE PLASMA
PRODUCTOS LIOFILIZADOS
LABORATORIOS MYN
INDUSTRIAL DESHIDRATADORA
INGSAM
BENEFICIADORA E INDUSTR.
STEROMEX
SYNTEX
DIOSYNTH
DIOSYNTH
PROQUINA
SYNTEX
DIOSYNTH
STEROMEX
PROQUINA

F A R M A C O

E M P R E S A

PROGESTERONA 17-OH MG.
PROPIONATO DE BENCILO
PROPIONATO DE DROMOSTANOLONA
PROPIONATO DE ERITROMICINA
PROPIONATO DE GERANILO
PROPIONATO DE 17-HIDROXIPROGESTERONA
PROPIONATO DE 9-NORTESTOSTERONA
PROPIONATO DE PRONASTANOLONA
PROPIONATO DE SODIO
PROPIONATO DE TESTOSTERONA
PROTEINAS AISLADAS
PROTEINAS CONCENTRADAS
PROTEINA DE MAIZ
PROTEINAS HIDROLIZADAS
PROTEINAS VEGETALES HIDROLIZADAS (PASTA)
PROTEINAS VEGETALES HIDROLIZADAS

PROTOXOLATO DE HIERRO (POLVO PURO)
PRUEBA PARA EL EMBARAZO
REACTIVOS PARA DIAGNOSTICO
REACTIVOS PARA DIAGNOSTICO UNICAMENTE PARA
ESTREPTOLISINA "O"
REAGININAS PRUEBA RAPIDA
SACARINA

SACARINA ACETANILIDA
SACARINA SODICA SOLUBLE

SAL SODICA DE ESTRADIOL
SAL SODICA DEL SULFATO DE DEHIDRO ISOANDROSTERONA
SAL SODICA DEL SULFATO DE EQUILENINA

STEROMEX
AROMATICOS PETROQUIMICOS
SYNTEX
FERMIC
AROMATICOS PETROQUIMICOS
SYNTEX
SYNTEX
SYNTEX
AROMATICOS PETROQUIMICOS
SYNTEX
PROTEINAS
PROTEINAS
ARANGUREN Y CIA.
GLUCOSA
GLUCOSA
GLUCOSA
COMP. ALIMENT.
SYNTOORGAN
LABS. LA FON
SIGMA

LABORATORIOS BELI
LABS. BIO-LAB, S.A.
SIGNA
FINE CHEMICALS
SIMBIOTIK
LABS. REY MOL
UNION QUIM. VALLE DE MEX.
LABS. REY MOL
SIMBIOTIK
SIGNA, S.A.
SYNTEX
SYNTEX
SYNTEX

1
3
1

F A R M A C O

E M P R E S A

SALICILATO DE BENCILO

SALICILATO DE METILO F. M.

SORBITOL U.S.P. 70%

SUERO ANTI A

SUERO ANTI B

SUERO DE COOMBS

SUERO DE LECHE DESMINERALIZADO

SUBCARBONATO DE BISMUTO

SUBGALATO DE BISMUTO

SUBNITRATO DE BISMUTO

SUBSALICILATO DE BISMUTO

SUBSALICILATO DE MERCURIO

SUBYODURO DE BISMUTO

SUCCINATO SODICO DE CLORAMFENICOL ESTERIL INYECTABLE

SUCCINATO ACIDO DE CLORAMFENICOL

SUCCIL SULFATIAZOL

SUERO ANTIALACRAN

SALICILATOS DE MEXICO
GRUPO AROQUIM

SALICILATOS DE MEXICO
POLIBASICOS, S. A.

LABS. BIO-LAB

LABS. BIO-LAB

LABS. LAFON

IND. ALIMENTICIAS CLUB

FARMAQUIMIA

SIGNA

LABS. REY MOL

J. T. BAKER

J. T. BAKER

FARMAQUIMIA, S. A.

SIGNA

LABS. REY MOL

CIA. UNIVERSAL DE INDUSTRIAS

SIGNA

LABS. REY MOL

J. T. BAKER

SIGNA, S. A.

FARMAQUIMIA

FARMAQUIMIA

FARMAQUIMIA

SIGNA, S. A.

KEMIKA INDUSTRIAL

PRODUCTOS QUIMICOS FINOS

PROQUIFIN

SIMBIOTIK

PRODUCTOS CORZO

SIMBIOTIK

SYNTORGAN

INST. NAL. DE HIGIENE

LABS. DR. ZAPATA

LABS. MYN

F A R M A C O

E M P R E S A

SUERO ANTICROTALICO	INST. NAL. DE HIGIENE LABS. MYN
SUERO ANTIBOTROPICO	LABS. MYN
SUERO ANTIVIPERINO	INST. NAL. DE HIGIENE LABS. MYN
SUERO ANTIBRONCONEURONICO	LABS. DR. ZAPATA
SULFACETAMIDA (PROYECTO)	GEDON RICHTER AMERICA SYMBIOTIK
SULFACETAMIDA SODICA (PROYECTO)	LABS. JULIAN GEDON RICHTER AMERICA
SULFADIAZINA	SIMBIOTIK
SULFADIAZINA SODICA	LABS. JULIAN DE MEX. INTERQUIM
SULFAMERAZINA	SIMBIOTIK
SULFAMERAZINA SODICA	LABS. JULIAN DE MEX.
SULFAMETAZINA	SIMBIOTIK
SULFAMETAZINA SODICA	LABS. JULIAN DE MEX. LABS. JULIAN DE MEX. SIMBIOTIK
SULFAMETOXAZOL	INTERQUIM
SULFANILAMIDA	INTERQUIM
SULFANILAMIDO PIRIMIDINA	SIMBIOTIK
SULFATIAZOL (SUSPENDIO FAB.)	LABS. JULIAN DE MEX.
SULFATIAZOL (SUSPENDIO FAB) SODICO	INTERQUIM
SULFADIMETILOXAZOL	INTERQUIM
SULFATO DE BARIO GRADO RADIOLOGICO	SIMBIOTIK (PROYECTO)
SULFATO DE EQUILENINA Y SODIO	INTERQUIM, S. A.
SULFATO DE ESTRONA Y SODIO	H. KOHNSTAMM DE MEX. SYNTEX
	SYNTEX

F A R M A C O

E M P R E S A

SULFATO DE 8-HIDROXIQUINOLEINA
 SULFATO DE PIPERAZINA (POLVO U.S.P.)
 SULFATIAZOL SODICO
 SULFATO BENZOATO SODICO DE DEXAMETAZONA
 TANATO DE ALBUMINA POLVO PURO
 TARTRATO DE PIPERAZINA CRIST. U.S.P.

TARTRATO DE PIRANTEL
 TETRACICLINA CLORHIDRATO ORAL 750.00/kg 76
 TETRACICLINA BASE ORAL \$795.00/kg 76
 TETRACICLINA CLORHIDRATO ESTERIL 1165.00/kg 76
 TERPINEOL
 TESTOSTERONA PROPIONATO
 TESTOSTERONA
 TETRACICLINA

TETRACICLINA BASE

TETRACICLINA FOSFATO COMPLEJO

TIABENDAZOL
 TINIDAZOL
 TIOCIANATO DE ERITROMICINA

TIOSULFATO DE AMONIO (GRADO FARMACEUTICO)
 TIOSULFATO DE SODIO (GRADO FARM.)
 TOLBUTAMIDA

P-TOLUEN SULFONAMIDA
 O-TOLUEN SULFONAMIDA
 TRIBROMO SALICILAMIDA
 TRIOXIDO DE AMONIO
 TRIPROPIONATO DE ESTRADIOL

SIGNA, S.A.
 SYNTORGAN
 INTERQUIM
 INST. BIOTER. PICO MEXICANO
 SYNTORGAN
 INTERQUIM
 SYNTORGAN
 PFIZER
 FERMIC
 FERMIC
 FERMIC
 AROMATICOS PETROQUIMICOS
 SYNTEX
 SYNTEX
 CYANAMID DE MEXICO
 FERMIC
 FERMIC
 CYANAMID DE MEXICO
 FERMENTACIONES Y SINTESIS
 FERMENTACIONES Y SINTESIS
 FERMENTACIONES Y SINTESIS
 DERMAQUIM, S.A.
 LABS. SILANES
 FERMIC
 ABBOT LABS.
 FINE CHEMICALS DE MEXICO
 FINE CHEMICALS DE MEXICO
 ORGANOSINTESIS
 FINE CHEMICALS DE MEXICO
 FINE CHEMICALS DE MEXICO
 FINE CHEMICALS DE MEXICO
 ORGANOSINTESIS
 FINE CHEMICALS DE MEXICO
 SYNTEX

F A R M A C O

TRICLORO CARBANILIDA (3, 4, 4')
TRIFLUORO METIL DICLORO MFENIL UREA
TRIHDRATO DE AMPICILINA

TRISILICATO DE MAGNESIO U.S.P.
UNDECENOATO DE 19-NORTESTOSTERONA
UNDECENOATO DE ESTRADIOL
UNDECENOATO DE TESTOSTERONA
UNDECILINATO DE TESTOSTERONA
VACUNAS VARIAS

VACUNAS Y VACTERINAS

VACUNA CONTRA EL NEWCASTLE, TRAQUINTIS Y
VACTERINAS DE USO VET.

VACUNAS DOSIFICADAS CONTRA EL COLERA PORCINO A BASE
DE VIRUS VIVOS AUN CUANDO CONTENGAN ANTIBIOTICOS

VACUNAS LIOFILIZADAS DE CEPA 19 CONTRA "BRUCELA
ABORTUS"

VACUNAS LIOFILIZADAS SIN DILUYENTES CONTRA RABIA
CANINA

E M P R E S A

ORGANOSINTESIS
ORGANOSINTESIS
EUROLATIN, S.A.
FERMENT. Y SINTESIS
KEMKA, S.A.
FERMIC
ORSABE, S.A.
QUINONAS DE MEXICO
PRODUCTOS CORZO
SYNTEX
SYNTEX
SYNTEX
STEROMEX
RHODIA, S.A.
PFIZER
PFIZER
CYANAMID
VINELAND LABS.
LABS. SERVA
QUIMICA HOECHST
CUTTER LABS. DE MEXICO

IND. BIOQUIM. NOVA
VINELAND LABS.
CYANAMID DE MEXICO

CYANAMID DE MEXICO
QUIMICA HOECHST

QUIMICA HOECHST

BROVEL

CYANAMID DE MEXICO
QUIMICA HOECHST

F A R M A C O

E M P R E S A

VALERATO DE BETAMETASONA
17-VALERATO DEXAMETAZONA
VALERATO DE ESTRADIOL
VALERATO DE TESTOSTERONA
VASELINA SOLIDA U.S.P.
VASELINA LIQUIDA N.F. Y U.S.P.
VITAMINA B-12

VITAMINA D-2 (CALCIFEROL) U.S.P.
VITAMINA D-2 (200 000 U.I.)
YODO CLORO HIDROXIQUINOLEINA

YODO NONIFENOXI POLI (ETINOXI) ETANOL
YODURO DE DIATIAZANINA U.S.P.
YODURO DE POTASIO

YODURO DE SODIO

INST. BIOTERAPICO MEXICANO
INST. BIOTERAPICO MEXICANO
SYNTEX
SYNTEX
QUIMICOS Y DERIVADOS
QUIMICOS Y DERIVADOS
PROQUIFIN
SIMBIOTIK
KEMIKA INDUSTRIAL
GARSIMEX
LABS. DAWE'S DE MEXICO
LABS. DAWE'S DE MEXICO
LABS. REY MOL
SIGNA
CIBA GEIGY
POLAQUIMIA
SIGNA
J. T. BAKER
CIA. UNIVERSAL DE IND.
TECNICA QUIMICA
FINE CHEMICALS
J.T. BAKER
CIA. UNIVERSAL DE IND.
FINE CHEMICALS

ANNEX V

ALPHABETICAL LISTING OF INTERMEDIATES AND BASIC CHEMICALS
USED IN THE PRODUCTION OF PHARMACEUTICAL WITH THE CORRES-
PONDING NAMES OF THE MEXICAN ENTERPRISES

Source: **Catálogos Seccionales**

PRODUCTOS QUÍMICOS PARA USO NACIONAL

(México 1978)

ASOCIACION NACIONAL DE LA INDUSTRIA QUÍMICA A.C.

A

ACEITE DE RICINO U.S.P.

Aceitera de Occidente, S. A.
Aceites Polimerizados, S. A.
Química Michoacana, S. A.

ACEITE ESENCIAL DE LIMON

Unión Nacional de Productores de
Aceite de Limón, S.A. de R.L.I.P. y C.V.

ACEITES BLANCOS Y BROMADOS

Químicos y Derivados, S. A.

ACEITES MINERALES BLANCOS U.S.P.

Químicos y Derivados, S. A.

ACETATO CUPRICO R.A. Y PURIF.

Productos Químicos Monterrey, S. A.

ACETATO DE AMILO R.A. Y PURIF.

J.T. Baker, S.A. de C.V.

ACETATO DE AMONIO PURIFICADO

J.T. Baker, S. A. de C.V.
Productos Químicos Monterrey, S. A.
Técnica Química, S. A.

ACETATO DE BARIO R.A. Y PURIF.

J.T. Baker, S. A. de C. V.
Productos Químicos Monterrey, S. A.

ACETATO DE BENCILO

Aromáticos Petroquímicos, S. de R.L.

ACETATO DE BETAMETASONA

Instituto Bioterápico Mexicano, S. A.

ACETATO DE CADMIO R.A. Y PURIF.

Productos Químicos Monterrey, S. A.

ACETATO DE CALCIO R.A. Y PURIF.

Productos Químicos Monterrey, S. A.

ACETATO DE CEORILO

Aromáticos Petroquímicos, S. de R.L.

ACETATO DE DEXAMETASONA

Instituto Bioterápico Mexicano, S. A.

ACETATO DE ETILO R.A.

Productos Químicos Monterrey, S. A.

ACETATO DE 9-FLUOROHIDROCORTISONA

Instituto Bioterápico Mexicano, S. A.

ACETATO DE 9-FLUOROPREDNISOLONA

Instituto Bioterápico Mexicano, S. A.

ACETATO DE GERANILO

Aromáticos Petroquímicos, S. de R.L.

ACETATO DE HIROXOCOBALAMINA

Garsimex, S. A.
Hormonas y Vitaminas de México, S.A.
Kemika Industrial, S. A.
Productos Químicos Finos, S. A.

ACETATO DE ISOBORNILO

Aromáticos Petroquímicos, S. de R. L.

ACETATO DE MAGNESIO R.A.

J.T. Baker, S.A. de C. V.
Productos Químicos Monterrey, S.A.

ACETATO DE MANGANESO R.A. Y PURIF.

Productos Químicos Monterrey, S. A.

ACETATO DE MERCURIO R.A. Y PURIF.

Productos Químicos Monterrey, S. A.

ACETATO DE NIQUEL

Productos Químicos Monterrey, S. A.

ACETATO DE NOPILO

Aromáticos Petroquímicos, S. de R.L.

ACETATO DE PLOMO N.F.

J.T. Baker, S.A. de C. V.
Productos Químicos Monterrey, S.A.
Técnica Química, S.A.

ACETATO DE POTASIO N.F. Y ANH.

J.T. Baker, S.A. de C. V.
Productos Químicos Monterrey, S. A.
Técnica Química, S. A.

ACETATO DE SODIO

Química Interamericana, S.A.

ACETATO DE SODIO F.M. Y TECNICO

Salicatos de México, S. A.

ACETATO DE SODIO N.F. CRIST. Y ANH.
J.T. Baker, S.A. de C.V.
Productos Químicos Monterrey, S.A.
Técnica Química, S.A.
Unión Química del Valle de México, S.A.

ACETATO DE TERPENILO
Aromáticas Petroquímicas, S. de R.L.

ACETATO DE ZINC PURIFICADO
J.T. Baker, S.A. de C.V.
Productos Químicos Monterrey, S. A.
Técnica Química, S. A.

ACETIL p-AMINOFENOL
Signa, S. A.
Sociedad Mexicana de Química Industrial, S.A.

ACETONA NF Y R.A.
J.T. Baker, S.A. de C.V.
Productora Química Mexicana, S.A.
Productos Químicos Monterrey, S. A.
Técnica Química, S.A.

ACIDO ACETICO GLACIAL U.S.P.
J.T. Baker, S. A. de C. V.
Productora Química Mexicana, S. A.
Productos Químicos Monterrey, S.A.
Técnica Química, S. A.

ACID ACETIL SALICILICO F.M. Y U.S.P.
Dow Química Mexicana, S.A. de C.V.
Salicilatos de México, S.A.

ACIDO 6-AMINO-PENICILANICO
Fermentaciones y Síntesis, S.A.
Fermic, S.A. de C.V.
Orsabe, S.A.

ACIDO BENZOICO F.M. Y TECNICO
Salicilatos de México, S.A.

ACIDO BORICO
Productos Químicos Monterrey, S.A.
Técnica Química, S.A.

ACIDO BROMHIDRICO 48o/o Ft.A.
Productos Químicos Monterrey, S.A.

ACIDO CITRICO U.S.P.
Industrias Cítricas, S. A.
Química Mexama, S.A.

ACIDO CLORHIDRICO U.S.P. Y R.A.
J.T. Baker, S.A. de C.V.
Productora Química Mexicana, S.A.
Productos Químicos Monterrey, S.A.
Técnica Química, S.A.

ACIDO ETILENDIAMINO TETRAACETICO
J.T. Baker, S.A. de C.V.

ACIDO FORMICO
Productos Químicos Monterrey, S.A.

ACIDO FOSFORICO USP Y R.A.
J.T. Baker, S.A. de C.V.
Productora Química Mexicana, S.A.
Productos Químicos Monterrey, S.A.
Técnica Química, S.A.

ACIDO FOSFORICO U.S.P.
Productora Química Mexicana, S.A.

ACIDO FOSFOROSO 20o/o
Productos Químicos Monterrey, S.A.

ACIDO NALIDIXICO
Laboratorios Silenes, S.A.
Signa, S. A.

ACIDO NITRICO U.S.P. Y R.A.
J.T. Baker, S.A. de C.V.
Productora Química Mexicana, S.A.
Productos Químicos Monterrey, S.A.
Técnica Química, S.A.

ACIDO 3-NITRO ARSANILICO
Nitrógeno Industrial y Alimenticio, S.A.

ACID PICRICO, R.A.
J.T. Baker, S.A. de C.V.
Productos Químicos Monterrey, S.A.

ACIDO SALICILICO
Dow Química Mexicana, S.A. de C.V.

ACIDO SALICILICO F.M. Y TECNICO
Salicilatos de México, S.A.

ACIDO SULFURICO U.S.P. Y R.A.
J.T. Baker, S.A. de C.V.
Productora Química Mexicana, S.A.
Productos Químicos Monterrey, S.A.
Técnica Química, S.A.

ACIDO SULFUROSO R.A.
Productos Químicos Monterrey, S.A.

ACIDO TARTARICO R.A.
Productos Químicos Monterrey, S.A.
Técnica Química, S.A.

ACIDO P-TOLUENSULFONICO R.A.
Productos Químicos Monterrey, S.A.

ADIPATO DE ESPIRAMICINA
Rhodia Mexicana, S.A.

ADIPATO DE PIPERAZINA
Interquim, S.A.

AGENTES EMULSIFICANTES
Polibéticos, S.A.

AGUA DE COCIMIENTO DE MAIZ
Araguren y Cia., S.A.

ALBUMINA HUMANA
Establecimientos Lauzier, S.A.
Laboratorios Hyland, S.A. de C.V.

ALCANOL AMIDAS
Organo Síntesis, S.A.

ALCOHOL BENCILICO
Aromáticos Petroquímicos, S. de R.L.

ALCOHOL BUTILICO R.A.
J.T. Baker, S.A. de C.V.
Productos Químicos Monterrey, S.A.
Técnica Química, S.A.

ALCOHOL ETILICO ANHIDRO, R.A.
J.T. Baker, S.A. de C.V.
Productos Químicos Monterrey, S.A.
Técnica Química, S.A.

ALCOHOL FENILETILICO
Aromáticos Petroquímicos, S. de R.L.

ALCOHOL ISOPROPILICO N.F.
J.T. Baker, S.A. de C.V.
Productos Químicos Monterrey, S.A.
Técnica Química, S.A.

ALCOHOL METILICO R.A.
Productora Química Mexicana, S.A.

Técnica Química, S.A.

ALDEHIDO AMILCINAMICO
Aromáticos Petroquímicos, S. de R.L.

ALDEHIDO ANISICO
Aromáticos Petroquímicos, S. de R.L.

ALDEHIDO CINAMICO
Aromáticos Petroquímicos, S. de R.L.

ALDEHIDO HEXILCINAMICO
Aromáticos Petroquímicos, S. de R.L.

ALIMENTO PROTEICO NO LACTEO
Complementos Alimenticios, S.A.

ALMIDON DE MAIZ NORMAL
Almidones Mexicanos, S.A.
Arenal, S.A.
Araguren y Cia., S.A.
Glucosa y Féculas de México, S.A.
Productos de Maiz, S.A.

ALMIDON DE MAIZ PREGELATINIZADO
Glucosa y Fécula de México, S.A.
Productos de Maiz, S.A.

ALMIDONES MODIFICADOS
Arenal, S.A.
Araguren y Cia., S. A.

ALUMBRE DE AMONIO
Productos Corzo, S. A.

ALUMBRE DE POTASIO
Productos Corzo, S.A.

AMILASA BACTERIANA
Enmex, S.A.
Travenol, S.A.

AMONIACO R.A. y U.S.P.
Productora Química Mexicana, S.A.

AMOXICILINA
Orsaba, S.A.

AMPICILINA
Centro Industrial Bioquímico, S.A.
Productos Gedeon Richter (América), S.A.

AMPICILINA ANHIDRA
Fermentaciones y Síntesis, S.A.
Fermis, S.A. de C.V.
Quinonas de México, S.A.

AMPICILINA BENZATINICA
Quinonas de México, S.A.

AMPICILINA POTASICA
Quinonas de México, S.A.

AMPICILINA SODICA
Fermentaciones y Síntesis, S.A.
Fermis, S.A. de C.V.
Kemika Industrial, S.A.
Orube, S.A.
Productos Gedeon Richter (América), S.A.

AMPICILINA SODICA ESTERIL
Quinonas de México, S.A.

AMPICILINA TRIHIDRATADA
Fermentaciones y Síntesis, S.A.

ANHIDRIDO ACETICO PURIFICADO
J.T. Baker, S.A. de C.V.
Productos Químicos Monterrey, S.A.
Técnica Química, S.A.

ANILINA
Productos Químicos Monterrey, S.A.

ANTITOXINA DIFTERICA
Instituto Nacional de Higiene
Laboratorios Dr. Zapata, S.A.

ANTITOXINA TETANICA
Instituto Nacional de Higiene
Laboratorios Dr. Zapata, S.A.

AROMATIZANTES Y SABORIZANTES
Aromáticos Petroquímicos, S. de R.L.
Colorantes Deiman, S.A.
Firmenich de México, S.A.
Fries & Fries Internacional de México, S.A.
Fritzsche Dodge & Olcott de México, S.A.
Hearman & Reimer de México, S.A.
International Flavors & Fragrances de México, S.A. de C.V.
Rhodia Mexicana, S.A.
Salicilatos de México, S.A.
Stange Pass, S.A. de C.V.
U.O.P. Fragrances, S.A. de C.V.

AZUCARES INVERTIDOS
Complementos Alimenticios, S.A.
Glucosm, S.A.

AZUCAR DE MAIZ
Polibásicos, S.A.

B

BACTERINAS VARIAS
Abbott Laboratories de México, S.A.
Química Hoechst de México, S.A.

BENCENO R.A.
J.T. Baker, S.A. de C.V.
Productos Químicos Mexicanos, S.A.
Productos Químicos Monterrey, S.A.

BENCIL PENICILINA POTASICA
Centro Industrial Bioquímico, S.A.

BENZALDEHID
Aromáticos Petroquímicos, S. de R.L.

BENZOATO DE BENCILO
Aromáticos Petroquímicos, S. de R.L.

BENZOATO DE 8-HIDROXIQUINOLINA
Signa, S. A.

BENZOATO DE SODIO R.A.
Productos Químicos Monterrey, S.A.

BENZOATO DE SODIO F.M.
Salicilatos de México, S. A.

BENZYL-METRONIDAZOL
Laboratorios Silanes, S.A.
Signa, S. A.

BETAMETASONA
Instituto Bioterápico Mexicano, S.A.

BICARBONATO DE SODIO U.S.P.
J.T. Baker, S. A. de C.V.
Industrias del Alkali, S.A.
Productos Químicos Monterrey, S.A.
Técnica Química, S.A.

BICLORURO DE MERCURIO N.F.
Farmoquímica, S. A.
J.T. Baker, S.A. de C.V.
Productos Químicos Monterrey, S.A.

BISULFATO DE POTASIO R.A. Y PURIF.
J.T. Baker, S.A. de C.V.
Productos Químicos Monterrey, S.A.

BISULFATO DE SODIO R.A.
Productos Químicos Monterrey, S.A.

BISULFURO DE CARBONO R.A.
J.T. Baker, S.A. de C.V.
Productos Químicos Monterrey, S.A.
Técnica Química, S.A.

BITARTRATO DE COLINA CRIST., U.S.P.
Syntorgan, S. A.

BITARTRATO DE POTASIO PURO
J.T. Baker, S. A. de C.V.
Técnica Química, S.A.

BITARTRATO DE SODIO PURO
Técnica Química, S. A.

BORATO DE SODIO R.A.
Productos Químicos Monterrey, S. A.

BROMELINA
Sigma, S. A.

BROMURO DE POTASIO R. A.
Productos Químicos Monterrey, S.A.

C

CAFEINA ANHIDRA
Industrial San Martín, S. A.

CAFEINA Y SUS SALES
Mexicana de Alcaloides, S.A.

CARBONATO DE BARIO
Productos Químicos Monterrey, S. A.

CARBONATO DE CALCIO R.A.
Productos Químicos Monterrey, S.A.

CARBONATO DE MAGNESIO
Laboratorios del Norte, S. A.

CARBONATO DE MAGNESIO EXTRA LIGERO
J.T. Baker, S.A. de C.V.
Coyocacán Química, S. A.

CARBONATO DE MAGNESIO PESADO
J.T. Baker, S.A. de C. V.
Coyocacán Química, S.A.

CARBONATO DE POTASIO R.A.
J.T. Baker, S.A. de C.V.
Productos Químicos Monterrey, S.A.
Técnica Química, S.A.

CARBONATO DE SODIO ANHIDRO PURO
J.T. Baker, S. A. de C.V.
Productos Químicos Monterrey, S. A.
Técnica Química, S.A.

**CARBONATO DE SODIO MONOHIDRATADO
CRIST. U.S.P.**
J.T. Baker, S. A. de C. V.
Productos Químicos Monterrey, S. A.
Técnica Química, S. A.

CARBOXIMETIL CELULOSA
Derivados Macroquímicos, S. A.

CARVONA
Aromáticos Petroquímicos, S. de R.L.

CASEINATO DE CALCIO
Glucosa, S. A.

CASEINATO DE SODIO
Glucosa, S. A.

CEFALEXINA
Fermentaciones y Síntesis, S. A.
Orsabe, S. A.
Quinones de México, S. A.

CEFALEXINA SODICA ESTERIL
Fermic, S. A.

CEFALEXINA SOOICA ORAL
Farmis, S.A.

CEMENTO ANTIACIDO
Alquimia Mexicana, S. de R.L.

CIANOCOBALAMINA
Germex, S. A.
Productos Químicos Fines, S. A.

CIANOCOBALAMINA GRADO ALIMENTICIO
Kemika Industrial, S. A.

CIANOCOBALAMINA INYECTABLE
Kemika Industrial, S. A.

CIANURO DE PLATA R.A.
J.T. Baker, S. A. de C.V.

CINAMATO DE CLORAMFENICOL
Productos Químicos Fines, S. A.

CITRAL
Aromáticos Petroquímicos, S. de R.L.

CITRATO DE AMONIO R.A. Y PURIF.
Productos Químicos Monterrey, S. A.

CITRATO DE COLINA DIHIDRATADO, CRIST.U.S.P.
Syntorgan, S. A.

CITRATO DE PIPERAZINA POLVO U.S.P.
Intarquim, S.A.
Syntorgan, S. A.

CITRATO DE PIRROLIDIN METIL TETRACICLINA
Farmis, S.A. de C. V.

CITRATO DE POTASIO
Productos Químicos Monterrey, S. A.
Técnicos Químicos, S. A.

CITRATO DE SODIO U.S.P.
J.T. Baker, S.A. de C.V.
Industria Cítrica, S. A.
Productos Químicos Monterrey, S.A.
Técnica Química, S. A.

CITRONELOL
Aromáticos Petroquímicos, S. de R.L.

CLORAMFENICOL LEVOGIRO
Centro Industrial Bioquímico, S. A.
Fermentaciones y Síntesis, S. A.
Productos Químicos Fines, S.A.
Signa, S.A.

CLORAMIOURO DE MERCURIO
Farmaquimia, S. A.

CLORATO DE POTASIO R.A.
Productos Químicos Monterrey, S. A.
Técnicos Químicos, S. A.

CLORHIDRATO DE HIDROXOCOBALAMINA
Germex, S. A.
Hormonas y Vitaminas de México, S.A.
Kemika Industrial, S. A.
Productos Químicos Fines, S.A.

CLORHIDRATO DE OXITETRACICLINA
Farmis, S.A. de C.V.
Pfizer, S.A.

CLORHIDRATO DE OXITETRACICLINA ESTERIL
Farmis, S.A. de C.V.

CLORHIDRATO DE PIPERAZINA, POLVO U.S.P.
Syntorgan, S. A.

CLORHIDRATO DE TETRACICLINA
Cyanamid de México, S.A.
Farmis, S.A. de C.V.

CLORHIDRATO DE TETRACICLINA ESTERIL
Cyanamid de México, S.A.
Farmis, S.A.

CLOROFORMO U.S.P. Y R.A.
J.T. Baker, S. A. de C. V.
Productora Química Mexicana, S.A.
Productos Químicos Monterrey, S. A.

CLORO - YODO - HIDROXIQUINOLEINA
Ciba-Geigy Mexicana, S.A. de C.V.
Signa, S. A.

CLORTETRACICLINA
Cyanamid de México, S.A.

CLORURO CUPRICO
J.T. Baker, S.A. de C.V.

CLORURO DE ALUMINIO HIDRATADO R.A.
Productos Químicos Monterrey, S. A.

CLORURO DE AMONIO U.S.P. Y R.A.
J.T. Baker, S.A. de C.V.
Productora Química Mexicana, S.A.
Productos Químicos Monterrey, S. A.
Syntorgan, S. A.
Técnicas Químicas, S.A.

CLORURO DE BARIO R.A.
J.T. Baker, S.A. de C.V.
Productos Químicos Monterrey, S. A.
Técnicas Químicas, S. A.

CLORURO DE BENZALCONIO
Palaquimia, S. A.
Químicas Reichhoff Interamericana, S.A.
Signa, S. A.

CLORURO DE CAOMIO R.A.
Productos Químicos Monterrey, S. A.

**CLORURO DE CALCIO HIDRATADO
U.S.P. Y ANH PURO**
J.T. Baker, S.A. de C.V.
Productos Químicos Monterrey, S.A.
Syntorgan, S. A.
Técnicas Químicas, S. A.

CLORURO DE COLINA CRIST. U.S.P.
Syntorgan, S. A.

CLORURO DE COLINA SOLUCION AL 70a/o
Credelis, S. A.
Nitrógeno Industrial y Alimenticio, S.A.

CLORURO DE ESTAÑO R.A.
Productos Químicos Monterrey, S. A.

CLORURO DE ESTRONCIO R.A.
Productos Químicos Monterrey, S. A.

CLORURO DE MAGNESIO U.S.P. Y R.A.
J.T. Baker, S.A. de C.V.
Productos Químicos Monterrey, S.A.
Syntorgan, S. A.

CLORURO DE MANGANESO R.A.
Productos Químicos Monterrey, S. A.

CLORURO DE POTASIO U.S.P.
J.T. Baker, S.A. de C.V.
Productos Químicos Monterrey, S.A.
Técnicas Químicas, S. A.

CLORURO DE SODIO U.S.P.
J.T. Baker, S.A. de C.V.
Productos Químicos Monterrey, S. A.
Reactivos R.M., S. A.

CLORURO DE ZINC R.A.
Productos Químicos Monterrey, S. A.

CLORURO ESTANNOZO R.A.
J.T. Baker, S. A. de C.V.
Técnicas Químicas, S.A.

CLORURO FERRICO R. A.
Productos Químicos Monterrey, S. A.
Técnicas Químicas, S. A.

CLORURO FERROSO R.A.
Productos Químicos Monterrey, S. A.

CLORURO MERCURICO R.A.
J.T. Baker, S.A. de C.V.
Productos Químicos Monterrey, S.A.

CLORURO MERCUROSO (CALOMEL) U.S.P.
J.T. Baker, S.A. de C.V.

CLOXACILINA
Kamika Industrial, S. A.

CLOXACILINA SODICA ORAL Y ESTERIL
Fermis, S.A. de C.V.

COENZIMA B12
Hormonas y Vitaminas de México, S. A.
Kamika Industrial, S. A.

**COMPLEJO DE ALQUILFENOXIPOLIETILENOXI
ETANOL - YODO (1.75a/o y 20a/o)**
Polifarma, S.A.

COMPLEJO DE HIERRO DEXTRAN
Tecnias Internacional, S.A. de C.V.

**COMPLEJO DE HIERRO - DEXTRAN (10a/o)
VETERINARIO**
Polifarma, S.A.

COMPUESTOS CUATERNARIOS DE AMONIO
Organo Síntesis, S. A.

CONCENTRADOS PROTEINICOS DE SOYA
Laboratorios Griffith de México, S. A.

CORTICOSTEROIDES VARIOS
Hormonas y Vitaminas de México, S. A.

CREMA EN POLVO NO LACTEA
Complementos Alimenticios, S. A.

CROMATO DE AMONIO R.A.
Productos Químicos Monterrey, S. A.
Técnicos Químicos, S. A.

CROMATO DE POTASIO R.A.
J.T. Baker, S. A. de C.V.
Productos Químicos Monterrey, S. A.
Técnicos Químicos, S. A.

CROMATO DE SODIO R.A.
Productos Químicos Monterrey, S. A.
Técnicos Químicos, S. A.

D

DEMETILCLORTETRACICLINA
Cyanamid de México, S.A. de C.V.

DEXAMETASONA
Instituto Bioterapéutico Mexicano, S. A.
Kamika Industrial, S. A.

DEXTRINAS
Aranguren y Cia., S. A.

DEXTROSA ANHIDRA R.A.
J.T. Baker, S.A. de C.V.
Polibánicas, S. A.
Técnicos Químicos, S. A.

DEXTROSA MONOHIDRATADA
Polibánicas, S. A.

3,5-DICLORO-2,6-DIMETIL-4-PIRIDINDOL
Dow Químicos Mexicana, S.A. de C. V.

DICLORHIDRATO DE ETAMBUTOL
Signa, S. A.

DICLOXACILINA
Fermentaciones y Síntesis, S. A.
Kamika Industrial, S.A.
Orsabe, S. A.
Químicos de México, S. A.

DICLOXACILINA SODICA ORAL Y ESTERIL
Formis, S.A. de C.V.

DICROMATO DE AMONIO R.A.
Productos Químicos Monterrey, S. A.

DICROMATO DE POTASIO R.A.
J.T. Baker, S. A. de C.V.
Productos Químicos Monterrey, S. A.
Técnicos Químicos, S.A.

DICROMATO DE SODIO R.A.
Productos Químicos Monterrey, S. A.

DIMETIL FORMAMIDA R.A.
Productos Químicos Monterrey, S. A.

**DIMETIL POLISILOXANO (LIQUIDO AL 100e/e ó
EN EMULSIONES ACUOSAS DE 10 y 30e/e)**
Bayer de México, S. A.
Dow Corning de México, S.A. de C.V.
Unión Carbide Mexicana, S. A.

3-6 DINITRO-ORTO-TOLUAMIDA
Dow Químicos Mexicana, S.A. de C.V.

DIOXIDO DE PLOMO R.A.
Productos Químicos Monterrey, S. A.

DIPIRONA MAGNESICA
Kamika Industrial, S. A.
Sociedad Mexicana de Químicos Industrial, S.A.

DIPIRONA SODICA
Sociedad Mexicana de Químicos Industrial, S.A.

DI-YODO-HIDROXQUINOLEINA
Fino Chemical de México, S.A.
Rey-Mel, S.A. de C.V.
Signa, S.A.

E

ERITROMICINA BASE

Abbott Laboratories de México, S. A.
Fermis, S.A. de C.V.

ESTARO GRANULAR R.A.

J.T. Baker, S.A. de C.V.
Productos Químicos Monterrey, S. A.
Técnicos Químicos, S.A.

ESTEARATO DE ALUMINIO U.S.P.

Productora Química Mexicana, S.A.

ESTEARATO DE CALCIO U.S.P.

Productora Química Mexicana, S. A.

ESTEARATO DE ERITROMICINA

Abbott Laboratories de México, S. A.
Fermis, S. A. de C.V.

ESTEARATO DE MAGNESIO U.S.P.

Productora Química Mexicana, S. A.

ESTEARATO DE SODIO U.S.P.

Productora Química Mexicana, S. A.

ESTEARATO DE ZINC U.S.P.

Productora Química Mexicana, S. A.

ESTERES DE SORBITAN

Polibidicos, S. A.

ETER DE PETROLEO 30 - 60 GRAOS R.A.

Productos Químicos Monterrey, S. A.

ETER ETILICO

J.T. Baker, S.A. de C.V.
Técnicos Químicos, S. A.

ETER GLICERICO DEL QUAYACOL

Laboratorios Silanes, S. A.

ETIL CARBONATO DE ERITROMICINA

Fermis, S.A. de C.V.

ETILENGLICOL R.A.

J.T. Baker, S. A. de C.V.
Productos Químicos Monterrey, S.A.

ETIL SUCCINATO DE ERITROMICINA

Abbott Laboratories de México, S. A.
Fermis, S. A. de C.V.

EXTRACTO DE MALTA

Complementos Alimenticios, S. A.

EXTRACTO DE LEVAOURA

Glucosa, S. A.

EXTRACTOS VEGETALES BLANCOOS

FLUIDOS Y SECOS

Syntorgan, S. A.

F

FACTOR ANTIHEMOPILICO

Laboratorios Hyland, S.A. de C.V.

FENACETINA F.M.

Solicitos de México, S. A.

FENIL BUTAZONA

Tecquim, S. A.

FENILEFRINA Y SUS SALES

Mexicana de Alcaloides, S. A.

FENOL R.A.

J.T. Baker, S.A. de C.V.
Productos Químicos Monterrey, S. A.

FENOL SULFONATO DE SODIO

Tecquim, S.A. de C.V.

FENOL SULFONATO DE ZINC

Técnicos Químicos, S. A.

FERROCIANUROS DE POTASIO

J.T. Baker, S.A. de C.V.
Productos Químicos Monterrey, S. A.
Técnicos Químicos, S. A.

FIPOL (TDOVP)

Polequimia, S.A.

FLUCLOXACILINA

Orsabe, S.A.
Quinona de México, S. A.

9-ALFA-FLUOROHIDROCORTISONA
Instituto Electrópico Mexicano, S.A.

9-ALFA-FLUOROPREDNISOLONA
Instituto Electrópico Mexicano, S.A.

FORMALDEHIDO 37e/o U.S.P. y R.A.
Casilla, S.A.
J.T. Baker, S.A. de C.V.
Productos Químicos Monterrey, S. A.
Técnicas Químicas, S. A.

FOSFATO COMPLEJO DE TETRACICLINA
Formis, S.A. de C.V.

FOSFATO DE AMONIO U.S.P. Y R.A.
J.T. Baker, S.A. de C.V.
Productos Químicos Monterrey, S. A.
Técnicas Químicas, S. A.

ZI-FOSFATO DE DEXAMETASONA
Kamila Industrial, S. A.

FOSFATO DE PIPERAZINA POLVO U.S.P.
Syntorgan, S. A.

FOSFATO SODICO DE BETAMETASONA
Instituto Electrópico Mexicano, S. A.

FOSFATO SODICO DE DEXAMETASONA
Instituto Electrópico Mexicano, S. A.

FOSFATOS DE CALCIO MONO Y DIBASICO
U.S.P. Y R.A.
J.T. Baker, S.A. de C.V.
Productos Químicos Monterrey, S. A.

FOSFATOS DE POTASIO MONO Y DIBASICO R.A.
J.T. Baker, S. A. de C.V.
Productos Químicos Monterrey, S. A.
Técnicas Químicas, S. A.

FOSFATOS DE SODIO, MONO, DI Y TRIBASICO R.A.
J.T. Baker, S. A. de C.V.
Productos Químicos Monterrey, S. A.
Técnicas Químicas, S. A.

FTALIL SULFACETAMIDA
Sintbiotik, S.A.
Syntorgan, S. A.

FTALIL SULFATIAZOL
Productos Gedeon Richter (América), S.A.
Syntorgan, S. A.
Tasquin, S.A.

FUMARATO FERROSO POLVO FINO
Signa, S. A.
Sistemas Industrial, S. A.

FUMARATO FERROSO POLVO NORMAL
Signa, S.A.

FURALTADONA
Esquim, S.A.

FURAZOLICONA
Esquim, S.A.
Peloquinis, S. A.

G

GAMMA GLOBULINA ANTIPAROTIDITIS HUMANA
Laboratorios Hyland, S. A.

GAMMA GLOBULINA ANTIPERTUSIS HUMANA
Laboratorios Dr. Zapata, S. A.
Laboratorios Hyland, S. A.
Laboratorios Myn, S. A.

GAMMA GLOBULINA ANTITETANICA HUMANA
Laboratorios Dr. Zapata, S. A.
Laboratorios Hyland, S. A.
Laboratorios Myn, S. A.

GAMMA GLOBULINA HUMANA
Establecimientos Lauzier, S. A.
Laboratorios Dr. Zapata, S.A.
Laboratorios Hyland, S. A.
Laboratorios Myn, S. A.

GENTAMICINA
Formis, S. A.
Sintbiotik, S. A.

GERANIOL
Aromáticos Petroquímicos, S. de R.L.

GLICERINA
J.T. Baker, S. A. de C.V.

GLICOLIL ARSANILATO DE BISMUTO N.F.
Sign, S.A.

GLUCOSA ANHORA
Complementos Alimenticios, S.A.
Glaxo, S. A.

GLUCOSAS
Glaxo y Fábricas de México, S.A.
Productos de Maíz, S.A.

GOMA ARABIGA REFINADA
Glaxo, S. A.
Químicas Interamericanas, S.A.

GRENETINA
Coloides Ouché, S. A.
Panamericana de Grenetina, S.A.

H

HEMISUCCINATO ACIDO DE CLORAMFENICOL
Kemia Industrial, S. A.
Productos Químicos Fines, S.A.

HETACILINA BASE
Quinonas de México, S. A.

HETACILINA POTASICA (ORAL Y ESTERIL)
Quinonas de México, S.A.

HEXACLOROFENO
Organosintesis, S. A.

HEXAHIDRATO DE PIPERAZINA
Interquím, S.A.

HEXAMETILENTETRAMINA (UROTOPINA)
Catalina, S.A.

HEXANO R.A.
J.T. Baker, S. A. de C.V.
Técnica Química, S.A.

HIDROLIZADOS DE PROTEINAS
Laboratorios Griffith de México, S.A.

p-HIDROXIBENZOATO DE ETILO F.M.
Salicilatos de México, S.A.

p-HIDROXIBENZOATO DE METILO F.M.
Salicilatos de México, S.A.

p-HIDROXIBENZOATO DE PROPILO F.M.
Salicilatos de México, S.A.

HIDROXIDO DE ALUMINIO GEL
Compañía Química Industrial Neumann, S.A.

HIDROXIDO DE ALUMINIO (GEL Y GEL SECO)
Laboratorios del Norte, S.A.
Productos Corzo, S. A.

HIDROXIDO DE ALUMINIO U.S.P.
J.T. Baker, S.A. de C.V.

HIDROXIDO DE AMONIO U.S.P. Y R.A.
J.T. Baker, S.A. de C.V.
Productos Químicos Monterrey, S.A.
Técnica Química, S.A.

HIDROXIDO DE CALCIO
Productos Químicos Monterrey, S.A.
Técnica Química, S.A.

HIDROXIDO DE MAGNESIO
J.T. Baker, S.A. de C.V.
Productos Corzo, S.A.

HIDROXIDO DE MAGNESIO (GEL)
Compañía Química Industrial Neumann, S.A.

HIDROXIDO DE MAGNESIO (GEL Y GEL SECO)
Laboratorios del Norte, S.A.

HIDROXIDO DE MAGNESIO PESADO
Compañía Química, S.A.

HIDROXIDO DE MAGNESIO U.S.P.
Química del Mar, S.A.

HIDROXIDO DE POTASIO, LENTEJAS, U.S.P.
J.T. Baker, S.A. de C.V.
Productos Químicos Monterrey, S. A.
Técnica Química, S.A.

HIDROXIDO DE SODIO, LENTEJA U.S.P.
J.T. Baker, S.A. de C.V.
Productos Químicos Monterrey, S.A.
Técnicas Químicas, S.A.

4-HIDROXI PIRAZOL (3-4-O) PIRIMIDINA
Rey Mol, S.A. de C.V.

HIDROXOCOBALAMINA
Garcimex, S.A.
Hormonas y Vitaminas de México, S.A.
Kamiko Industrial, S.A.
Productos Químicos Fines, S.A.

HORMONAS ESTEROIDES SINTETICAS
Beneficiadora e Industrializadora, S.A. de C.V.
Productos Químicos Naturales, S.A.
Químicas Esteroidal, S.A. de C.V.
Sociedad de México, S.A. de C.V.
Steromex, S. A.
Syntax, S. A.

K

KANAMICINA
Sintetich, S.A.

L

LACTATO DE SODIO
J.T. Baker, S.A. de C.V.

LAURIL SULFATO DEL PROPIONATO DE ERITROMICINA (ESTOLATO DE ERITROMICINA)
Abbott Laboratories de México, S.A.
Fermic, S.A. de C.V.

LECITINA DE SOYA
Galletera Mexicana, S.A.
Hidrogenadora La Polar, S. A.

LECHES MALTEADAS
Complementos Alimenticios, S.A.

LEVADURA DE CERVEZA DESAMARGADA
Compañía Química Industrial Neumann, S.A.

LEVADURA ZAPATA
Laboratorios Dr. Zapata, S.A.

LINCOMICINA
Upjohn, S.A.

M

MALTA DEXTRINA
Complementos Alimenticios, S.A.

MANITOL
Polibásicos, S. A.

d-MANNOHEPTULOSA
Productos Químicos Naturales, S.A.

MEFENEZINA
Tequim, S.A.

MERCURIO TRIDESTILADO
J.T. Baker, S.A. de C.V.
Productos Químicos Monterrey, S. A.
Técnicas Químicas, S.A.

METABISULFITO DE POTASIO
Productos Químicos Monterrey, S.A.

METABISULFITO DE SODIO R.A.
Productos Químicos Monterrey, S. A.

METAMPICILINA
Fermic, S.A. de C.V.
Productos Gedeón Richter (América), S.A.

METAMPICILINA SODICA (ORAL Y ESTERIL)
Quinonas de México, S.A.

METANOL, R.A.
J.T. Baker, S.A. de C.V.
Productos Químicos Monterrey, S. A.
Técnicas Químicas, S.A.

METIL ETIL CETONA R.A.
J.T. Baker, S.A. de C.V.
Productos Químicos Monterrey, S. A.

METIL ISOBUTIL CETONA R.A.
J.T. Baker, S. A. de C.V.
Productos Químicos Monterrey, S. A.

D.L.METIONINA
Alimentos Balanceados de México, S.A. de C.V.

METOCARBAMOL
Laboratorios Silaner, S.A.

METRONIDAZOL
Rhodia Mexicana, S. A.
Sigma, S.A.

**MEZCLAS CRUAS DE QUIMOTRIPSINA
RIBONUCLEASAS Y TRIPSINA**
Canofarma, S.A. de C.V.
Laboratorios Wilson de México, S. A.

MIRISTATO DE ISOPROPILO
Organo Síntesis, S. A.

N

NICOTINAMIDA U.S.P.
Distribución y Ventas, S. A.

NITRATO CUPRICO, R.A.
Productos Químicos Monterrey, S. A.

NITRATO DE ALUMINIO R.A.
Productos Químicos Monterrey, S. A.

NITRATO DE AMONIO, CRIST. PURO
J.T. Baker, S.A. de C.V.
Productos Químicos Monterrey, S. A.
Syntorgan, S.A.
Técnica Química, S. A.

NITRATO DE BARIO R.A.
Productos Químicos Monterrey, S. A.
Técnica Química, S.A.

NITRATO DE BISMUTO R.A.
J.T. Baker, S. A. de C.V.

NITRATO DE CALCIO CRIST. PURO
J.T. Baker, S. A. de C.V.
Syntorgan, S. A.

NITRATO DE MAGNESIO R.A.
J.T. Baker, S.A. de C.V.
Productos Químicos Monterrey, S.A.

NITRATO DE MERCURIO R.A.
J.T. Baker, S.A. de C.V.
Productos Químicos Monterrey, S. A.

NITRATO DE PIRROLIDIN METIL TETRACICLINA
Fermic, S. A. de C.V.
Química Hoechst de México, S.A. de C.V.

NITRATO DE PLATA U.S.P.
J.T. Baker, S.A. de C.V.
Productos Químicos Monterrey, S.A.
Técnica Química, S. A.

NITRATO DE PLOMO
J.T. Baker, S. A. de C.V.
Productos Químicos Monterrey, S. A.
Técnica Química, S. A.

NITRATO DE POTÁSIO R.A.
J.T. Baker, S. A. de C.V.
Productos Químicos Monterrey, S.A.
Técnica Química, S. A.

NITRATO DE SODIO R.A.
J.T. Baker, S.A. de C.V.
Productos Químicos Monterrey, S. A.
Técnica Química, S. A.

NITRATO DE ZINC R.A.
J.T. Baker, S.A. de C.V.
Productos Químicos Monterrey, S. A.

NITRATO FERRICO R.A.
Productos Químicos Monterrey, S.A.

NITRATO NIQUELOSO R.A.
Productos Químicos Monterrey, S. A.

NITRO BENCENO R.A.
Productos Químicos Monterrey, S. A.

NITROFURAZONA
Esquim, S.A.

O

OXACILINA
Quinones de México, S.A.

OXALATO DE AMONIO R.A.
Compañía Química Industrial Neumann, S.A.
Productos Químicos Monterrey, S.A.

OXALATO DE POTASIO

Productos Químicos Monterrey, S.A.
Técnica Química, S.A.

OXALATO DE SODIO

J.T. Baker, S.A. de C.V.
Productos Químicos Monterrey, S. A.
Técnica Química, S.A.

OXICLORURO DE BISMUTO NAGAR

Farmaquimia, S.A.

OXIDO DE BISMUTO

Farmaquimia, S.A.
Signa, S.A.

OXIDO DE COBRE (ICO)

Productos Químicos Monterrey, S. A.

OXIDO DE MAGNESIO (MAGNESIA CALCINADA)

Laboratorios del Norte, S.A.

OXIDO DE MAGNESIO U.S.P.

Cía. Química Industrial Neumann, S. A.
Química del Mar, S. A.

OXIDO DE MAGNESIO EXTRA LIGERO U.S.P.

Coyocán Química, S.A.

OXIDO DE MAGNESIO PESADO U.S.P.

Coyocán Química, S. A.

OXIDO DE ZINC U.S.P.

General Products, S.A. de C.V.

OXIDO FERRICO

Productos Químicos Monterrey, S.A.

OXIDOS ROJO Y AMARILLO DE MERCURIO

J.T. Baker, S.A. de C.V.
Farmaquimia, S.A.
Productos Químicos Monterrey, S.A.

OXITETRACICLINA

Fermic, S.A. de C.V.
Pfizer, S.A.

OXITETRACICLINA ESTERIL

Fermic, S.A. de C.V.

P

PALMITATO DE CLORAMFENICOL

Kemika Industrial, S. A.
Productos Químicos Fines, S. A.

PANTOTENATO DE CALCIO RACEMICO Y DEXTRO

GIRO GRADO ALIMENTICIO Y U.S.P.
Nitrógeno Industrial y Alimenticio, S.A.

PAPAINA

Signa, S.A.

PENICILINA

Centro Industrial Bioquímica, S.A.

PENICILINA BENZATINICA

Quiminas de México, S.A.

PENTOXIDO DE ARSENICO

Productos Químicos Monterrey, S. A.

PEPTONAS

Glucosa, S. A.

PEROXIDO DE HIDROGENO

J.T. Baker, S.A. de C.V.
Electroquímica Mexicana, S.A.
Productos Químicos Monterrey, S. A.

PERSULFATO DE POTASIO R.A.

Productos Químicos Monterrey, S. A.

PIRIDINA R.A.

Productos Químicos Monterrey, S.A.

PIRROLIQIN METIL TETRACICLINA

Fermic, S. A. de C.V.
Química Hoechst de México, S. A.

PLASMA NORMAL HUMANO

Laboratorios Mvn, S.A.
Productos Liofilizados, S. A.

PROPILEN GLICOL, S.A.

J.T. Baker, S.A. de C.V.

PROPIONATO DE ERITROMICINA

Fermic, S.A. de C.V.

PROTEINA DE MAIZ

Araucara y Cia., S.A.

PROTEINAS VEGETALES HIDROLIZADAS

Complementos Alimenticios, S.A.

PROTOXALATO DE HIERRO POLVO PURO

Syntorgan, S. A.

R

REACTIVO KARL FISCHER

Productos Químicos Monterrey, S. A.

REACTIVOS ANALITICOS

J.T. Baker, S.A. de C.V.

Productos Químicos Monterrey, S.A.

Sigma de México, S.A.

Técnica Química, S.A.

S

SACARINA

Fine Chemical de México, S.A.

Sinbiotik, S.A.

SACARINA ACETANILIDA

Unión Química del Valle de México, S.A.

SAL TETRASODICA DEL E.D.T.A.

J.T. Baker, S.A. de C.V.

Ciba-Geigy Mexicana, S.A. de C.V.

Complex Química, S.A.

Ingram, S.A.

SALICILATO DE AMILO TECNICO

Salicilatos de México, S. A.

SALICILATO DE BENCILO TECNICO

Salicilatos de México, S.A.

SALICILATO DE METILO F.M. Y TECNICO

Salicilatos de México, S.A.

SILICONAS LIQUIDAS

Bayer de México, S. A.

Ow Corning de México, S. A.

Unión Carbide Mexicana, S.A.

SORBITOL U.S.P. 70a/o

Polibásicos, S.A.

SUBACETATO DE PLOMO

J.T. Baker, S. A. de C.V.

Productos Químicos Monterrey, S. A.

SUBCARBONATO DE BISMUTO

J.T. Baker, S.A. de C.V.

Farmaquimia, S.A. de C.V.

Roy-Mel, S.A. de C.V.

Sigma, S. A.

SUBGALATO DE BISMUTO

J.T. Baker, S.A. de C.V.

Farmaquimia, S.A.

Sigma, S.A.

SUBNITRATO DE BISMUTO

J.T. Baker, S.A. de C.V.

Farmaquimia, S.A.

Roy-Mel, S.A. de C.V.

Sigma, S.A.

SUBSALICILATO DE BISMUTO

J.T. Baker, S.A. de C.V.

Farmaquimia, S.A.

Roy-Mel, S.A. de C.V.

Sigma, S.A.

SUBYODURO DE BISMUTO

Sigma, S. A.

SUCCINATO SODICO DE CLORAMFENICOL

ESTERIL INYECTABLE

Kemika Industrial, S.A.

Productos Químicos Finos, S.A.

SUCCINIL SULFATIAZOL

Syntorgan, S.A.

SUERO ANTIALACRAN

Instituto Nacional de Higiene

Laboratorios Dr. Zapata, S.A.

Laboratorios Myn, S.A.

SUERO ANTIBOTROPICO
Instituto Nacional de Higiene

SUERO ANTIBRONCONEUMONICO
Laboratorios Dr. Zapata, S.A.

SUERO ANTICROTALICO
Instituto Nacional de Higiene, S.A.

SUERO ANTIVIPERINO
Laboratorios Mya, S.A.

SUEROS VARIOS
Polifarma, S.A.

SULFACETAMIDA
Productos Gedeon Richter (América), S.A.
Sibiotik, S.A.

SULFACETAMIDA SODICA
Productos Gedeon Richter (América), S.A.
Sibiotik, S.A.

SULFADIAZINA
Laboratorios Julián de México, S.A.

SULFADIMETILOXAZOL
Interquim, S.A.

SULFAMERAZINA
Laboratorios Julián de México, S.A.

SULFAMERAZINA SODICA
Laboratorios Julián de México, S.A.

SULFAMETAZINA
Laboratorios Julián de México, S.A.
Sibiotik, S.A.

SULFAMETAZINA SODICA
Laboratorios Julián de México, S.A.
Sibiotik, S.A.

SULFANILAMIDA
Interquim, S.A.
Sibiotik, S.A.

SULFATIAZOL
Sibiotik, S.A.

SULFATIAZOL SODICO
Sibiotik, S.A.

SULFATO CUPRICO DESECADO Y CRIST. U.S.P.
J.T. Baker, S. A. de C.V.
Productos Químicos Monterrey, S.A.
Syntorgan, S.A.
Técnica Química, S.A.

SULFATO DE ALUMINIO R.A.
Productos Corzo, S.A.
Productora Química Mexicana, S.A.
Técnica Química, S.A.

SULFATO DE ALUMINIO Y AMONIO R.A.
J.T. Baker, S.A. de C.V.
Productos Químicos Monterrey, S. A.
Técnica Química, S.A.

SULFATO DE ALUMINIO Y POTASIO R.A.
J.T. Baker, S. A. de C.V.

SULFATO DE AMONIO PURIFICADO
J.T. Baker, S. A. de C.V.
Productos Químicos Monterrey, S. A.
Técnica Química, S. A.

SULFATO DE BARIO GRADO RADIOLOGICO
Alquimia Mexicana, S. de R.L.
Ezen de México, S. A. de C.V.

SULFATO DE CALCIO R.A.
J.T. Baker, S. A. de C.V.
Cía. Química Industrial Neumann, S. A.
Productos Químicos Monterrey, S. A.
Técnica Química, S.A.

**SULFATO DE CALCIO DESECADO Y
DIHIDRATADO PURIFICADO**
J.T. Baker, S. A. de C.V.
Técnica Química, S. A.

SULFATO DE COBRE
J.T. Baker, S. A. de C.V.
Compañía Química Industrial Neumann, S.A.
Productos Químicos Monterrey, S.A.
Técnica Química, S.A.

SULFATO DE CROMO R.A.
Productos Químicos Monterrey, S. A.

SULFATO DE CROMO Y POTASIO R.A.
Productos Químicos Monterrey, S.A.

SULFATO DE 8-HIDROXIQUINDOLEINA
Sigma, S. A.

**SULFATO DE MAGNESIO U.S.P.
DESECADO Y CRIST.**
J.T. Baker, S.A. de C.V.
Laboratorios del Norte, S. A.
Productos Corza, S.A.
Productos Químicos Monterrey, S. A.
Syntorgan, S.A.
Técnica Química, S. A.

**SULFATO DE MANGANESO
MONOHIDRATADO R.A.**
J.T. Baker, S. A. de C.V.
Productos Químicos Monterrey, S. A.

SULFATO DE PIPERAZINA POLVO U.S.P.
Syntorgan, S. A.

SULFATO DE PLATA R. A.
J.T. Baker, S. A. de C.V.
Productos Químicos Monterrey, S.A.

**SULFATO DE POTASIO CRIST. Y
POLVO SECO PURO**
J.T. Baker, S.A. de C.V.
Productos Químicos Monterrey, S.A.
Syntorgan, S. A.
Técnica Química, S.A.

**SULFATO DE SODIO ANHIORO CRIST.
PURIF Y N.F.**
J.T. Baker, S. A. de C.V.
Productos Químicos Monterrey, S. A.
Syntorgan, S. A.

SULFATO DE SODIO CRIST. U.S.P.
Compañía Química Industrial Neumann, S.A.
Cayocada Química, S. A.
Laboratorios del Norte, S. A.
Syntorgan, S. A.

SULFATO DE ZINC U.S.P. CRIST. Y DESECADO
J.T. Baker, S.A. de C.V.
Syntorgan, S. A.
Técnica Química, S.A.

SULFATO FERRICO AMONICO PURIFICADO
J.T. Baker, S. A. de C.V.
Productos Químicos Monterrey, S. A.
Técnica Química, S. A.

SULFATO FERROSO
Sigma, S. A.

SULFATO FERROSO AMONICO PURIFICADO
J.T. Baker, S.A. de C.V.
Productos Químicos Monterrey, S.A.
Técnica Química, S. A.

**SULFATO FERROSO DESECADO U.S.P.
Y CRISTALIZADO HEPTAHIDRATADO**
J.T. Baker, S.A. de C.V.
Productos Químicos Monterrey, S. A.
Syntorgan, S.A.
Técnica Química, S.A. .

SULFATO FERROSO HEPTAHIDRATADO
Alquimia Mexicana S. de R.L.

SULFATO MANGANOSO R.A.
J.T. Baker, S. A. de C.V.

SULFATO NIQUELOSO R.A.
Productos Químicos Monterrey, S. A.
Técnica Química, S. A.

SULFITO DE SODIO R.A.
Productos Químicos Monterrey, S. A.

SULFOBENZATO SODICO DE DEXAMETASONA
Instituto Bioterápico Mexicano, S. A.

SULFOCARBONATO DE ZINC, R.A.
Técnica Química, S. A.

SULFO FENATO DE ZINC R.A.
Técnica Química, S. A.

SULFURO DE AMONIO R.A.
J. T. Baker, S. A. de C.V.
Productos Químicos Monterrey, S. A.
Técnica Química, S. A.

SULFURO DE SODIO R.A.
Productos Químicos Monterrey, S. A.

T

TANATO DE ALBUMINA POLVO PURO
Syntorgan, S. A.

TARTRATO DE AMONIO R.A.
Productos Químicos Monterrey, S.A.

TARTRATO DE PIPERAZINA CRIST. U.S.P.
Syntorgan, S.A.

TARTRATO DE POTASIO PURIFICADO
J.T. Baker, S.A. de C.V.
Productos Químicos Monterrey, S.A.
Técnica Química, S.A.

TARTRATO DE SODIO PURIFICADO
J.T. Baker, S.A. de C.V.
Productos Químicos Monterrey, S.A.
Técnica Química, S.A.

TARTRATO DE SODIO Y POTASIO R.A.
J. T. Baker, S.A. de C.V.
Productos Químicos Monterrey, S.A.

TETRACICLINA
Cyanamid de México, S.A. de C.V.
Fermie, S.A. de C.V.

TETRACLORURO DE CARBONO N.F.
J.T. Baker, S.A. de C.V.
Productos Químicos Monterrey, S.A.
Técnica Química, S.A.

TIOCIANATO DE AMONIO R.A.
Productos Químicos Monterrey, S.A.

TIOCIANATO DE ERITROMICINA
Abbott Laboratories de México, S.A.
Fermie, S.A. de C.V.

TIOCIANATO DE POTASIO R.A.
Productos Químicos Monterrey, S.A.

TIOCIANATO DE SODIO R.A.
Productos Químicos Monterrey, S.A.

TIOSULFATO DE SODIO R.A.
J.T. Baker, S.A. de C.V.
Productos Químicos Monterrey, S.A.
Técnica Química, S.A.

TOLBUTAMIDA
Organo Síntesis, S.A.

TOLUENO R.A.
J.T. Baker, S.A. de C.V.

Productos Químicos Monterrey, S.A.
Productora Química Mexicana, S.A.

TRICLOROCARBANILIDA
Organo Síntesis, S.A.

TRICLORO ETILENO
J.T. Baker, S.A. de C.V.
Productos Químicos Monterrey, S.A.

TRICLORURO DE ANTIMONIO
Productos Químicos Monterrey, S.A.

TRIETANOL AMINA R.A.
Productos Químicos Monterrey, S.A.

TRIHIDRATO DE AMPICILINA
Fermie, S.A. de C.V.
Kemika Industrial, S.A. de C.V.
Orsabe, S.A.
Quinonas de México, S.A.

TRIOXIDO DE BISMUTO
J.T. Baker, S.A. de C.V.
Sigma, S.A.

TRISILICATO DE MAGNESIO N.S.P.
Productos Corzo, S.A.

TUNGSTATO DE SODIO R.A.
Técnica Química, S.A.
Técnica Química, S.A.

U

UREA PURIFICADA R.A.
J.T. Baker, S.A. de C.V.
Productos Químicos Monterrey, S.A.

V

VACUNAS PARA USO HUMANO Y VETERINARIO
Química Hoechst de México, S.A.

VACUNAS VARIAS
Rhodia Mexicana, S.A.

VALERATO DE BETAMETASONA
Instituto Bioterápico Mexicano, S.A.

VALERATO DE DEXAMETASONA
Instituto Bioterápico Mexicano, S.A.

VASELINA LIQUIDA N.F. Y U.S.P.
Químicos y Derivados, S.A.

VASELINA SOLIDA U.S.P.
Químicos y Derivados, S.A.

VITAMINA B 12
Hormonas y Vitaminas de México, S.A.
Kernita Industrial, S. A.
Manoper, S. A.
Productos Químicos Finos, S.A.

VITAMINA B 12 ORAL
Garcimex, S. A.

VITAMINA D-2 (CALCIFEROL)
Laboratorios Dawe's de México, S.A. de C.V.

VITAMINA D-3
Laboratorios Dawe's de México, S.A. de C.V.

VITAMINA D-4
Laboratorios Dawe's de México, S.A. de C.V.

X

XILENO R.A.
J.T. Baker, S. A. de C.V.
Productos Químicos Monterrey, S. A.
Productos Químicos Mexicanos, S. A.

Y

YODATO DE CALCIO
Productos Químicos Monterrey, S. A.

YODATO DE POTASIO
Productos Químicos Monterrey, S. A.

YODATO DE SODIO
J.T. Baker, S. A. de C.V.

YODHIDRATO-DE HIDROXOCOBALAMINA
Kernita Industrial, S. A.

YODOCLORO -8- HIDROXIQUINOLINA
Signa, S. A.

YODO RESUBLIMADO
Productos Químicos Monterrey, S.A.

LA/S Y NUM.
DE REGISTRO

B M P R E S A.

REPRESENTANTE

MATERIA PRIMA

PRECIO VENTA

USA
518

10F- 001

PROQUIFIN DIV. OFOTERAPICOS
S.A.
100% Mal.

LIC. DANOMA
5-66-68-96

Heparina
Gonadotropina Corionica

7.200 Mega

2FA- 002

SEARLE DE MEX. S.A. C.V.
100% Ext.

DR. CARLOS GAR
CIA.
5-94-50-11

Espirornolactona
Andrenolactona
Alendieno
Etiodiol diacetato
Fosfato de disopiramida

Clorhidrato de difenoq
xilato.

10F- 006

QUINOMAS DE MEXICO, S.A.
DE C.V.
100 % Mal.

ANTONIO MAYER
5-69-08-88

Ampicilina Trihidratada 2.240 \$/ Kg.
Ampicilina Anhidra 3.200 145
Ampicilina Sódica Esteril 3.940 174
Ampicilina Potasica Cruda O. 3.700 164
Ampicilina Potasica Esteril 4.180 185
Metampicilina Sódica Oral 3.700 164
Metampicilina Sódica Esteril 3.940 172 \$
Hetacilina Base 3.580 153
Hetacilina Potasica Oral 3.580 153
Hetacilina Potasica Esteril 4.180 185
Dicloracilina Sódica Mono 3.500 153
hidratada Oral 4.180 185
Dicloracilina Sódica Mono 3.460 159
hidratada esteril 4.060 178
Cloracilina Sódica Monohi 3.700 164
dratada Oral 4.300 190
Cloracilina Sódica Monohi 6.270 277
dratada Esteril 6.870 304
Oxacilina Sódica Monohi
dratada Oral
Oxacilina Sódica Monohi
dratada Esteril
Flucloxacilina Sódica Mono
hidratada Oral
Flucloxacilina Sódica Mono
hidra Esteril.

CLAVÉ Y NUM.
DE REGISTRO

E N P R E S A

UFA-0011

PRODUCTOS QUÍMICOS FINOS, S. A.
100 % Mal.

REPRESENTANTE

LIG. NECTOR BARONA

MATERIA PRIMA

Clenocobalamina
Hidrocobalamina
Acetato y clorhidrato
Vitamina B-12 Oral
Vitamina B-12 grado Vet.
Cloramfenicol Levógiro
Palmitato de Cloramfenicol
Hemisuccinato Acido de Cloramfenicol
Succinato Sódico de Cloramfenicol Liofilizado Estéril
Hidrocortisona y sus sales
Hidrocortisona Hemisuccinato
Hidrocortisona Sódica.

PRECIO VENTA

CLAVES Y NUM. DE REGISTRO E M P R E S A. REPRESENTANTE MATERIA PRIMA PRECIO VENTA

IFA- 0019

QUIMICA Y FARMACIA
100% Mal.

ALFONSO ALVAREZ
5-6-47-71
8-00-21

Hidroxido de Aluminio
" " Magnesio
Sulfato " "
Carbonato " "
Sulfato " Sodio

OFA- 0023

DON QUIMICA MEXICANA, S.A.
100% Ext.

JOSE LUIS GARCIA
5-40-67-00
5-65-39-66

Acido Acetil Salicilico

85.80
3.77

IQF- 0026

MEXICANA DE ALCALOIDES
17% Mal.

LIC. LICIO LAGOS
TERAN

Fenilefrina Base
Cafeina Anhidra Sintetica
Fenilefrina Clorhidrato

5,670 210
308 136
5,285 732

IQF- 0035

SIGMA, S.A.
100% Mal.

C. P. VICTOR M.
BAJALIL
5-50-22-33
5-06-99

Diyodo 8-Hidroxiquinoleina

Yodocloro 8-Hidroxiquinoleina U.S.P.

336 15
459 203

Sub-carbonato de Bismuto
Sub-galato de bismuto
Sub-Nitrato de bismuto
Sub-salicilato de bismuto

420 19
385 17
330 15
340 156

Fumarato Ferroso
Bromelina
Papeina
" "
" "

75 3.3
3,000 132
260 115
600 765
1,250 5.3

Cloruro de Benzalconio al 50%

50 2.2

Cloruro de " 95%
" " Polvo

100 4.4
135 5.9

Benzoil Metronidazol

900 40

CLAVE Y NUM.

DE REGISTRO

E N P R S A. REPRESENTANTE

MATERIA PRIMA

PRECIO VENTA

IOF- 0035

Metronidazol
Etambutol
Cloranfenicol Levógiro

750 33
1.750 44
1.050 47

OFA- 0042

LABORATORIOS MTH, S.A.
100 % Natl.

JOSE M. MONROY

Serros Antitéticos equinos
Derivados de Plasma Humano
Vacuna Antiveriulosa.

IOF- 0043

CASIMEX, S.A.
100% Natl.

JAVIER GARCIA
5-63-52-20

Cianocobalamina Cristalizada
Hidrocobalamina
Acetato y Clorhidrato
Vitamina B-12 Horal
En Manitol 1 X 1000.
Vitamina B-12 Feed-grade.
P/alimento animal

OFA- 0044

GLAXO DE MEXICO, S.A.
C.V.
100% Ext.

ING. HORACIO SAN
VICENTE
5-82-14-11

Betametazona
17-Valarato
Betametazona
Alcohol
Betametazona
Fosfato.

OFA- 0052

ABBOTT DE MEXICO, S.A.
100% Ext.

ERICO VARISCO
5-34-36-80

Tiocianato de Eritromicina
Esterato de Eritromicina
Etil Succinato de Eritromicina
Estolato de Eritromicina
Eritromicina base

114
2,860 5
6,000 14
3,025 17
2,640 117

CLAVE Y NUM.
DE REGISTRO

E M P R E S A. REPRESENTANTES

MATERIA PRIMA PRECIO VENTA

OPA- 0058

RICHTER, S.A.
100% Ext.

JOSEPH SLOWE
5-48-47-80

Cefalaxina Monohidrato
Ampicilina Trihidrato
Ampicilina Anhídrido
" Sódica estéril
Bemisuccinato de Hidrocortisona
Nitrato de Miconazol
Clorhidrato de Difenoxilato
Ptalil Sulfacetamida
Miconazol base
Clorhidrato de Loperamida
Mebendasol

1
3
1

IOF- 0062

FERRIC, S.A. DE C.V.
65% Nat.

PLINIO BRISEÑO

Eritromicina Estolato 2,279.15⁰⁰
" Estearato 2,279.15⁰⁰
" Base 3,368.70¹⁴
Tetraciclina Clorhidrato 1,048.55¹⁶
oral. 1,536.60⁶⁷
Tetraciclina Clorhidrato
esteril 1,010.60⁶⁵
Tetraciclina base
Oxitetraciclina Clorhidrato 1,121.00⁴⁹
oral
Oxitetraciclina Clorhidrato 1,714.65¹⁵
Esteril 1,055.15⁴⁴
Oxitetraciclina Base Oral 1,714.65¹⁵
Oxitetraciclina Base Esteril 2,454.55⁴³
Ampicilina Trihidrato 3,595.10¹⁹
" Anhídrido 3,759.00¹⁶
Dicloxacilina Sódica Oral 4,385.50¹⁹
" Esteril 8,243.45⁶¹
Cefalixina Monohidrato Oral 80,000.00³³³
Sulfato de Gentamicina
Sulfato de Gentamicina Esteril 68,000.00³³³

CLAVE Y NUM. DE REGISTRO E M P R E S A. REPRESENTANTE MATERIA PRIMA PRECIO VENTA

IQF- 0063	LABS. JULIAN DE MEX. S.A. MIX Ext.	ING. SALVATORE BRANCATO 5-38-80	Sulfametazina " " " " " " Parbendazole Oxibendazole Albendazole Sulfas	Técnica Micronizada Sódica	425 403.10 433.82 485.00	18 14 19 21.4
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OPA- 0072

THE SYDNEY BOSS, CO.
S.A.
MIX Ext.

C. P. ARTURO
Sanchez
5-65-78-55
6-87-40-00

Hidrosido de Magnesio

IQF- 0073

SYNTORGAN, S.A.
MIX Mel.

ALBERTO PI-
SUÑER
5-58-20-02
5-58-94-66

Citrato de Piperazina
U.S.P.
Ftalilsulfatiazol U.S.P.
Glicerina Bidestilada
U.S.P.
Cloruro de Calcio (Polvo Seco)
Sulfato de Magnesio (polvo)
Ftalilsulfacetamida B.P.
Extractos Vegetales
Blandos
Nitrate de Calcio Crist
Diatex "P"

CLAVE Y NUM.
DE REGISTRO

E M P R E S A. REPRESENTANTE

MATERIA PRIMA

PRECIO VENTA

IFA - 0074

PROQUINA, S.A.
100% Ext.

LIC. JESUS NIETO
G.

Dioegenina Cruda
16 DHP Crudo
16 DHP Libre Crudo
16 DHP Libre Puro
Acetato de epóxido
Epóxido K-2
Oxima

16 Alfa Metil
Pregnenolona Acetato
" Cruda

Delta 16 Progesterona
Progesterona
Grignard
DAA-Puro
5,6 Alfa-epoxi
DHA-Puro
Moretisterona
" Acetato

Estradiol
Etinil estrádiol
Etinil estrádiol M-20
Estradiol Benzoato
" Valerianato
" M-20

Testosterona Prápiionato
" enantato

Dehidroespandrosterona enantato
Hidroxipregnenolona 3 Acetato

Desoxicorticoesterona
Enantato de Moretisterona
Desoxicorticoesterona Acetato Enantato
Trioltrifacetato

IQP- 0084

ORSABE, S.A. DE C.V.
5 1/2 Gal.

FELIPE MARTÍ
MEZ.
5-26-99

Acido 6 Amino Penicilánico

CLAVE Y NUM. DE REGISTRO	E M P R E S A.	REPRESENTANTE	MATERIA PRIMA	PRECIO VENTA
IQF- 0090	FERSIM, S.A. 100% Nat.	ING. JOSE ALBO 7-81-363 78-12-59	Ampicilina Trihidratada " Anhidra Ampicilina Sódica Esteril Cloramfenicol Cloramfenicol Levógiro Dicloxacilina Sódica Cefalexina Monohidratada	2,252.05, 1/2 2,917.00, 1/2 3,543.00, 1/2 850.00, 1/2 3,416.00, 1/2 6,553.82, 1/2
IQF- 0094	CENTRO INDUSTRIAL BIO QUIMICO, S.A. DE C.V. 100% Nat.	LIC. JAINE M. BENAVIDES 8-02-00 al 03	Penicilina G. Potásida No esteril	
QPA- 0099	PFIZER, S.A. DE C.V. 100% Ext.	LIC. JUAN JOSE TORRES 5-34-84-80 5-16-60	Terramicina N " Clorhidrato " Cruda Terramicina Refinado " Base " Calcio " Clorhidrato Pomoato de Pirantil Timidazole Vanodine Superase Prill 300,000 Protease C- 30,000	- 76 -
IQF- 00101	SIMBIOTIK, S.A. 100% Nat.	ING. ALFONSO ORDIALES 3-97-95-47	Sulfametizina Hierro Dextran Vitamina B-12 Sulfatiazol Cafeina Cloramfenicol Sacarina Gentamicina Kanamicina esteril Kanamicina Oral	6,500 5,600 2018 1/2

CLAVE Y NUM.
DE REGISTRO

E P R E S A

REPRESENTANTE

MATERIA PRIMA

PRECIO VENTA

QFA- 00102	LABS. HYLAND, S.A. DE C.V. 25% Nat.	LIC. JAVIER ROMO ZARAGOZA	Albumina Humana Gama Globulina Factor Antihemofílico
QFA- 00105	CUTTER 25% Nat.	DR. ROGELIO CRESCO 3-99-56-44	Albumina Felva Crioprecipitado Gamma- Globulina
IQF- 00106	QUIMICA ESTEROIDAL S.A. DE C.V. 100% Ext.	LIC. ALFONSO GONZALEZ 5-77-37-83 5-77-39-20	Productos Químicos Esteroides
IQF-00108	BEISA 100% Ext.	LIC. FERNANDO GUTIERREZ 5-69-30-88	Beta Pregnano Dione Butil orto Valarato Triclorametilida Betametazona y sus Esteres Antihistamínicos Maleato de Clorofeniramina Maleato de Dextro Clorofeniramina Maleato de Destrobromofeniramina
IQR- 00114	PRODUCTOS BIOCLIN S.A. 100% Nat.	EMMA NAJERA DE FUENTES 5-11-10-74	Multidiscos Equipo Monoclin Unidiscos
IQF- 00116	TECQUIM, S.A. 100% Nat.	LUIS HALLARD D 5-59-02-37 5-79-02-29	Fenilbutazona Base Fenilbutazona Sódica Piracिनobutazona Mefenesina

CLAVE Y NUM DE REGISTRO	E M P R E S A.	REPRESENTANTE	MATERIA PRIMA	PRECIO VENTA
IOP- 00151	SALICILATOS DE MEXICO, S.A. 95% NaI.	ING. MANUEL LABASTIDA PEREZ 7-60-57-00	Acido Salicilico Fenacetina Salicilato de Metilo	
OFA- 00153	CIBA-GEIGY MEXICANA, S.A. DE C.V. 100% Ext.	LIC. ARMANDO SAN CHEZ	Fenilbutazona Clorhidrato de 5- Clorhidroxiquinoleina 4-Cloro-2Nitro fenolato de Sodio Iodoclorohidroxiquinoleina	
IOP- 00156	PRODUCTOS CORZO, S.A. 100% NaI.	LIC. ALFREDO COR DOBA KUTHEZ 6-76-09-32 5-94-69-55	Alumbre Esteratos Metalicos Hidróxido Aluminio Gal-Seco Hidróxido Magnesio Polvo Hidróxido Calcio Sulfato Aluminio Sulfactantes (Emulsificantes)	
IOP- 00157	QUIMICA MORELOS, S.A. 100% NaI.	LIC. ALFREDO CORDOBA 5-34-50- Y 6-76-09-32	Hidróxido de Aluminio Gal Hidróxido de Magnesio Pasta Silica Gal Sulfato de Magnesio	
IOP- 00162	LABORATORIOS SANFER, S.A. 100% NaI.	EDUARDO ALA TRISTE 5-90-02-66	Metisoprinol	

CLAVE Y NUM. DE REGISTRO	E M P R E S A. REPRESENTANTE	MATERIA PRIMA	PRECIO VENTA
QFA- 00163	LABORATORIO MANUELL, S.A. 100% Natl.	DR. SERGIO MANUELL B. 7-95-22-12 7-95-28-56	Bromocaseina Calcicaseina Tanocaseina Sacarosa Pulverizada Yofocaseina
QFA- 00169	RHODA MEXICANA, S.A. 100% Ext.	JANIEL EFRAIN GARIBAY 5-34-30-30	Metronidazol Menzoil Metronidazol
IQF- 00171	CANAFARMA, S.A. DE C.V. 35% Natl.	MOISES BRISEÑO 5-76-25-84 5-66-16-33	Symolean
IQF- 00184	POLAQUIMIA, S.A. 100% Natl.	ING. SALOMON BENDESTY 5-03-49-83 5-69-02-88	Furazolidona Cloruro de Benzalconio
IQR- 00195	BIO-LAB, S.A. 100% Natl.	DR. ALEXIS ARROYO 2-50-52-66	Lecitina Cardiopolopina Cerebro de Conejo Desecado
IQF- 00219	STEROMEX, S.A. 100% Ext.	ESTEBAN HDEZ. 5-58-18-22	Hormonas Esteroides Formosulfatazol Oxifen butazona
IQF- 00229	ESQUIM, S.A. 100% Natl.	ING. RUBEN DE LOS SANTOS 5-96-01-55	Furazolidona Furaladona-Base Nitro furazona

CLAVE Y NUM. DE REGISTRO	E M P R E S A	REPRESENTANTE	MATERIA PRIMA	PRECIO VENTA
QFA-00232		OSCAR TRIGO DUMINGUEZ 5-70-33-33		
QFA-00241	CIA. MEDICINA LA CAMPANA 100% Ext.	C.P. ARTURO FIGUEROA 5-48-66-00		
IUF-00256	SOMEQUISA, S. A. 60% Natl.	ALBERTO DEDILLA A.		
IUF-00259	DISTRIBUCION Y VENTAS 100% Natl.		Nicotinamida Acido Nicotínico	
IUF-00266	FARMAQUINIA, S. A. 100% Natl.	GUSTAVO A. BEREA L. 5-65-71-63	Salas de Glemuto	
QFA-00267	QUIMTEK, S. A. 100% Natl.	BERTHA GARDINO S. 5-76-85-06	Yodo Polivinil Pirrolidona	
QFA-00272	FARM LABORATORIOS S. A. DE C. V. 100% Natl.	Dr. Francisco CUBOS PAMUERO 5-73-08-66		

CLAVE Y MARCA

DE REGISTRO	E M P R E S A	REPRESENTANTE	MATERIA PRIMA	PRECIO VENTA
IUF-00273	KEMIKA INDUSTRIAL S. A., DE L. V. 100% Natl.	VICTOR GERMAIN ALCUCER	Vitamina B-12 Sulfametazina Caf. Succ. Sódico Cloramfenicol Succinato Sódico Esteril Cloramfenicol Lavóglro " Palmitato " Succinato	1,750.00 X 850.00 X 900.00 X 1,600.00 X
IUF-00278	CYNAMID, S. A. 100% Ext.	DEAN A WOODS 6-77-00-11	Veridasa Tetraciclina Grado Veterinario	
IUF-00298	NIXIM, S. A. 100% Natl.	Q. I. JARJE EBRAD M. 5-76-58-00	Extrac. Vegetales	
IUF-00299	HEAD JUNCTION DE MEX. S. A. 100% Ext.	DR. CARLOS DE ARAÚJO J. 6-77-39-99		
IUF-00307	MICHOMETRIX, S. A. 100% Natl.	I. B. PEDRO TOMAS M. 6-70-43-94	Microesferas Activas e Inertes.	
IUF-00325	ACEITES VITAMINICOS, S. A. 100% Natl.		Acete de Hija de Tiburón	

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ANNEX VII

LISTA DE MATERIAS PRIMAS FABRICADAS EN MEXICO
POR LABORATORIOS DE MATRIZ NORTEAMERICANA

1. PENICILINAS SEMI-SINTETICAS
2. ESPIRONOLACTONAS
3. ETINODIOL
4. PREDRIOL
5. DIFENOXILATO
6. NORPACE
7. NORETINODREL
8. METIL ANDROSTANOLONA
9. D-ISOPRAMIDA TOSILATE
10. HIDROXIDO DE MAGNESIO
11. ESTEARATO DE ERITROMICINA
12. ESTOLATO DE ERITROMICINA
13. SUCCINATO DE ERITROMICINA
14. CLORHIDRATO DE CLORTETRACICLINA
15. CLORHIDRATO DE TETRACICLINA
16. CLORHIDRATO DE DIMETIL-CLORTETRACICLINA
17. ESTREPTOQUINASA ESTREPTODORNASA (VARIDASA)
18. ALBUMINA EN POLVO
19. GAMAGLOBULINA
20. CRIO PRECIPITADO
21. DEXAMETASONA FOSFATO
22. DEXAMETASONA
23. HIDROXOCOBALAMINA
24. HORMONAS Y ESTEROIDES SINTETICOS
25. ANTIBIOTICOS
26. CLOROPROPAMIDA
27. VANODINE
28. TIMIDAZOL
29. LINCOMICINA

STATUS OF PRODUCTION IN RESPECT OF THE ILLUSTRATIVE LIST OF
ESSENTIAL DRUGS (UNIDO TWENTY ESSENTIAL DRUGS)

<u>DRUG</u>	<u>STATUS OF PRODUCTION</u>
ANALGESICS	
Acetyl Salicylic Acid	1
ANTI-INFECTIVE	
<u>Anthelmenthics</u>	
Bephenium	2
<u>Antibacterials</u>	
Ampicillin	1
Benzyl Penicillin	1
Phenoxymethyl Penicillin	2
Tetracycline	1
Sulphadiazine	1
Sulphadimidine	2
<u>Antifilarials</u>	
Diethyl Carbamazine	2
<u>Antimalarials</u>	
Chloroquine	2
Primaquine	2
<u>Antileprotics</u>	
Dapsone	2
Clofazimine	2
<u>Antiprotozoals</u>	
Metronidazole	1
<u>Antituberculosis</u>	
Ethambutol	1
Isoniazid	2
Streptomycin	2
CARDIOVASCULAR DRUGS	
<u>Antihypertensive drugs</u>	
Reserpine	2
<u>Cardiac glycosides</u>	
Digoxin	2
Digitoxin	2

(1) Active ingredient produced

(2) Formulated locally from imported active ingredient

ANNEX IX

SELECTION OF DRUG IMPORTS THAT MIGHT BE FEASIBLE
FOR LOCAL PRODUCTION

1974

<u>Drug</u>	<u>Imports</u> (Million Pesos)		
	<u>MT</u>	<u>US\$</u>	<u>Amount</u>
Dextropropoxyphene Hydrochloride	2	619469	14
Ethambutol Dihydrochloride	6	265486	6
Alpha-Methyl-3, 4 Dihydroxy Phenylalanine	10	442477	10
p-Hydroxyphenyl Butazone Monohydrate	8	398230	9
Methylene-Bis (Methylamino Antipyrine)	103	265486	6
Ethyl-3, 5, 6, Tri-O-Benzyl Glycofuranoside	6	309734	7
1-Dimethyl, Dipyridylum Dichloride	131	256486	6
Indomethacin	1	309734	7
Thiopropazine Methansulphonate	5	1238938	28
4-Chloro-N-(2-Furylmethyl-5-Sulfamoylanthranilic acid	1	309734	7
N-4-(2(5-Chloro-2-Methoxy Benzamide) Ethyl Phenylsulphonyl-N-Cyclohexylurea	0.15	309734	7
Tolylsulfonylurea and derivatives	72	486725	11
Sodium Ascorbate	109	221238	5
Vitamin A concentrate	73	309734	7
Carotene	11	265486	6
Vitamin E Acetate	56	309734	7
Riboflavin	23	398230	9
Bacterial fermentation by product with 45-55% Cyanocobalamine content	0.48	663716	15
C-Alpha, 9-Alpha-Difluoro-11-Beta 17 Alpha Dihydroxy-18 Alphenethyl-21 Trimethyl-Acetoxy-14 Pregnandiene-3, 2 Odione	0.001	221238	5
13-Aceto-Ethyl-17-Alpha-Ethynyl 17-Hydroxy-4-Zinc-3-Cna	0.14	619469	14
Bacterial Amylase	26	221238	5
Cinchona Alkaloids	16	752212	17
Indol Alkaloids	0.06	663716	15
Mikromol of Procaine Benzyl Penicillin	41	442477	10

<u>Drug</u>	<u>MT</u>	<u>Imports</u> (Million Pesos)	
			<u>Amount</u>
Rifamicin S.V.	2	1017699	23
Polymixin, Bacitracin and Derivatives	517	929203	21
Novobiocin, Cephalosporin, Monensin Pyrolnitrin and derivatives	18	2566371	58
Mutatin, Amphothericin, Primaricin and Derivatives	2	309734	7

source: Comercio Exterior. Banco de Comercio Exterior, S.A.
Vol.27, Number 3.

<u>NOMBRE</u>	<u>CONSUMO ANUAL</u>	<u>LABORA-TORIOS</u>	<u>PRINCIPAL CONSUMIDOR</u>	
ACIDO NALIDIXICO	25 TON.	Más de 12		
CINARIZINA	215 KG.	2	Janssen	86%
CLOFIBRATO	8 TON.	8	Ayerst-ICI	66%
DIAZEPAM	1 TON.	Más de 20	Roche	33%
ETAMBUTOL	9 TON.	8	Cyanamid	25%
FUROSEMIDA	3 TON.	Más de 15	Hoechst	33%
GUAYACOL	20 TON.	Más de 12		
LOPERAMIDA	20 KG. (Est. 1979)	Más de 5	Johnson & Johnson	40%
METOCLOPRAMIDA	350 KG.	Más de 12	Carnot	20%
NICOTINAMIDA	20-40 TON.	Más de 30		
SULPIRIDE	541 KG.	8	Leppetit	80%

Source: Fermic, S.A. de C.V.

ANNEX X

Statement showing the prices of imported raw materials and intermediates

<u>Raw Material</u>	<u>Unit</u>	<u>Unit Price (US\$)</u>
Acetonitrilo	Litre	1.49
Ac.2 Etil Hexoico	Litre	1.48
7 A.D.C.A.	Kg.	244.33
Anhidrido Propionico	Litre	1.86
Alfa Fenil Glacina	Kg.	27.60
Cloruro de Metileno	Litre	0.70
Corn steep solido	Kg.	0.85
D.C.I.M.C.	Kg.	57.33
Dimetil Dicloro Silanco	Kg.	2.03
Hexametil Disilazano	Kg.	9.25
Lauril Sulfato de Sodio	Kg.	4.10
N N-Dimetil Anilina	Litre.	1.87
Penicilina G.K.	Kg.	25.10
Pentacloruro de Fosforo	Kg.	2.64
Pharmamedia	Kg.	0.65
Prinafloc	Litre	1.72
Propanol	Litre	0.60
Trietil Amina	Litre	1.98
Tiocianato de Sodio	Kg.	1.70
Acido Lactico	Kg.	3.44
2 Metil 6 Amino Piridina	Ton	7,500
Malonato de Dietilo	Ton	4,400
Ortoformiato de Dietilo	Ton	4,200
Sulfato de Dietilo	Ton	1,787
2 Metil 5 Nitroimidazol	Ton	11,000
Guayacol	Ton	5,000
Carbonato de Dietilo	Ton	2,259
2 Metil Imidazol	Ton	6,000
Fenol	Kg.	1.32
Bioxido de Carbono	Kg.	0.14/0.15
Hidroxido de Sodio	Kg.	0.12/0.15
Anhidrido Acetico	Kg.	0.83/0.15

Sources: Fermic, S.A.de C.V.
 Quimsi, S.A.
 Salicilatos de Mexico S.A.
 Dow Quimica Mexicana, S.A. de C.V.

STEROIDS PRODUCED WITHIN THE COUNTRY
(ACTIVE SUBSTANCES AND INTERMEDIATES)
1974

3,20-Allopragnanedione	Searle
Allopregnan-3 Beta-ol-20-one	Searle
Allopregnan-3 Beta-01-20-one acetate	Searle
Androsta-1, 4-diene-3,17-dione	Searle
Androstane-3,17-dione	Searle
Androstan-17 Beta-01-3-one	Searle, Steromex, Syntax
Androstan-17 Beta-01-3-one benzoate	Searle
Androsta-1,4,6-triene-3,17-dione	Searle
Androstenadiol	Searle, Syntax
Androstenadiol 3-acetate	Searle
Androstenadiol 3-acetate 17 benzoate	Searle
Androstenadiol 17-benzoate	Searle
Androstenadiol 3, 17-diacetate	Searle
Androstenadiol 3, 17-dipropionate	Searle
Androst-4-ene 3, 20-dione	Searle, Steromex, Syntax
Dehydroisoandrosterone	Diosynth, Searle, Steromex, Sy
Dehydroisoandrosterone acetate	Diosynth, Searle, Steromex, Sy
16-Dehydropregnenolone oxime	Searle
16-Dehydropregnenolone acetate oxime	Diosynth, Proquina, Searle, Sy
16-Dehydroprogesterone	Searle, Steromex
1-Dehydrotestosterone acetate	Searle
1-Dehydrotestosterone benzoate	Searle
Desoxycorticosterone acetate	Syntax
17 Alpha, 21-Dihydroxypregnenolone 21-acetate (MONAC)	Steromex
6, 16-Dimethyl-16-dehydropregnenolone	Searle
6, 16-Dimethyl-16-dehydropregnenolone acetate	Searle
6, 16 Alpha-Dimethylpregnenolone	Searle
6, 16 Alpha, Dimethylpregnenolone acetate	Searle
6, 16 Alpha-Dimethylprogesterone	Searle
16 Alpha, 17 Alpha-Epoxypregnenolone	Beiss, Diosynth, Searle, Stero Syntax.

PRODUCT

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PRODUCER

16 Alpha, 17 Alpha-Epoxyprogesterone	Searle, Steromax
Equilin	Syntex
Equilin sodium sulfate	Syntex
Estradiol	Searle, Syntex
Estradiol benzoate	Searle, Syntex
Estradiol dirpropionate	Searle, Syntex
Estradiol enanthate	Syntex
Estradiol 3-methyl ether	Searle
Estradiol sodium sulfate	Syntex
Estradiol undecanoate	Syntex
Estradiol valerate	Syntex
Estriol	Searle, Syntex
Estrone	Searle, Syntex
Estrone-3 methyl ether	Searle
Estrone sodium sulfate	Syntex
Ethisterone	Searle, Syntex
17 Alpha-Ethynylandrostenediol	Searle
Ethynylestradiol	Searle, Syntex
Etiadanic acid 3-acetate	Searle
Etienic acid 3-acetate	Searle
18-Hydroxidesoxycorticosterone	Searle
17 Alpha-Hydroxypregnenolone	Beisa, Searle, Steromax
17 Alpha-Hydroxypregnenolone 3-acetate	Searle, Steromax
17 Alpha-Hydroxypregnenolone 17acetate	Searle, Steromax
21-Hydroxypregnenolone 21-acetate	Searle
17 Alpha-Hydroxypregnenolone 3, 17-diacetate	Searle, Steromax
17 Alpha, Hydroxypregesterone	Diosynth, Searle, Steromax, Syntex
17 Alpha-Hydroxypregesterone acetate	Searle, Steromax, Syntex
17 Alpha, Hydroxypregesterone caproate	Diosynth
17 Alpha-Hydroxypregesterone enanthate	Diosynth
Isoandrosterone	Searle
Medroxyprogesterone	Searle, Steromax
Medroxyprogesterone acetate	Searle, Steromax
Mestranol	Searle, Syntex
17 Alpha-Methylandrosterane-3 Beta, 17 Beta-diol	Searle
17 Alpha-Methylandrosteran-17 Beta-ol-3-one	Searle, Steromax, Syntex.

PRODUCT

PRODUCER

Methylandrostenediol	Diosynth, Searle, Steromex, Syntex
Methylandrostenediol dipropionate	Syntex
6-Methyl-16-dehydropregnenolone	Searle
16-Methyl-16-dehydropregnenolone	Searle
6-Methyl-16-dehydropregnenolone acetate	Searle
16-Methyl-16-dehydropregnenolone acetate	Searle
6 Alpha, Methyl-16-dehydropregesterone	Searle
16-Methylene-17 Alpha-hydroxypregnenolone	Searle
16-Methylene-17 Alpha-hydroxypregnenolone acetate	Searle
6-Methyl-16 Alpha-epoxypregnenolone	Searle
16 Beta-Methyl-16 Alpha-epoxypregnenolone	Searle
6-Methyl-16 Alpha-17 Alpha-epoxypregnenolone acetate	Searle
16 Beta-Methyl-16 Alpha-epoxypregnenolone acetate	Searle
6 Methyl-17 Alpha-hydroxypregnenolone	Searle
6 Methyl-17 Alpha-hydroxypregnenolone diacetate	Searle
6 Methylpregnenolone	Searle
16 Alpha-Methylpregnenolone	Proquina, Searle, Steromex
16 Beta-Methylpregnenolone	Searle
6-Methylpregnenolone acetate	Searle
16 Alpha Methylpregnenolone acetate	Searle, Steromex
16 Beta, Methylpregnenolone acetate	Searle
16 Alpha, Methylprogesterone	Searle, Steromex
16 Beta-Methylprogesterone	Searle
Methyltestosterone	Diosynth, Proquina, Searle, Steromex, Syntex
19-norandrost-4-ene-3,17-dione	Searle
19 norandrost-5(10)-en-17 Beta-01-3-one	Searle
19 nortestosterone	Searle, Syntex
Pregnenolone	Diosynth, Proquina, Searle, Steromex, Syntex
Pregnenolone acetate	Diosynth, Proquina, Searle, Steromex, Syntex
Progesterone	Diosynth, Proquina, Searle, Steromex, Syntex
Reichstein's compound "S"	Steromex

PRODUCT

PRODUCER

Reichstein's compound "S" acetate

Steromex

Smilagenin

Proquina

Testosterone

Diosynth, Searle, Steromex,

Syntex

Testosterone acetate

Searle, Steromex, Syntex

Testosterone benzoate

Searle

Testosterone enanthate

Diosynth, Syntex

Testosterone isobutyrate

Searle, Steromex, Syntex

Testosterone undecanoate

Syntex

Testosterone valerate

Syntex

I. NAME OF THE FINANCIAL INSTITUTIONS VISITED

Nacional Financiera, S.A.
P. O. Box 353, Isabel la Católica 51
México 1, D.F.
Tel. 518-15-28, 518-16-80
Cable address and telex number: NAFIN - 01772538

Offices of foreign representatives: London, New York,
Tokyo, Washington, D.C.

II. OWNERSHIP

1. Private and public: 35% Government: 65 %
2. Name of principal shareholders: Federal Government

III. OBJECTIVES AND ACTIVITIES

Nacional Financiera, a banking institution in the public sector, is the main agency for promoting industrial development and the development of economic and social infrastructure in Mexico.

IV. NAME OF THE OPERATIONAL MANAGEMENT DIRECTOR CONTACTED

Lic. Benito Rey Romay, Director de Empresas y Fideicomisos

Competence: Loan for additional construction and development of the existing plants. No foreign or new plant investments. Director of Affiliated Industrial Companies - Trust Funds.

V. RESOURCES (in millions of pesos) as at 30 June, 1978

Authorized capital	2.300.0
Legal & other reserves	709.0
Surplus from revaluation	
of bank permits	12.4
Profits for the year	407.2
Net Worth	<u>3.428.6</u>

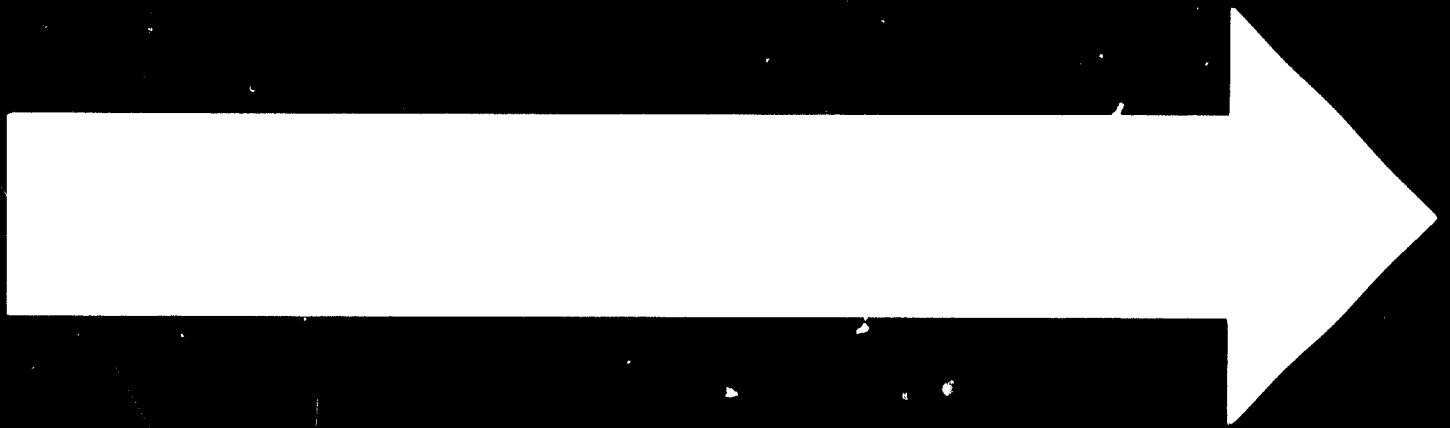
VI. CEILINGS FOR FINANCING INDUSTRIAL PROJECTS

1. Lending limit: There are no limits on individual loans
2. Equity-investment limit: Maximum: 95%; Minimum: 20%

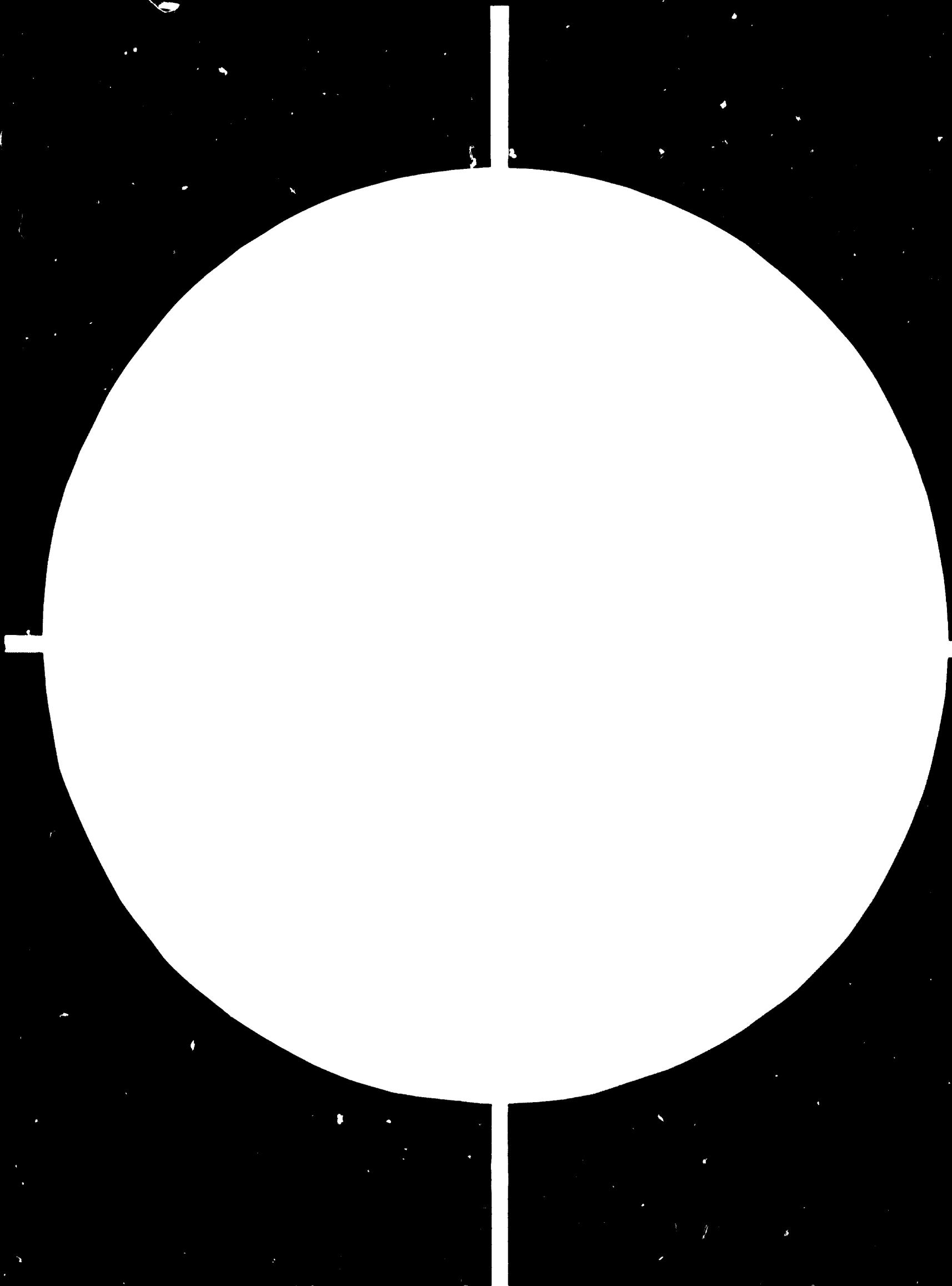
VII. TERMS AND CONDITIONS FOR INDUSTRIAL FINANCING

1. Interest rate per anum on:
 - (a) Pre-investment loans (if any): 11% on unpaid balances

B - 558

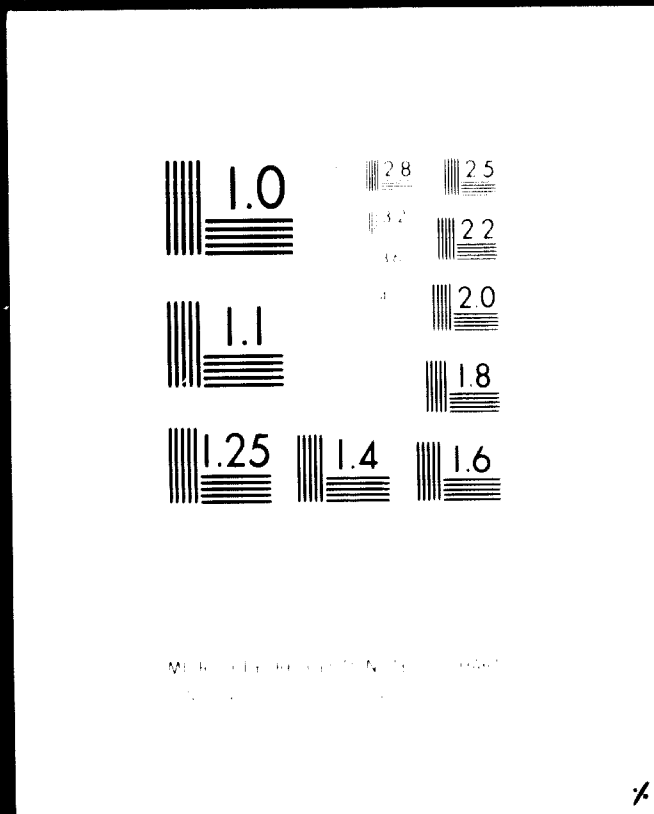


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24x
D

(b) Investment loans (medium and long-term): 18.5% in private and 17% in public sector; FOGAIN 12% in Zone I; 11% in Zone II; 10% in Zone III. 2/

(c) Working-capital loans (medium or short-term);

2. Maturity range of loans (with own resources): Up to 8 years for equipment; 3-15 years for running expenses; FOGAIN 2-3 years for equipment; 3-15 years for running expenses and for industrial mortgages.
3. Collateral: The primary security is the value of the asset for which credit is used; otherwise, pledging of shares or securities, mortgages on real estate and industrial units.
4. Expected minimum rate of return on equity investment, if applicable: 14%

For the development of the raw materials and the intermediates in pharma industries, priorities established by the present Government are as follows: Help is given mainly to industrial undertakings manufacturing products for mass consumption and capital goods, and to the energy, basic input and agroindustrial sectors.

Nacional Financiera administers four trust funds for industrial financing under the PAI, Programa de Apoyo Integral a la Pequeña y Mediana Industria (Programme of Support for the Small and Medium Size Industry):

FOGAIN - (Guarantee and Development Fund for Small-Scale and Medium-Scale Industry) - Refractionary, habilitation and mortgage credits for industry.

FOMIN - (National Industrial Development Fund) - Temporary capital subscription (up to 33% of total) for new industries or to enlarge existing ones.

FIDEIN - Sale of lands; rent of locations

FONEP - For studies and projects (including those of basic engineering)

Note: The official exchange rate as of 13-VIII-73 is US\$1 = Mex\$22.64

ANNEX XIII

I. NAME OF THE FINANCIAL INSTITUTION VISITED

SOMEX, Sociedad Mexicana de Crédito Industrial, S.A.
Paseo de la Reforma 213
Mexico 1, D.F.
Tel. 591-16-11
Telex: 01772789

II. OWNERSHIP

1. Private and public: 13% Government: 87%
2. Name of principal shareholders: Federal Government

III. OBJECTIVES AND ACTIVITIES

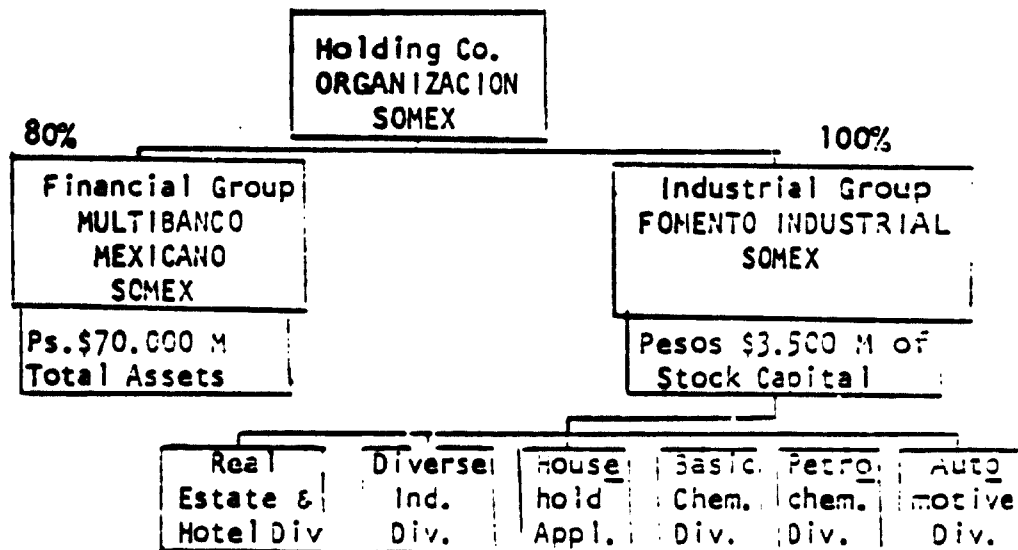
Main interest: Financing technology of such hard to find industrials as basic chemicals. Interest in raw materials (and pharmaceutical intermediates). The first experience: Sydney Ross Chemicals, USA; Kali Chemie, West Germany.

IV. NAME OF THE OPERATIONAL MANAGEMENT DIRECTOR CONTACTED

Mr. Donaciano Tamez Fuente, Executive Vice-President and Director of Industrial Promotion.

Competence: In his capacity as a Director of Industrial Promotion and the multipurpose character of the bank is able to assign funds for domestic markets in every term and for different activities (as opposed to the one-year ago limited possibilities).

V. RESOURCES



Make sales of \$18.000 M pesos in 1979

Net profits of \$1.100 M pesos

50 companies - 50% majority owned - 50% minority owned

SOMEX acts as a trustee in Nacional Financiera (see Annex 2).

Has minority shares in:

1. FOGAIN - Guarantee and Development Fund for Small and Medium Size Industry, which finances through private and public banks, credits to enterprises having a capital ranging between 50 and 40 thousand million pesos, with credit availability for the industrial project of \$9,000,000.00 of the total \$16,000,000.00 up to 4-7 years return.
2. FONEP - National Fund for Studies and Projects aims at facilitating financial resources and technical assistance for preparation of preinvestment studies, which may allow to know in advance the risks or benefits of investing capital before doing so.

In addition, SOMEX has majority shares in the following funds managed by the Bank of Mexico:

1. FOMEX - Fund for Promotion of Exports of Manufacturing Products, which promotes and encourages exports of manufactured products, as well as the substitution of imports of capital and consumption goods.
2. FONEI - Fund for Industrial Equipping, encourages the establishment and/or modernization of enterprises, which should export an important part of their production or either substitute efficiently imports of goods or services. The credits granted by the Fund vary from a minimum of 4.5 million pesos to a maximum of 100 million. The FONEI grants credits to a maximum 72% of the investments in fixed assets when used for modernization or enlargement, and up to 65% of fixed assets when used for establishment of new enterprises. The financial intermediate, be it a private or public bank, will grant an 11.1% of the amount provided by the FONEI when used for modernization or enlargement, and 15.4% for new projects.
3. FONATUR - National Fund for the Development of the Tourism Industry.

With the help of the above mentioned Funds, it is possible to borrow 3 to 6 points below the commercial level.

SOMEX is interested in promoting the production of raw materials and intermediates for the pharmaceutical industry and is ready to accept joint ventures with UNIDO in performing financial research for the intermediate markets internally as well as for ALALC (Asociación Latinoamericana de Libre Comercio).

The expert provided the information on the latest proposal of ALALC based on the sectorial meeting of the chemical-pharmaceutical industry held in Montevideo, Uruguay, on 21 May, 1979 (Argentina, Brazil, Mexico, Uruguay).

AVAILABILITY OF RAW MATERIALS FOR THE PRODUCTION OF 20 ESSENTIAL DRUGS

<u>Drug</u>	<u>Active ingredient produced locally</u>	<u>Raw Material</u>	<u>Availability of Raw Materials</u>		
ANALGESICS					
<u>Acetyl Salicylic Acid</u>	1	Phenol	-		
		Carbondioxide	x		
		Sodium hydroxide	x		
		Acetic anhydride	x		
ANTI-INFECTIVE					
Antihelminthics					
<u>Bephenium</u>		Benzyl chloride	x		
		Dimethylamine	-		
ANTIBACTERIALS					
<u>Ampicillin</u>	1	Potassium benzyl Penicillin	x		
		d Phenyl glycine	-		
		NN Dimethylaniline	-		
		Organic Solvents	x		
		B-Naphthalene			
		Sulphonic Acid	-		
		<u>Benzyl Penicillin</u>	1	Corn Steep Liquor	-
				Maize starch	-
				Soya bean flour	
				Butyal alcohol	-
				Lard oil	-
				Ground nut oil	
				Urea	x
Phenyl acetic acid	-				
Sugar	x				
Caustic soda	x				
Sulphuric acid	x				
<u>Phenoxyethyl Penicillin</u>		Same as above plus Phenoxyacetic acid	-		

1 Active ingredients produced locally
x Raw material available
- Raw material not available

AVAILABILITY OF RAW MATERIALS FOR THE PRODUCTION OF 20 ESSENTIAL DRUGS

<u>Drug</u>	<u>Active ingredient produced locally</u>	<u>Raw Materials</u>	<u>Availability of Raw Materials</u>
<u>Tetracycline</u>	1	Corn steep liquor	-
		Maize starch	-
		Soybean flour	
		Ground nut oil	
		Oxalic acid	-
		Sodium hydroxide	x
		Hydrochloric acid	x
		Ion exchange resin	-
		Butyl alcohol	-
<u>Sulphadiazine</u>	1	Acetanilide	-
		<u>Sulphadimidine</u>	
		Chlorosulphonic acid	-
		Aminobase	-
Antifilarials			
<u>Diethyl carbamazine</u>		Mono ethanolamine	-
		Hydrochloric acid	x
		Ammonium chloride	x
		Sodium hydroxide	x
		Citric acid	x
		Formic acid	x
Antimalarials			
<u>Chloroquine</u>		Metachloroaniline	-
		Ethoxymethylene malonic ester	-
		Diphenyloxide	-
		Phosphorous Oxychloride	-
		Novaldiamine	-
		Benzene	x
		Phenol	-
		Acetic acid	x
		Phosphoric acid	x
		Hydrochloric acid	x
		Ammonia	x
		Sodium hydroxide	x
		Methanol	x
		Ethyl alcohol	x

AVAILABILITY OF RAW MATERIALS FOR THE PRODUCTION OF 20 ESSENTIAL DRUGS

<u>Drug</u>	<u>Active ingredient produced locally</u>	<u>Raw Materials</u>	<u>Availability of Raw Materials</u>
<u>Primaquine</u>		P-anisidine	-
		Acetic anhydride	X
		Glycerine	X
		Arsenic acid	-
		Hydrazine Hydrate	-
		Potassium phthalimide	-
		1-4 Dibromopentane	-
	Organic solvents .	X	
Antileprotics			
<u>Dapsone</u>		Monochlorobenzene	-
<u>Clofazimine</u>		Chlorosulphonic acid	-
		Ammonia	X
Antiprotozoals			
<u>Metronidazole</u>	1	2 Methyl 4 or 5 Nitro imidazole	-
		Ethylene chlorohydrin	-
Antituberculosis			
<u>Ethambutol</u>	1	4 amino 2 butanol	-
		Ethylene dibromide	-
<u>Isoniazid</u>		Gasme picoline	-
		Nitric acid	X
		Sulphuric acid	X
		Hydrazine hydrate	-
		Ethyl alcohol	X
<u>Streptomycine</u>		Pharmamedia	-
		Methanol	X
		Formaldehyde	X
		Ion exchange resins	-

AVAILABILITY OF RAW MATERIALS FOR THE PRODUCTION OF 20 ESSENTIAL DRUGS

<u>Drug</u>	<u>Active ingredient produced locally</u>	<u>Raw Material</u>	<u>Availability of Raw Materials</u>
Cardiovascular drugs			
Antihypertensive drugs			
<u>Reserpine</u>		Rauwolfia	
Cardiac glycerides			
<u>Digoxin</u>		Digitalislanata	
<u>Digitoxin</u>			

JOB DESCRIPTION

US/INT/78/007/11-02(32.1.D)

- Post Title:** .Pharmaceutical Adviser
- Duration:** 2 months
- Date required:** As soon as possible
- Duty Station:** Mexico, Venezuela, Colombia, Peru, Argentina and Vienna and possible travels within the countries.
- Purpose of the project:** At present, some essential drugs are manufactured locally in Developing Countries and this is usually done by formulation from imported bulk materials. In order to produce drugs from raw materials, UNIDO will assess the availability of raw materials locally for 20 essential drugs to be produced in Developing Countries.
- Another objective of the project is to investigate the financial mechanisms existing in developing countries in order to finance the construction of new pharmaceutical plants or the expansion of existing ones and to identify problems of a financial nature that may prevent pharmaceutical companies from using formal lines of credit.
- Duties:** The expert in co-operation with the Ministries and Counterparts will carry out the following:
- 1) To collect information and data on intermediates and raw materials required for the production of 20 essential drugs as mentioned in the Background.
 - 2) To assess raw materials already produced in the country and those that are planned to be produced.
 - 3) To make a technical and economical evaluation of these intermediates for production of the 20 drugs listed.
 - 4) To consider the utilization of a multipurpose plant for the production of these drugs from the raw materials available in the developing countries, in case the total industrial line for each drug is not justified because of capacity limitations.
 - 5) To visit a sample of public and private financial institutions in order to determine the terms and conditions of credit available for pharmaceutical companies and the possibilities of granting special treatment to them.
 - 6) To visit a sample of pharmaceutical companies and inquire about their sources of financing of both fixed investment and working capital and identify possible problems.
 - 7) After his visit to the above mentioned countries, to make a projection for other countries and to consider co-operation among developing countries.
 - 8) To prepare a final report at UNIDO headquarters.

Qualifications:

Chemical Engineer or industrial pharmacist with extensive experience in the establishment/development/operation of pharmaceutical production units.

Language :

English

Background:

At the second meeting of the Panel of Experts on the Pharmaceutical Industry, convened by UNIDO to prepare for consultations on this industry, a list of 20 drugs was prepared. These drugs are the drugs most needed for the health programmer of developing countries and are also drugs which can be manufactured in developing countries. In order to assess whether local raw materials are available for their production, it is proposed to make on-the-spot investigations in 5 developing countries with a medium or large population. These surveys will serve to show the existence of raw material availabilities in the 5 countries concerned: they will also show other developing countries how to undertake similar studies.

UNIDO also wants to investigate the formal sources of credit available for the financing of pharmaceutical companies that would undertake the production of one or more of the 20 drugs included in the list.

The 20 drugs are listed in the attached Annex together with the raw materials which are required for the manufacture of the pharmaceutical intermediates.

COUNTRY PROFILE

COCOMBIA

The country has an area of 444,176 square kilometres and a population of 6.13 million inhabitants. The size of the pharmaceutical market (June 1978 - July 1979) is US \$ 292 million. Formulations are undertaken by 300 pharmaceutical laboratories manufacturing prescription items and over-the-counter products. 240 laboratories are Colombian-owned, nevertheless foreign companies share 95 percent of the market. The country is strongly dependent on imports. About 70 percent of the pharmaceutical requirements are formulated locally. No intermediates are produced in the country. Only one of the 20 essential drugs - acetyl salicylic acid - is produced in Colombia. Import prices of the 20 essential finished bulk drugs is appended at the end of this chapter. Payment of royalties in Colombia can not exceed 4 percent on net sales.

COUNTRY PROFILE

VENEZUELA

Venezuela has a population of 12.8 million inhabitants (1977) with an urban population rate of 75.6 percent. The GNP per capita is US \$ 2,940. Infantile mortality rate is 39.5 per thousand. The major cause of death is heart and circulatory system diseases followed by accidental death, malignancy and perinatal mortality. Schistosomiasis is confined to an area in the middle north of the country where some 300 thousand persons are infected with the disease.

Total sales of pharmaceuticals (1977) were US \$ 203.5. 70 percent of the market is shared by foreign companies. The country is strongly dependent on imports. About 70 percent of its pharmaceutical requirements are formulated locally the balance being met by imports of finished dosage forms. Venezuela is not equipped to go into large-scale basic production due to lack of an infrastructure and qualified personnel. The only drug produced in the country is ethambutol one of the 20 essential drugs. This drug is produced by a foreign company subsidiary from an imported intermediate. Therefore, no intermediates are available in Venezuela.

COUNTRY PROFILE

PERU

Peru is located in the southern hemisphere and has a 3,079 kilometre coastline on the Pacific Ocean. Its area is 1,288,215 square kilometres and it has a population of 16 million inhabitants. Because of increasing declines in the economy, a system of mini-devaluations was introduced in 1976. Peru is a member of the Andean Common Market (ANCOM), the Latin American Economic System (SELA) and the Latin American Free Trade Association (LAFTA). Peru is also the site of the Cartagena Agreement (mostly known as the Andean Countries Pact) a system of regional co-operation in which Bolivia, Columbia, Ecuador and Venezuela also participate as member countries. Peru's GNP growth averaged 5.5 percent per annum up to 1975 but dropped sharply to slightly under 3 percent in 1976. A further decline to only 2 percent annual growth had been forecasted for 1978.

The Peruvian Government believes that foreign investment can make a positive contribution to the country's development. Foreign-owned firms are eligible for tax, tariff and credit incentives.

The health status of the population is rather unsatisfactory. Diabetes and hypertension are common. Intestinal parasites, leprosy and venereal diseases are frequent. Tuberculosis is the fifth cause of death with a mortality rate of death of 200/100 thousand. Typhoid fever, louse-borne typhus, yellow fever, malaria, chagas disease, plague and polycythemia - a chronic life-shortening disorder involving all bone marrow elements - are endemic.

Life expectancy at birth is 56.5 years, child mortality rate per 1000 born alive is 115 and percentage of death by infection and parasitic diseases is 23.7. Literacy is 72.4 percent and GNP per capita (1974) is US \$ 597.

The pharmaceutical industry is almost 100 percent dependent on imports of bulk drugs. All active ingredients are imported except for ampicillin and chloramphenicol which are produced locally from imported late intermediates, the latter from p-nitro-phenyl-2-amino-1,3-propano-diol and the former from 6-APA and phenyl-glycine.

Peru formulates about 90 percent of its requirements. 172 companies formulate or distribute medicines through third party agreements - 59 laboratories - 41 nationally-owned and 18 foreign-owned plants - are

established in the country in formulation activities.

The size of the pharmaceutical market (1977) was US \$ 126 million. Foreign companies share 78.3 percent of the market. 19.5 percent is shared by nationals. A government laboratory shares 1.77 percent of the country's demand. Peru produces a number of raw materials of common use in the synthetics of bulk drugs. These chemicals, the country's production capacity and current selling prices are listed in the appended annexes of this report. A chart showing the available raw materials used in the production of the 20 essential drugs, at sub-regional level is also annexed to this study. No intermediates are produced in Peru. The country's requirements for 1980 of a number of the 20 essential drugs are detailed below:

<u>Drug</u>	<u>Amounts M.T./Year</u>
Penicillin	8.0
Ampicillin	13.1
Tetracyclines	14.5
Streptomycin	11.2
Isciazide	52.2

(Source: Cartagena Agreement, Proposal 92)

The only essential drug produced in Peru is ampicillin as stated in this chapter. The selling price of this bulk drug is US \$ 190/kg. Imported intermediates represent about 70 percent of the production cost. Current prices of the two main intermediates are the following : 6-APA US \$ 105/kg and phenyl-glycine US \$ 32/kg. A breakdown of the production cost of ampicillin is appended to this study.

X

FINANCING MECHANISMS

No preferential treatment exists for the pharmaceutical industry. No loans are granted for working capital. The Corporacion Financiera de Desarrollo (COFIDE) provides loans for investments in local currency with an interest rate of 37.5 percent per annum plus 2-4 percent of bank charges. Loans in hard currency are granted at an interest rate of 1-2 percent above of 12½ percent plus 2-4 percent of bank charges. These rates of interest are applicable on loans above US \$ 200,000. Loans below the latter amount are obtainable from the Banco Industrial at the same interest rates.

Private banks grant loans for the acquisition of equipment at the same interest rates shown in the first paragraphs of this chapter.

For industrial institutions, specialized banks grant loans at the interest rates described above under at a 30-70 equity-loan ratio.

The terms of loans above US \$ 100,000 for capital goods is 2 years. From US \$ 100,000-300,000 3-5 years; above US \$300,000 5 years. Repayment of loans is made on monthly, quarterly or yearly installments. In granting loans for capital goods in U S dollars the equity-loan ratio is 20-80.

Ceiling on payment of royalties is 4 percent minus 33 percent of sales tax. Payment of inter-company royalties is not allowed.

REGIONAL EVALUATION OF THE ANDEAN COUNTRIES

Evaluation of the conditions related to Colombia, Peru and Venezuela must be framed under the umbrella of the projects under study or in execution by the Board of the Cartagena Agreement. The self-reliance in essential drugs requirements of the five countries of the region will only be achieved when the stipulations of the Proposal 92 related to the pharmaceutical programme are implemented.

A total of 28 drugs have been selected for local production in the Andean Region. Estimated requirements and therefore local production targets for each drug in all five countries of the regions are shown in the appended annexes. Only five of the 20 essential drugs - penicillin, ampicillin, tetracyclines, streptomycin and isoniazid - have been selected by the Andean Countries among their priorities for basic production. None of the sophisticated intermediates used in the production of the 20 essential drugs are available in the region. The miscellaneous chemicals available in the Andean Region that could be used in the production of the 20 essential drugs are also detailed in the appended charts. It is not foreseen that this region could produce intermediates in the near future and therefore its dependency on imports will continue to exist.

Colombia produces acetyl salicylic acid. Some of the chemicals used in the synthesis of this important drug are available in the region as it could be observed in the enclosed charts. All chemicals necessary to synthesize acetyl salicylic acid are obtainable in the world market. The main issues as regards the capabilities to produce this drug are to secure an adequate technology and to produce at a competitive cost. Some factories have to close operations in other areas of the world because they could not meet the competition of the imported finished bulk drugs. Another essential drug produced in the subregion is ethambutol although no data about production capacity have been secured.

The third essential drug produced in the Andean subregion is ampicillin. This plant is located in Peru as stated in this paper. This production unit has no constraints either in the acquisition of new technologies or in the obtention of the basic intermediates, 6-APA and phenyl glycine because its dynamic management learned to identify the sources of supply of intermediates and the seller of technology. This plant has an installed production capacity to supply all the requirements of the Andean Region as per the projections of the Board of the Cartagena Agreement for 1980.

The main constraints encountered by developing countries in the Andean Region to set up basic production plants of essential drugs would be tied to the lack of experience to identify the sources and to bargain the cost of acquisition of technology and of intermediates. The recently created Association of National Manufacturers of Latin American countries could be the kernel in providing assistance to national investors that could be giving thought to establishing basic production plants in developing countries in this Region. It is unquestionable that if the acquisition of technology and of intermediates could be negotiated under reasonable conditions essential drugs could be produced in developing countries at competitive prices.

COUNTRY PROFILE

ARGENTINA

The third largest country of Latin America has a total area of 3.76 million square kilometres and a population of 26.4 million inhabitants (1978). Rural population is 18.3 percent. Literacy rate is 93 percent. Life expectancy at birth is 69.4 years. Infantile mortality rate is 65 per thousand. Gross National Product per capita (1978) is US \$ 2,076. Rate of inflation (1978) was above 125 percent.

In spite of the rampant inflation the Argentinian Government has dramatically improved the country's balance of payments and increased its foreign currency reserves.

Present investment in the petrochemical sector amounts to US \$ 500 million. It is foreseen that some US \$ 1.2 billion will be invested in this sector through the year 1985. A further expansion of the petrochemical industry would create a framework for local production of pharmaceutical intermediates in five years time. It must be observed nevertheless that the immediate targets of the petrochemical industry in Argentina are mainly focussed toward the production of chemicals used in the production of synthetic fibres. A breakdown of the projections of the demand of basic petrochemical products for 1981 is given below:

<u>Chemical</u>	<u>Year 1981 M.T. (10³)</u>
Ethylene	291
Propylene	153
Butadiene	56
Butylene	13
Benzene	194
Tolnene	52
O-Xylene	25
P-Xylene	22
Xylene	<u>16</u>
	822

Health conditions of the population is fair. Diseases like smallpox, - malaria, cholera, human rabies and schistosomiasis do not exist. Hydatid disease, a helminthiasis caused by certain types of tapeworms is under control. Venereal disease - mainly syphilis and gonorrhoea are increasing. - Chagas disease, trypanosomiasis has been detected in 19 provinces.

10 percent of the total population could have a positive serology to this disease. Hypertension, diabetes and mental diseases are common in cities with a high density of population.

The pharmaceutical industry in Argentina is fully advanced both at the formulation level and at the level of basic production. Practically 100 percent of the formulation requirements are met locally. Twelve of the twenty essential drugs are produced in Argentina.

The size of the pharmaceutical market (IMS 1978) is estimated in US \$ 895.5 million. The medicinals per capita (1977) were US \$ 25 with an average per capita consumption of 18 units of finished dosage forms.

The pharmaceutical laboratories formulating or producing in Argentina total 196 out of which 45 are foreign companies. National laboratories (1977) shared 43 percent of the market. Production of the pharmaceutical industry represents 2.3 percent of the total manufacturing industry in Argentina. The pharmaceutical industry in this country produces employment for 74.6 thousand persons.

No data have been published as regards the value of the production of bulk drugs. It is estimated that some US \$ 45 million would be an approximate figure of year production for 1978. In spite of the continuous growth of the industry of basic production of bulk drugs Argentina continues to be dependent on imported intermediates to undertake the production of synthetic drugs. An analysis of the tables appended to this study proves that imports have been increasing lately to the extent that imports of bulk drugs and/or intermediates are about 4.4 fold the amount of exports for the year 1976. It could be assumed that the same ratio could be applicable to 1979.

Argentina depends on imports of about 70 different chemo-pharmaceutical drugs. The three groups: heterocyclic compounds, a number of antibiotics and hormones represent 46 percent of the value of drug imports. Heterocyclic compounds describe a group of chemicals which represented 25 percent of drug imports or US \$ 37.6 million in 1976. The higher percentage of the imports classified under this commodity corresponds to pyrazole, azepine, pyridine, pyrimidine, piperazine and oxanal and probably most of the intermediates used in the production of synthetics. Natural or synthetic hormones mostly used in contraceptives, and antibiotics amounted to US \$ 30.9 million representing 20.7 of chemo-pharmaceutical imports. Imports of amino and amino compounds,

two groups which might comprise intermediates amounted to US \$ 14.9 million. In spite of the advancement of the pharmaceutical industry in Argentina, if the supply of intermediates from foreign sources was curtailed, the local production of most synthetic drugs would stop. Except for phenoxymethyl penicillin and parachloromethoxylenol one or more of the intermediates used in the production of the 20 essential drugs have to be imported.

Royalties payable by national manufacturers under licensing agreements are to a maximum of 5 percent of net sales. Royalties payable by subsidiaries of foreign companies are 3-5 percent of net sales.

Licensing agreements on the use of brand names without transfer of technology cannot exceed 10 percent of net sales. Royalties on products manufactured with transferred technology cannot exceed 5 percent of net sales.

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COUNTRY EVALUATION

ARGENTINA

A quick review of Argentina's exports of pharmaceutical commodities reveal that 33 per cent of the exports in 1976 corresponds to ophthalmics. This fact is important to be remarked on because it proves that Argentina is using the capabilities to exploit the extraction of animal by-products for therapeutic use. During the quinquennium 1972-1976, Argentina exported US\$ 45.31 million of organo-therapeutics. The experience from Argentina could be used by other developing countries in the region where slaughter houses by-products are completely wasted. Antibiotics exports for the same period were US\$ 30.15 million which demonstrated that this country holds a strong position in production on fermentation drugs.

A controversial situation is disclosed, nevertheless, when an analysis of antibiotics imports during 1972-1976 unveils that Argentina had to import US\$ 72.87 million. It could be assumed, however, that the heavy imports of antibiotics could be due to the introduction of modern drugs not yet produced in the country such as gentamicin not produced yet at that time, sisomicin and the like.

Without quantitative data on the requirements of the country versus local production, it is difficult to produce a country evaluation. Nevertheless, there is a singular contrast between the well established position of Argentina as producer of fermentation antibiotics and ampicillins as compared to its vulnerable standing as producer of synthetics as regards the 20 essential drugs, whereas only two drugs are produced in Argentina; isoniazid and acetyl salicylic acid. The balance of the synthetic 20 essential drugs are imported in finished bulk for local formulation.

The inquiry on financing mechanisms existing in Argentina that could be used for the installation of basic production units in the field of pharmaceuticals or expansion of the existing uses was made by contacting the Banco Nacional de Desarrollo a government-owned financing enterprise. The data obtained is summarized as follows:

- a. Promoting of technical development in Argentina by various means including support of small and medium size enterprises of national pharmaceutical industry which are willing to modernize the equipment and/or to start new operations. This is important in light of the new governmental decree which lowers the import duties for foreign goods by 1 point/every 3 months. This decree was issued for one specific reason: to force industries with outdated technologies to modernize and adjust to the modern marketing techniques. In this context, the Bank signed agreements with the Argentine Society for Testing Materials and with the National Industrial Technology Institute. Such agreements foster also the inter-communication among Government bodies. The Bank's involvement with the National Council of Technical Education could be of value to UNIDO in the future for eventual transfer of technical information and know-how.

b. Resources:

The financial statement given by the bank does not take into account inflation and profit erosion. It is clear that profit determined by traditional accounting procedures, which do not apply corrective indices for the devaluation of the currency, is greatly reduced if one makes the corresponding corrections:

Net worth of the Bank: Arg. \$ 449,756 million
(equiv. to US\$ 532 million)

c. Loans:

- (i) All types of investment in fixed assets may reach up to 100% with a period of amortization of up to 10

years plus a two years' period of grace. Loans are granted with a monetary adjustment clause and interest rate for medium size companies - 2% and may reach 300% of the capital of the applicant.

(ii) Consolidated loans: 36 months including a period of up to 12 months.

(iii) Preinvestment loans: 36 months including a period of grace of up to 13 months.

Both these loans contain a monetary adjustment clause and bear 6.5% annual rate of interest.

d. Loans for modernization and re-equipment of industrial installations: Usually, a complete study is required in order to determine the economical, financial and technical feasibility. The loan can reach up to 80% of the cost of the project, but without exceeding 100% of the investments in fixed assets. The limits of the ratio of debts to the up-dated value of assets of companies is as follows:

- 1) For medium and long terms loans: 150%
- 2) All type debts for industrial companies: 200%
- 3) All type debts for industrial companies with third parties: 300%

e. The bank is laying groundwork for the establishment of the National Development Bank Foundation similar to the one established in Europe and the United States.

f. In Argentina, the Bank signed 18 agreements with provincial banks to transfer the funds to the far-off areas in the country. The interest rate there: 0.5% annually.

COLOMBIA

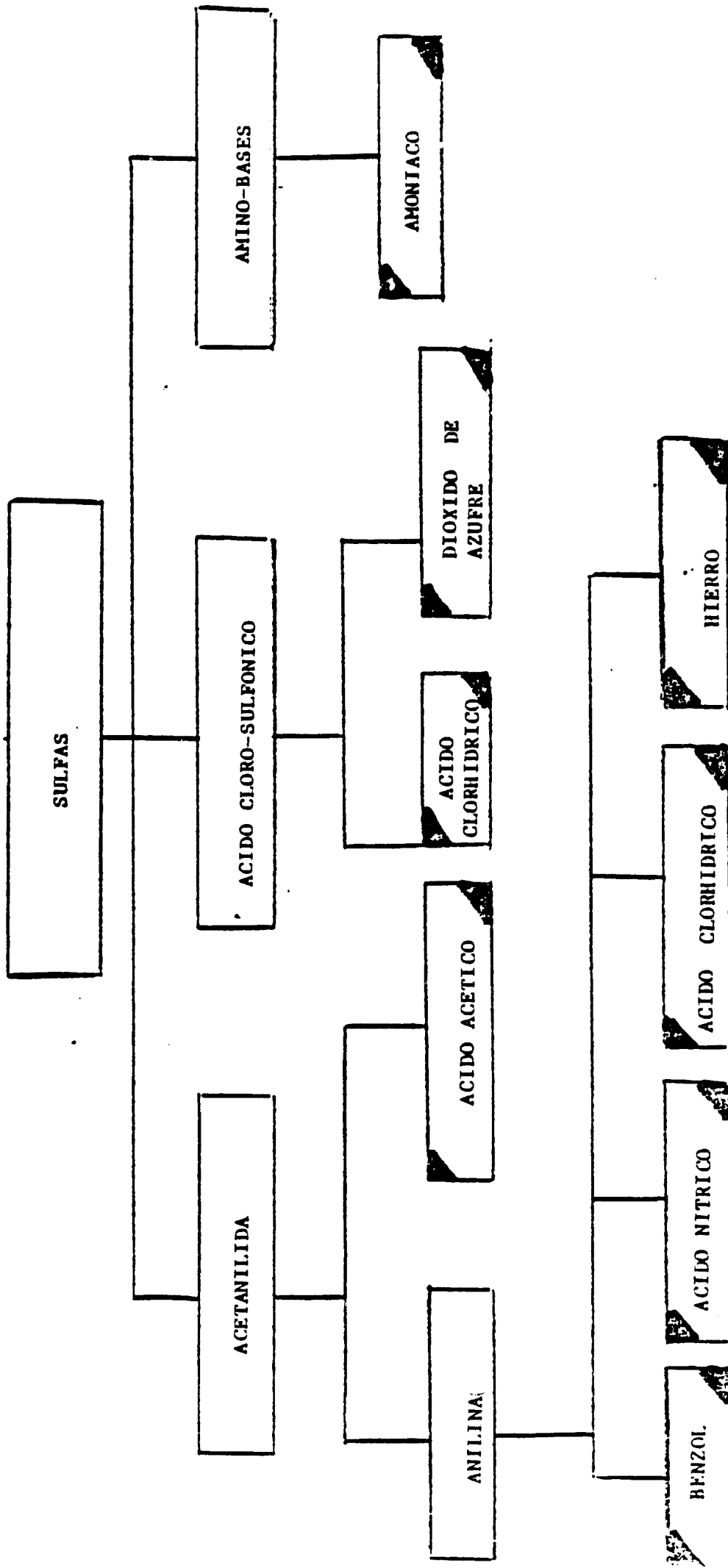
IMPORT PRICES OF THE 20 ESSENTIAL DRUGS IN BULK

<u>Drug</u>	Prices US\$/KG	
	<u>Minimum</u>	<u>Maximum</u>
Acetyl Salicylic Acid	2.20	2.40
Ampicillin		
Anhydrous	130	150
Sodium	150	180
Trihydrate	90	120
Sodium Benzyl Penicillin	28 BOU	33 BOU
Phenoxymethyl Penicillin	28 BOU	32 BOU
Tetracycline	33	37
Chloroquine		
Base	78	80
Diphosphate	40	45
Primaquin Diphosphate	130	150
Isoniazid	5	5
Streptomycin Sulphate	35	40
Ethambutol	55	62
Tolbutamide	10	12
Bephenium Hydronaftoate	14	16
Clofazimine	35	40
Benzoyl Metronidazole	30	35
Reserpin	260	300

ANNEX XVI I

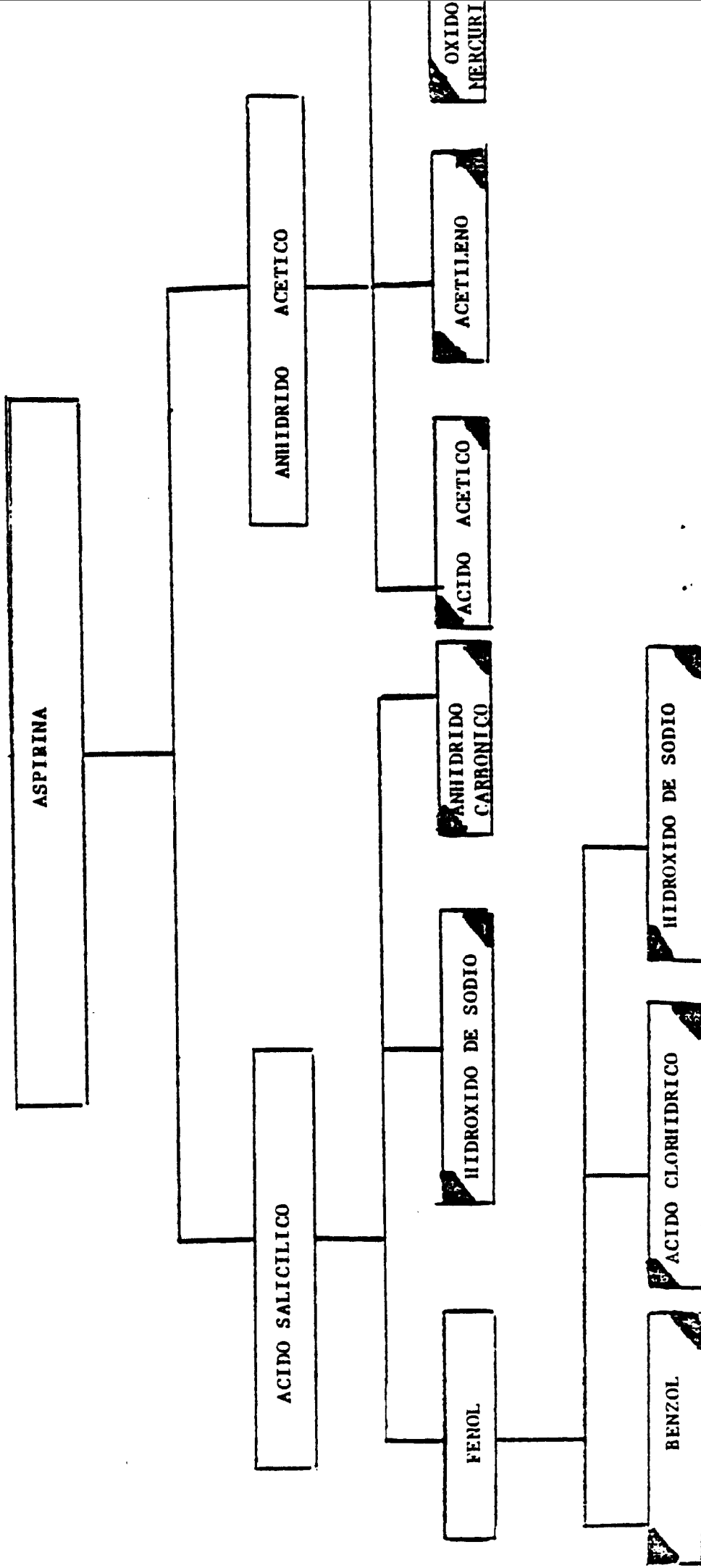
Raw Materials Available in Andean countries which can be used in the Production of the 20 essential drugs

CUADRO N° 1	_____	SULFAS
CUADRO N° 2	_____	ASPIRINA .
CUADRO N° 3	_____	AMPICILINA .
CUADRO N° 4	_____	BENZIL PENICILINA
CUADRO N° 5	_____	FENOXIMETILPENICILINA
CUADRO N° 6	_____	TETRACICLINA
CUADRO N° 7	_____	CLOROQUINA
CUADRO N° 8	_____	PRIMAQUINA
CUADRO N° 9	_____	ISONIACIDA
CUADRO N° 10	_____	ESTREPTOMICINA
CUADRO N° 11	_____	ETAMBUTOL
CUADRO N° 12	_____	TOLBUTAMIDA
CUADRO N° 13	_____	CETRIMIDA
CUADRO N° 14	_____	PARACLOROMETAXIFENOL
CUADRO N° 15	_____	BEFENIO
CUADRO N° 16	_____	DIAMINODIFENILSULFONA
CUADRO N° 17	_____	DIETILCARBAMAZINACITRATO
CUADRO N° 18	_____	METRONIDAZAS
CUADRO N° 19	_____	SENNOSIDOS
CUADRO N° 20	_____	GLUCOSIDOS DE LA DIGITAL
CUADRO N° 21	_____	RESERPINA
CUADRO N° 22	_____	INSULINA
CUADRO N° 23	_____	CATGUT
CUADRO N° 24	_____	PEPSINA



Material prima producida en la Subregión Andina

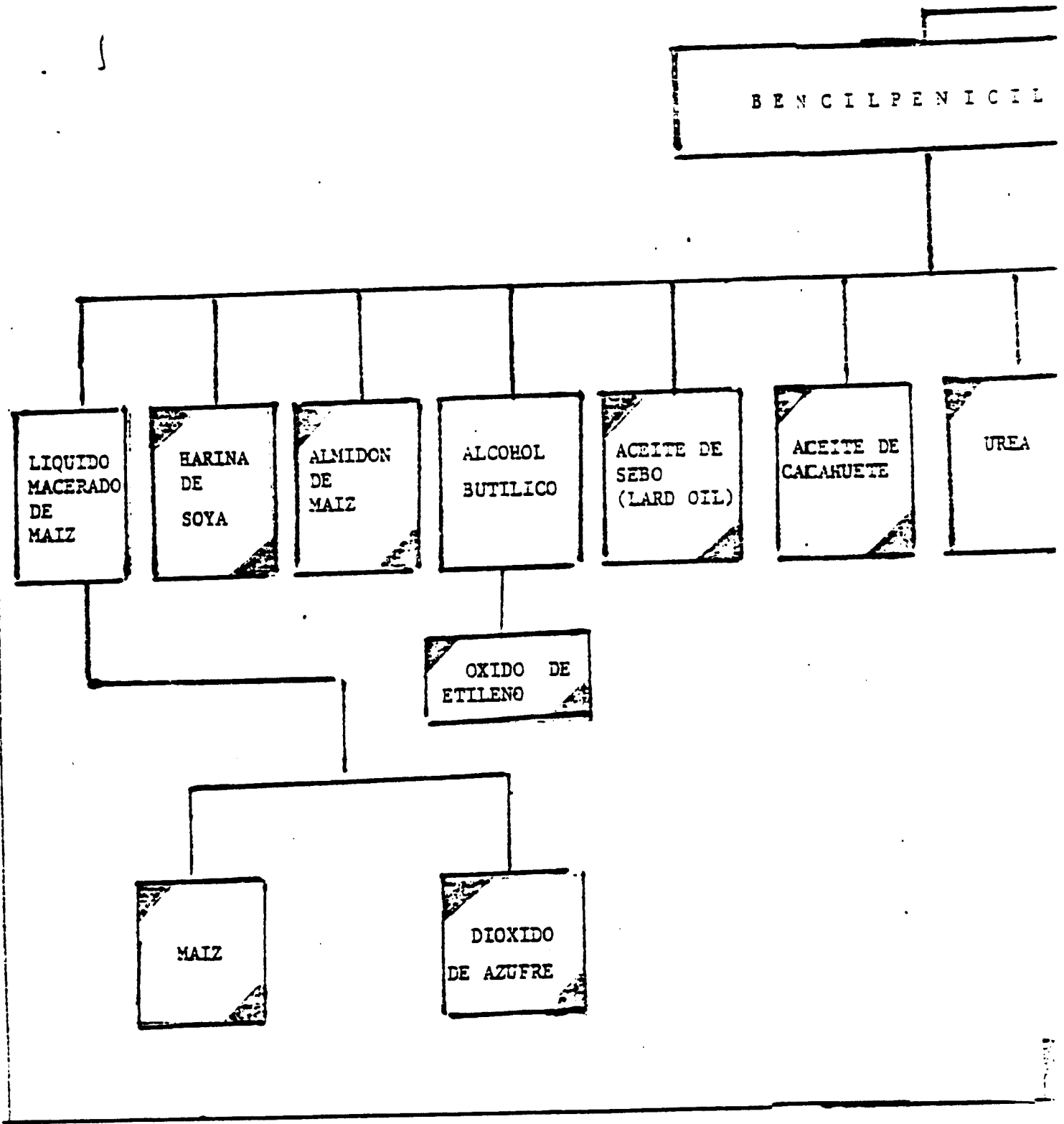
Fuente: Departamento de Desarrollo Industrial - Junta del Acuerdo de Cartagena
Noviembre 1978



Materia prima producida en la Subregión Andina

Fuente: Departamento de Desarrollo Industrial - Junta del Acuerdo de Cartagena
Noviembre 1978

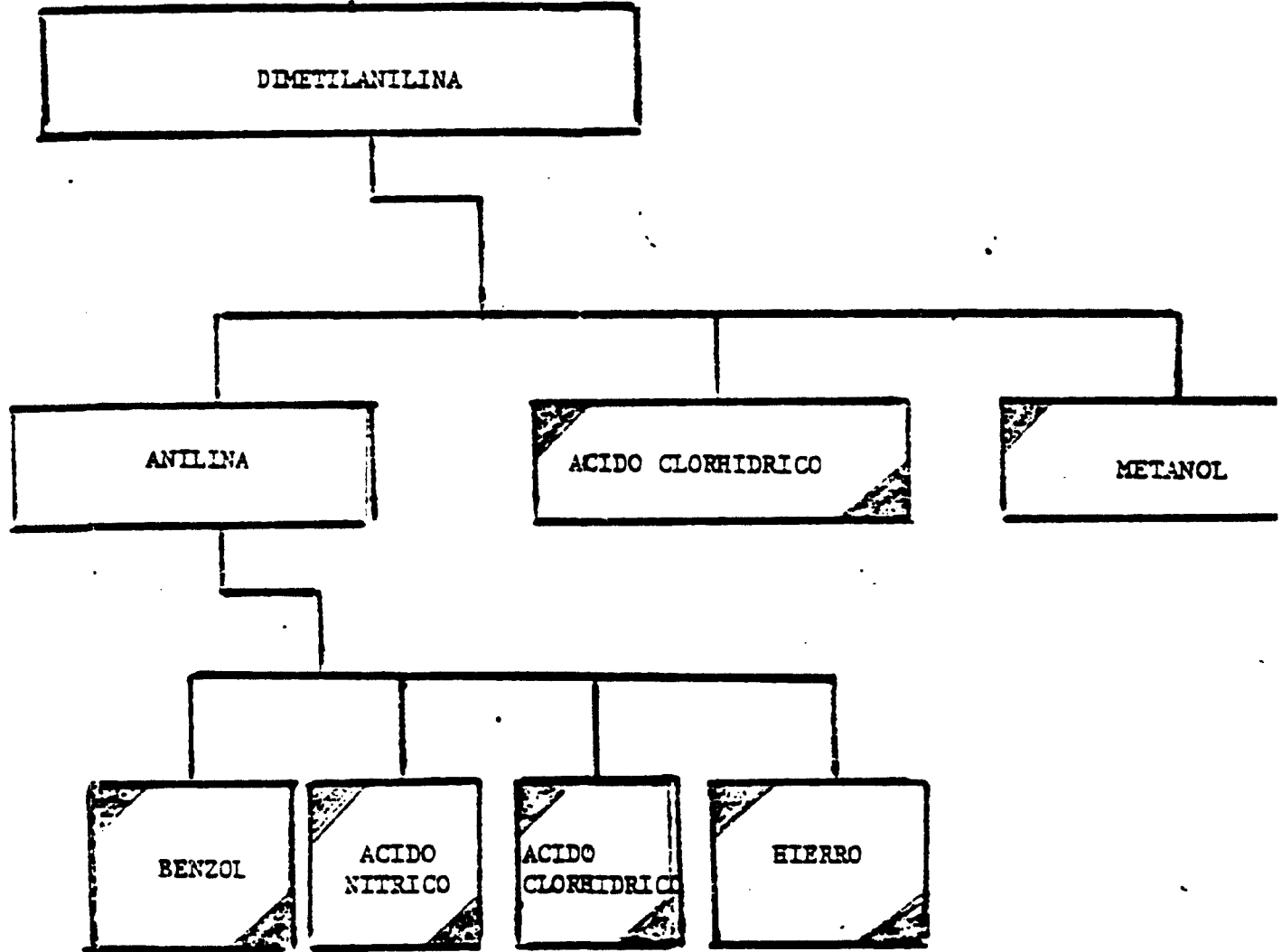
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27.XI.78

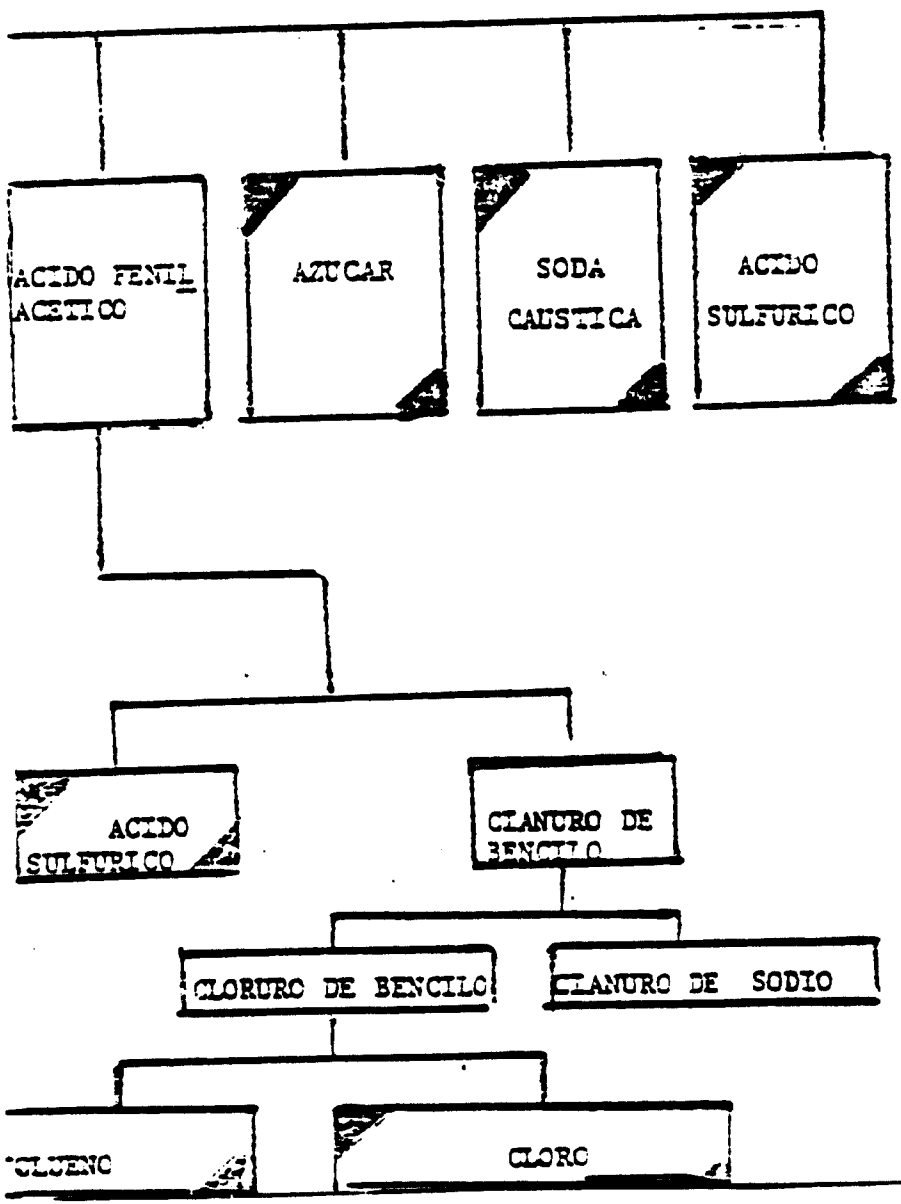
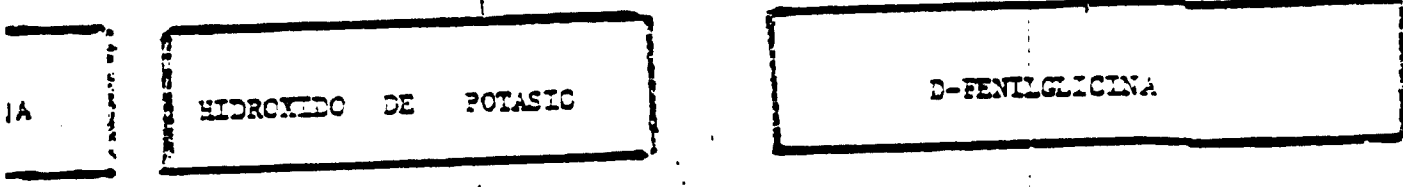


 Materia prima producida en la Subregión Andina

Fuente: Departamento de Desarrollo Industrial - Junta del Acuerdo de Cartagena
Noviembre 1978

M P I C I L L I N





ACIDO 3-NAFTALENOSULFONICO

NAFTALENO

ACIDO SULFURICO

Ma
Fuente: Dep
Nov

CUADRO N° 4

BENCILPENTILENA

LIQUIDO
MACERADO
DE MAIZ

HARINA
DE SOYA

ALMIDON
DE
MAIZ

ALCOHOL
BUTILICO

ACEITE DE
SEBO (LARD
OIL)


ACEITE DE
CACAHUETE

UREA

OXIDO DE
ETILENO

MAIZ

DIOXIDO
DE
AZUFRE

 Materia prima producida en la Subregión Andina

Fuente: Departamento de Desarrollo Industrial - Junta del Acuerdo de Cartagena
Noviembre 1978

BUV/mca.

4

ACIDO FENIL
ACETICO

AZUCAR

SODA CAUSTI
CA

ACIDO
SULFURICO

ACIDO
SULFURICO

CIANURO DE
BENCIO

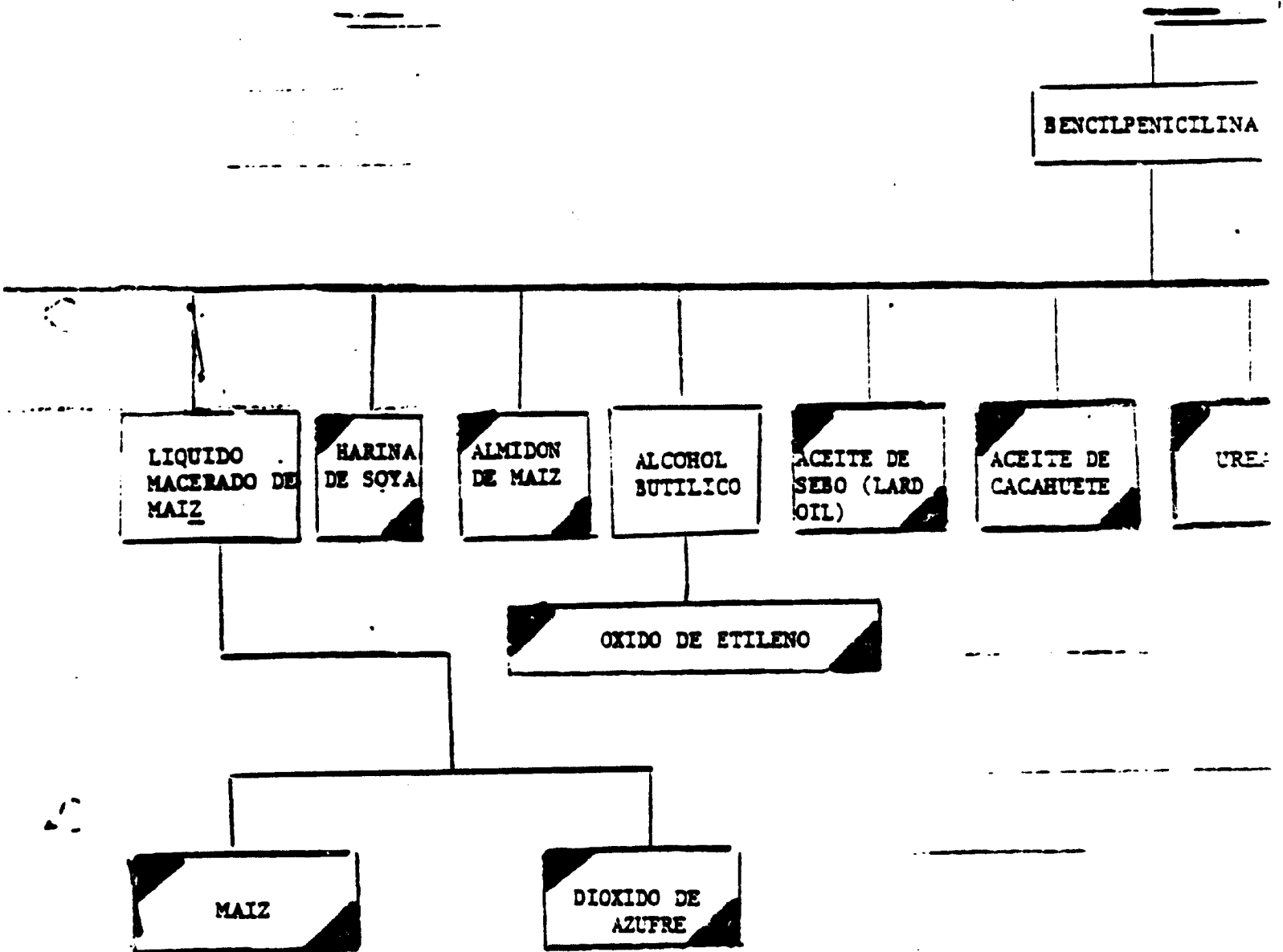
CLORURO DE
BENCIO

CIANURO DE
SODIO

TOLUENO

CLORO

Cuadro N° 5

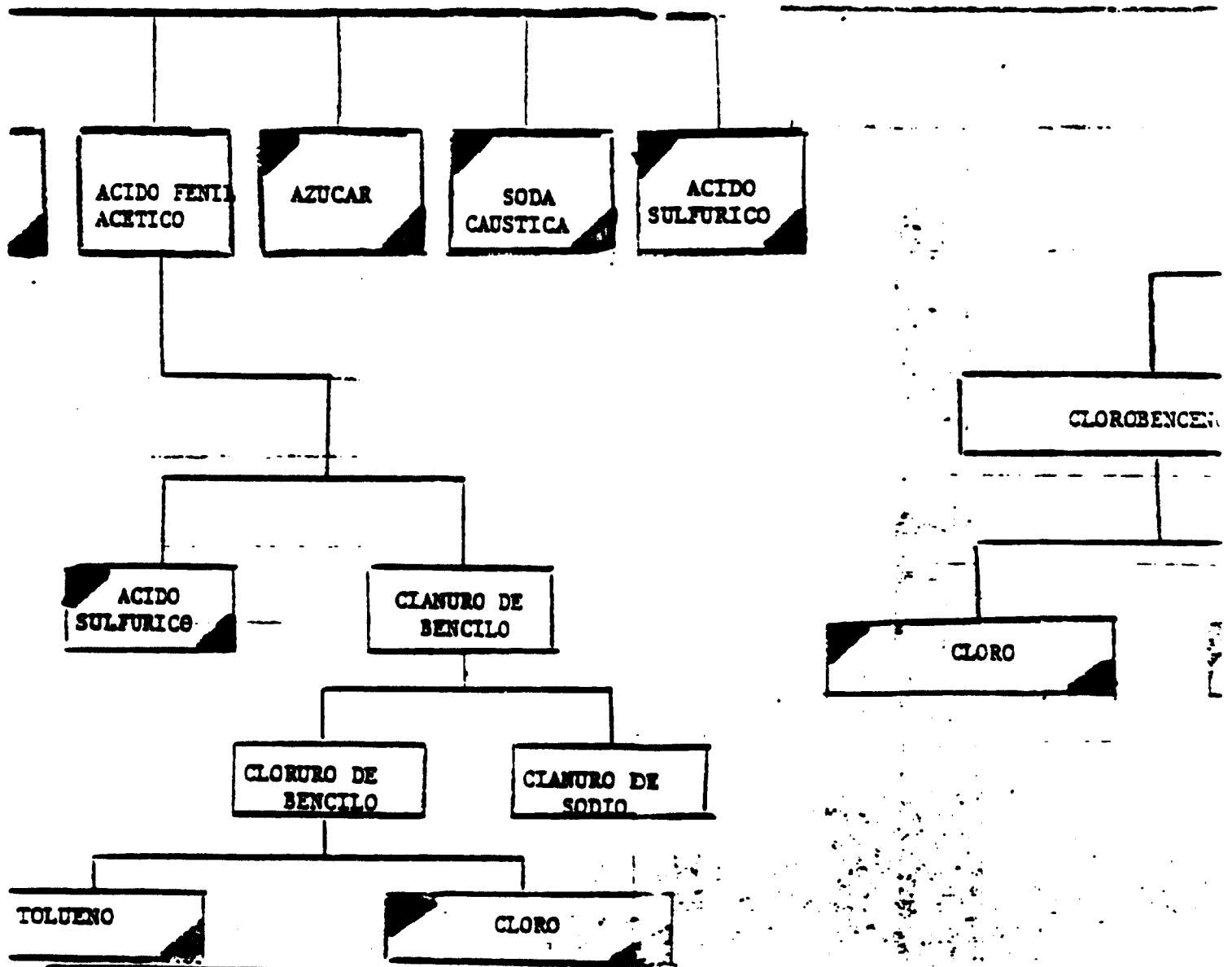


Materia prima producida en la Subregión Andina

Fuente: Departamento de Desarrollo Industrial - Junta del Acuerdo de Cartagena
Noviembre 1978

BUV/mta.

PENOXI-METAL-GENICIA



[Redacted]

[Redacted]

ACIDO FENOXLACETICO

FENOL

[Redacted]

HIDROXIDO DE SODIO

BENCENO

[Redacted]



ACIDO MONOCLOROACETICO

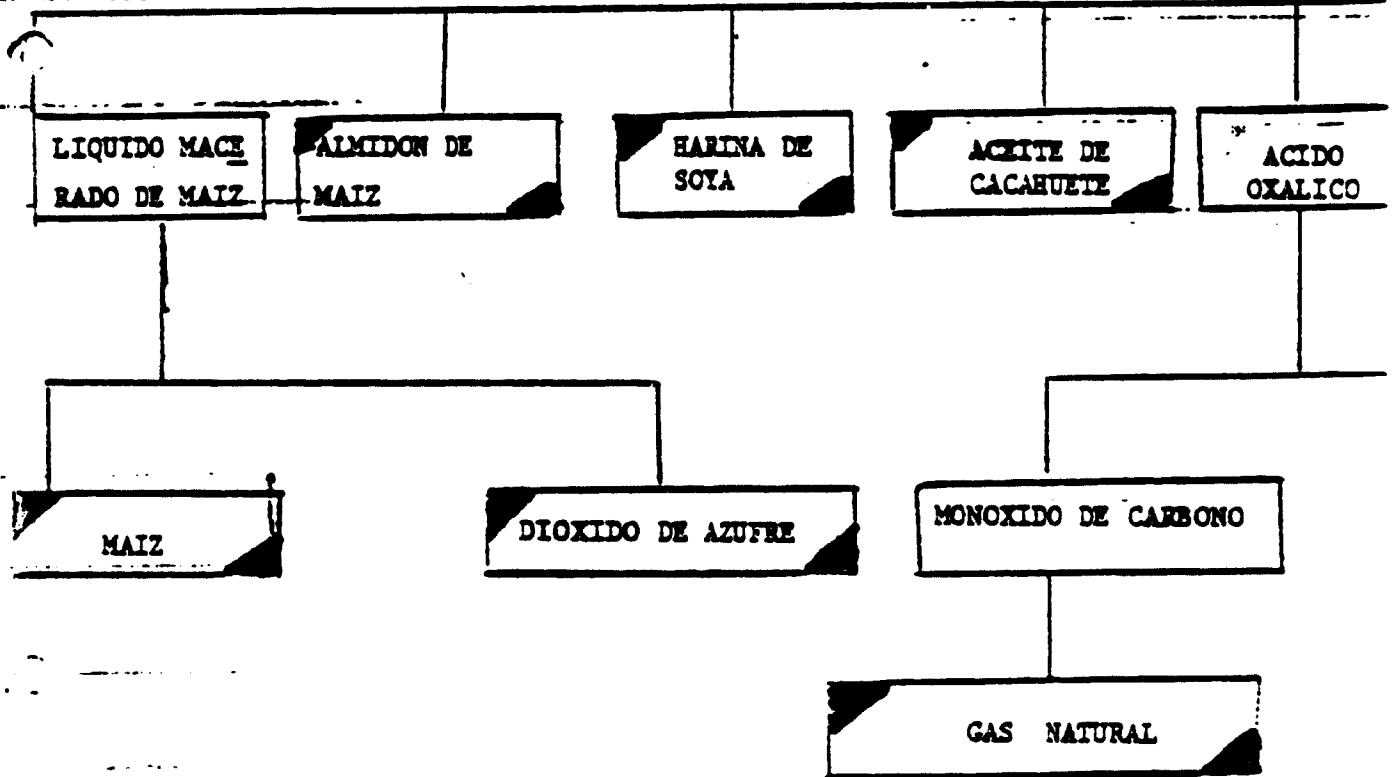
ACIDO ACETICO

CLORO



CUADRO N°

T E T R A C I C



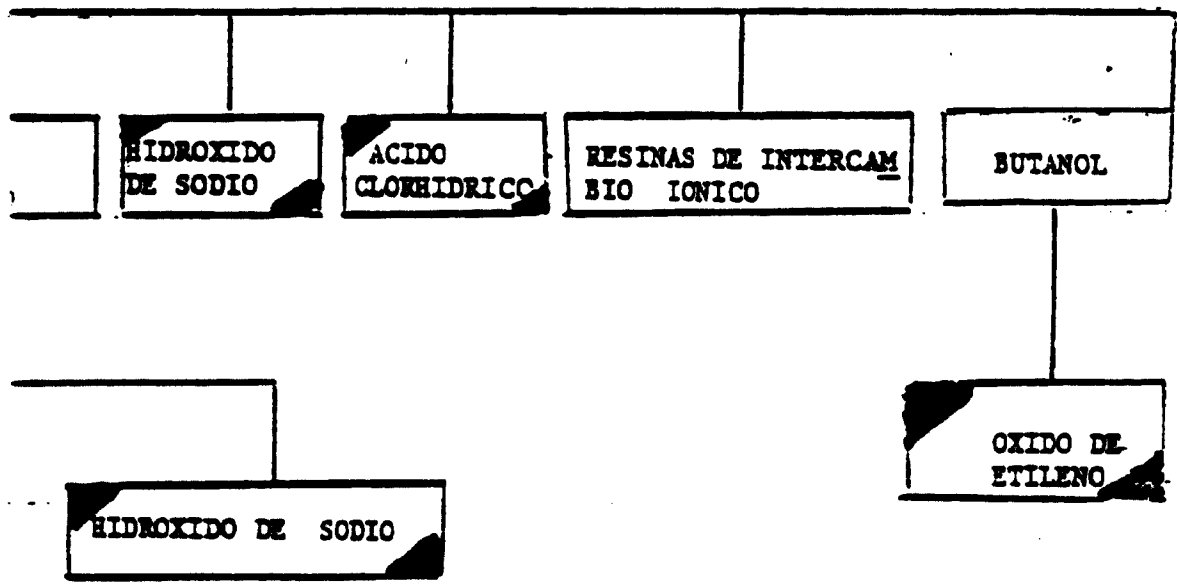
Materia prima producida en la Subregión Andina.

Fuente: Departamento de Desarrollo Industrial - Junta del Acuerdo de Cartagena
Noviembre 1978

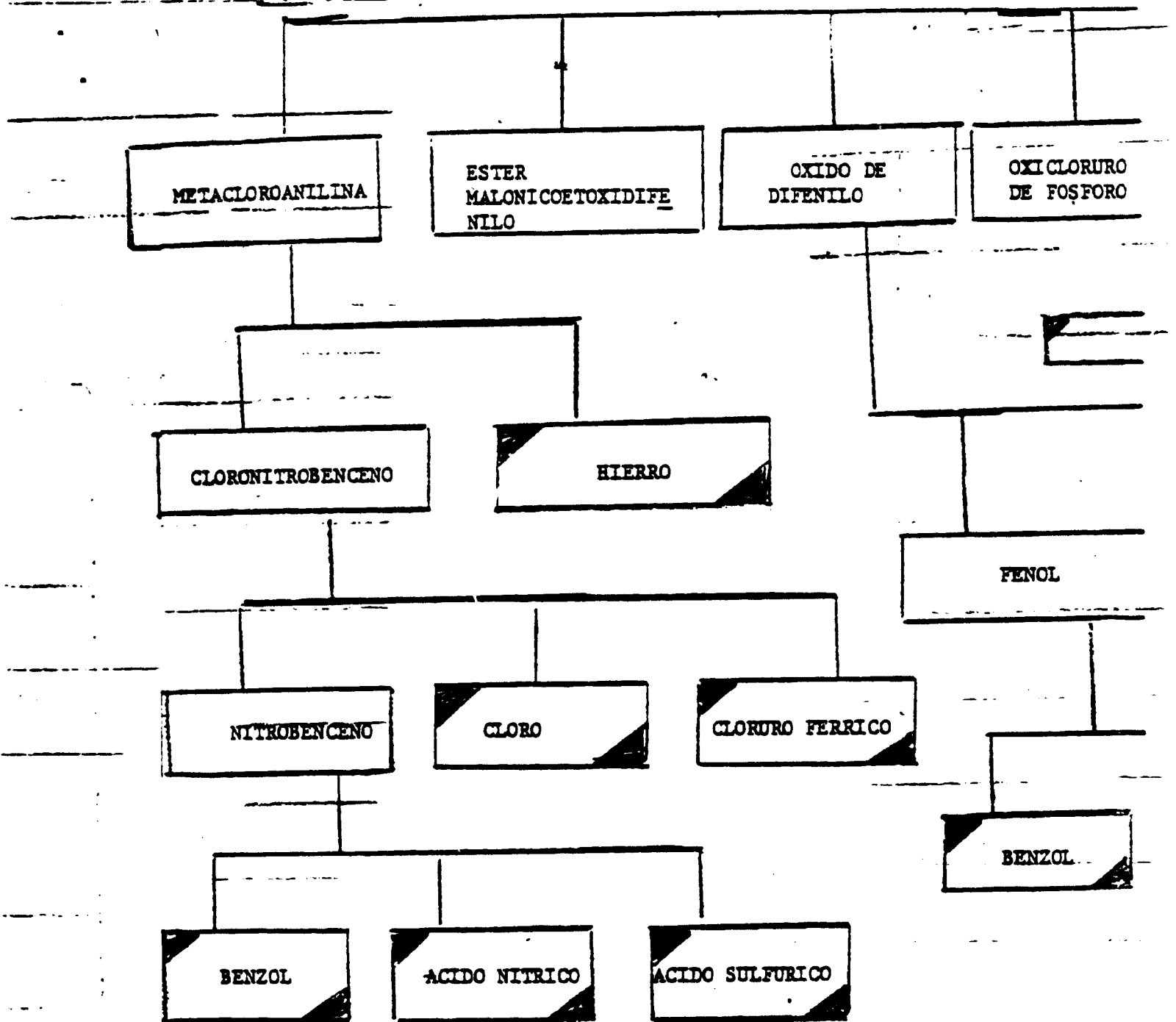
6

6

CLINA



CUADRO N° 7



Materia prima producida en la Subregión

Fuente: Departamento de Desarrollo Industrial - Junta del Acuerdo de Cartagena
Noviembre 1978

ALBROQUINA

NOVALDIAMINA

BENZOL

FENOL

ACIDO ACETICO

BENZOL

COLORO

HIDROXIDO DE SODIO

HIDROXIDO DE SODIO

CLOROBENCENO

COLORO

HIDROXIDO DE SODIO

BENZOL

ACIDO CLOHIDRICO

AMONIACO

HIDROXIDO DE
SODIO

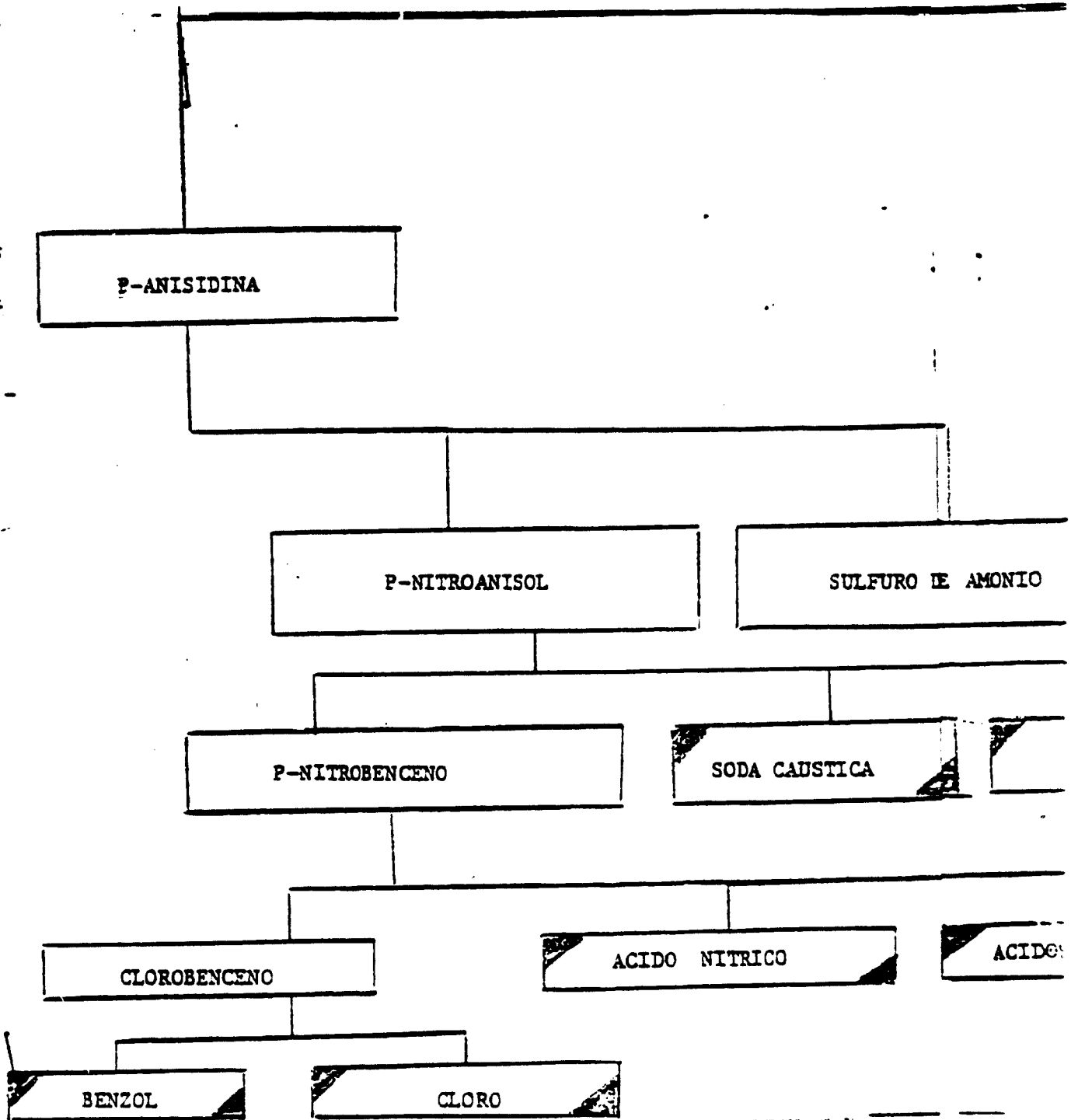
METANOL

ACIDO FOSFORICO

ALCOHOL ETILICO

CORO

CUADRO N° 8



Materia prima producida en la Subregión Andina

Fuente: Departamento de Desarrollo Industrial - Junta del Acuerdo de Cartagena
Noviembre 1978

PRIMAQUI

SULFURO DE AMONIO

ANHIDRIDO ACETICO

ACIDO ACETICO

ACETILENO

OXIDO MER

METANOL

SULFURICO

A

GLICERINA

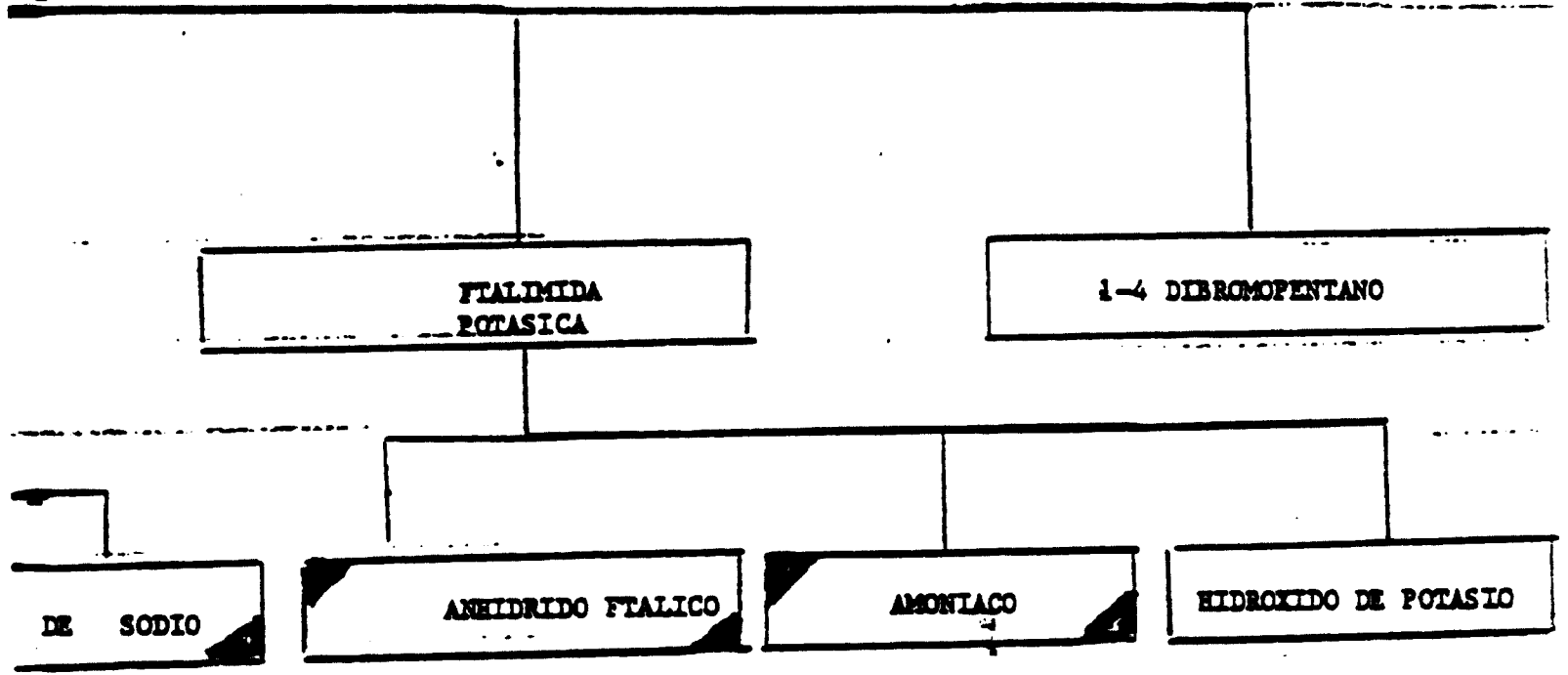
HIDRATO DE HIDRAZINA

CURICO

HIPOCLORITO DE SODIO

UREA

HIDROXIDO



FTALIMIDA
POTASICA

1-4 DIBROMOPENTANO

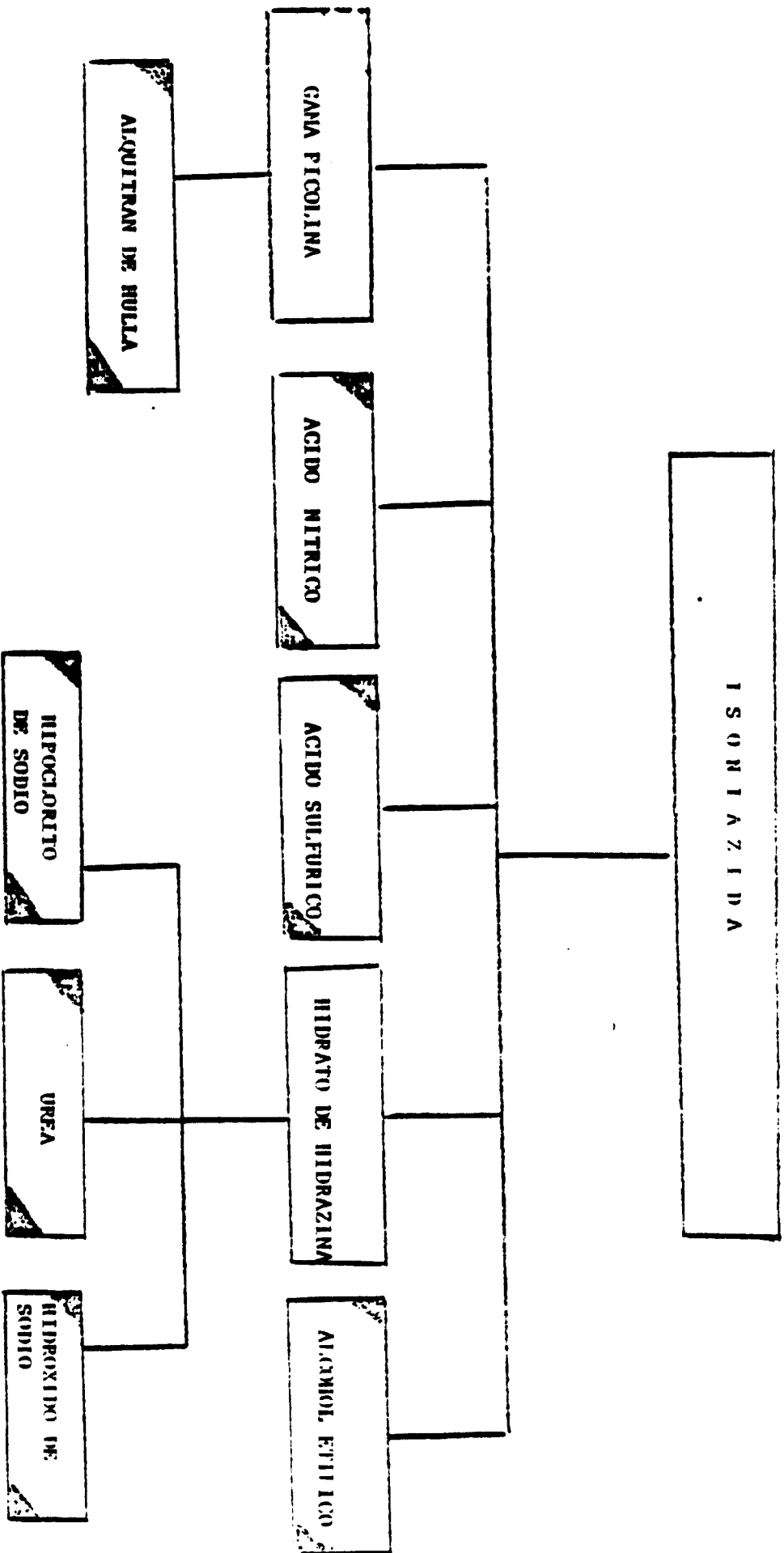
DE SODIO

ANHIDRIDO FTALICO

AMONIACO

HIDROXIDO DE POTASIO

Cuadro N° 9

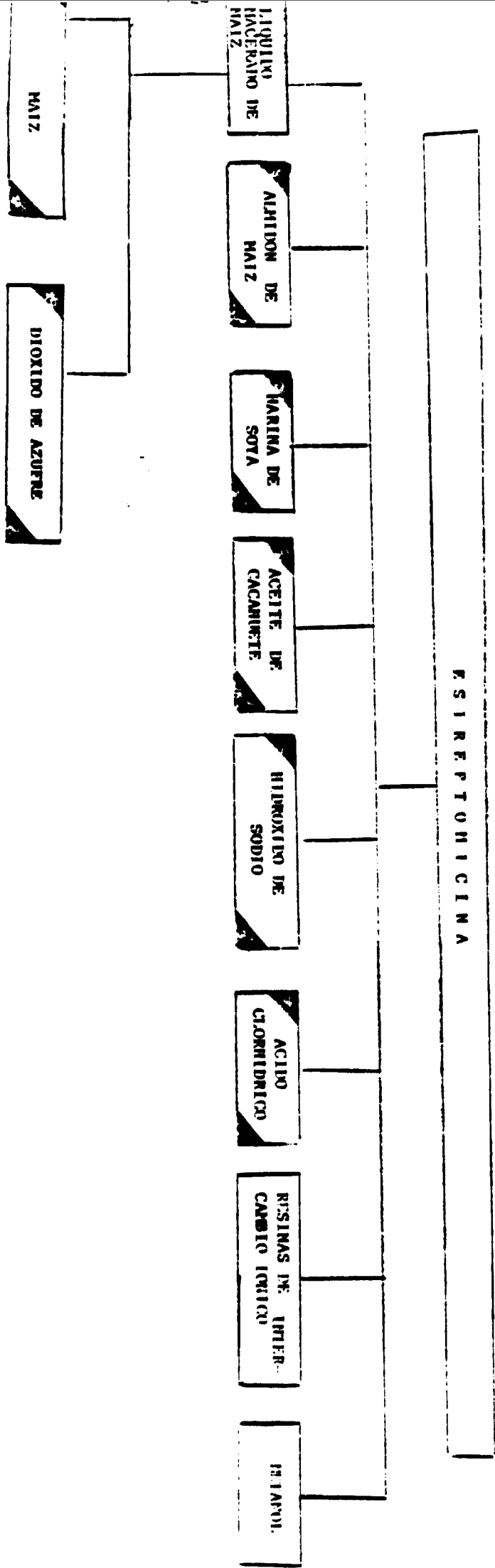


Materia prima producida en la Subregión Andina -

Fuente: Departamento de Desarrollo Industrial - Junta del Acuerdo de Cartagena
Noviembre 1978

BUV/mca,
27.XI.78

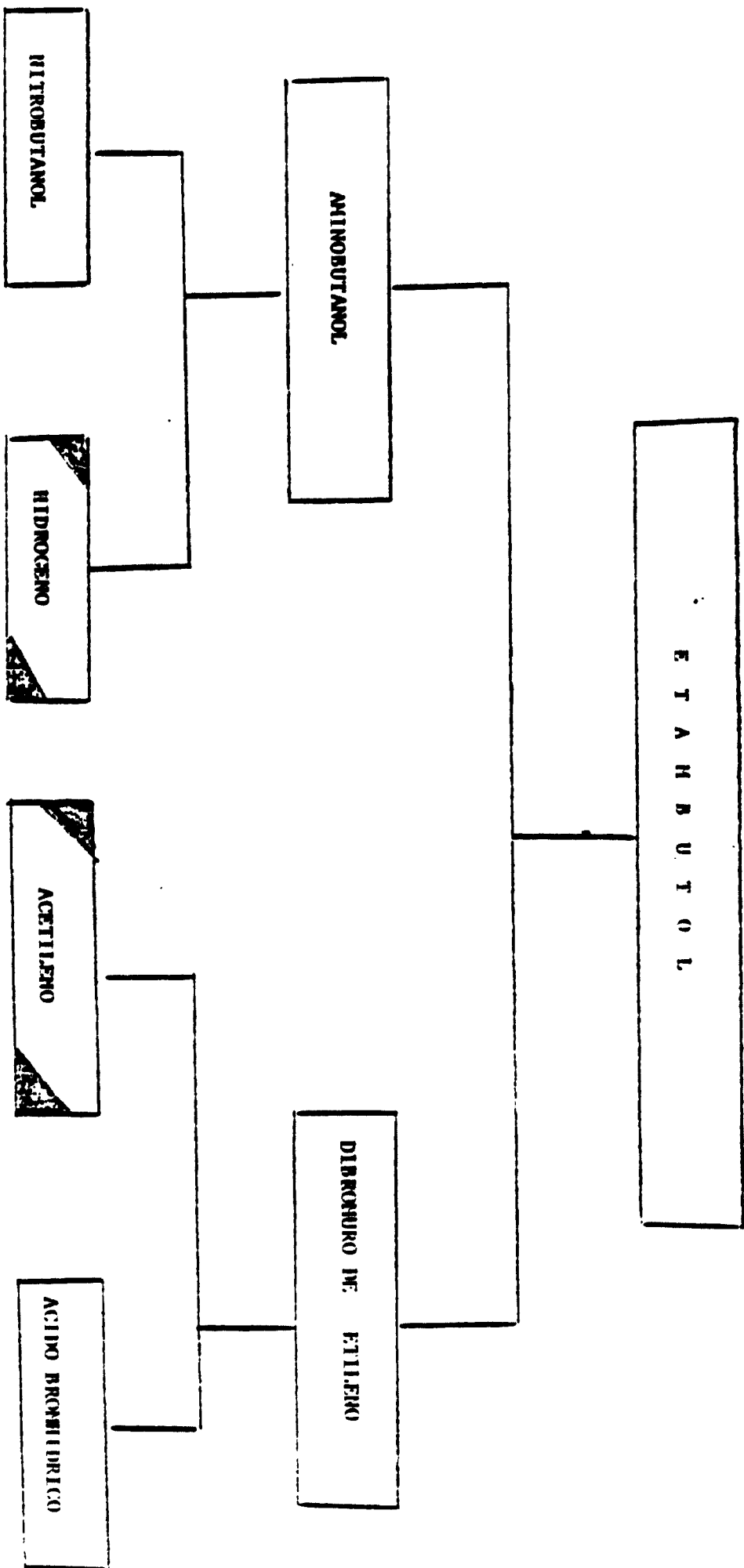
PSIREPTONICINA



Matéria prima producida en la Subregión Andina

Fuente: Departamento de Desarrollo Industrial - Junta del Acuerdo de Cartagena
Noviembre 1976

CUADRO N° 11



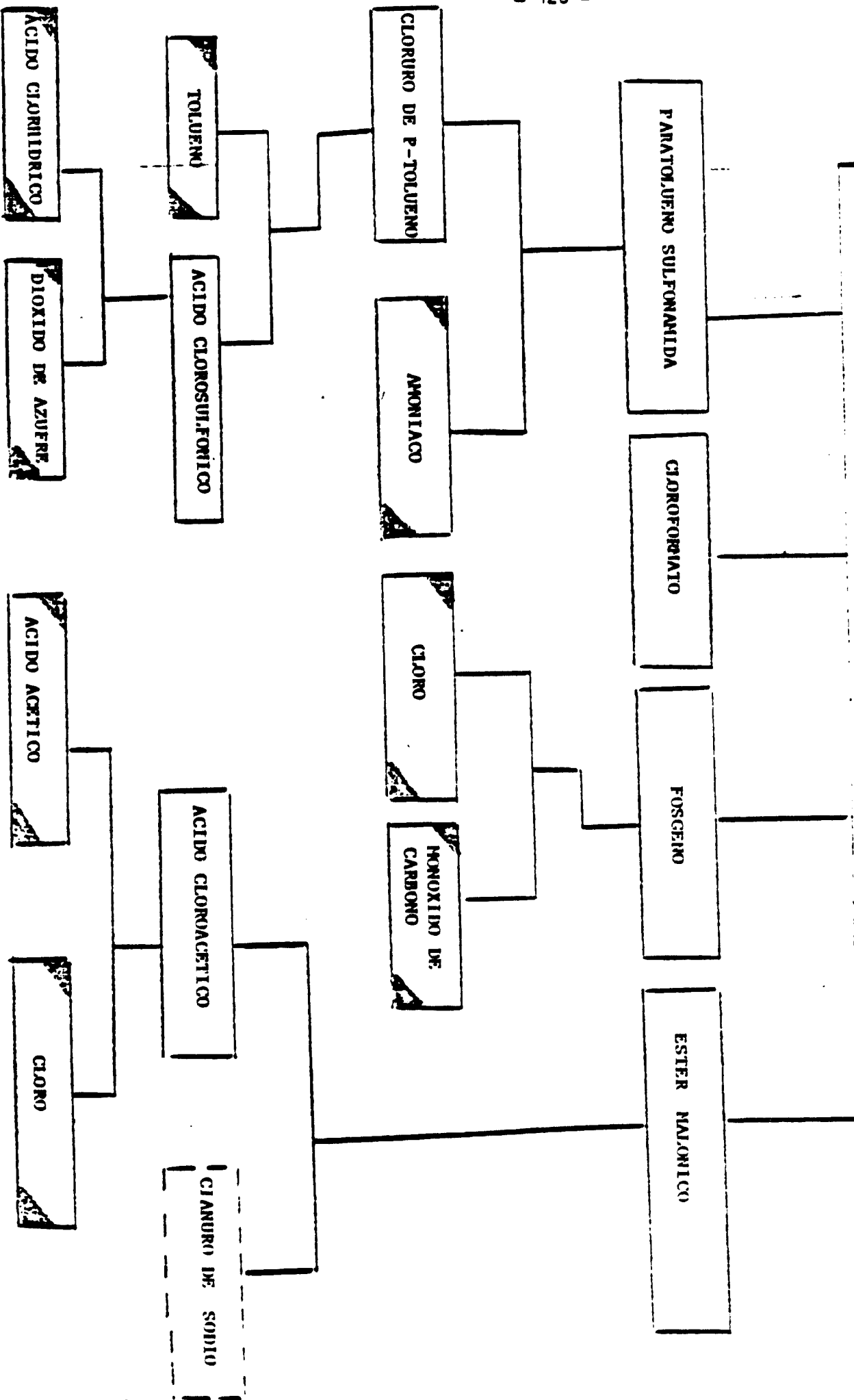
Materia prima producida en la Subregión Andina

Fuente: Departamento de Desarrollo Industrial - Junta del Acuerdo de Cartagena

BUV/mcr.

28.XI.78

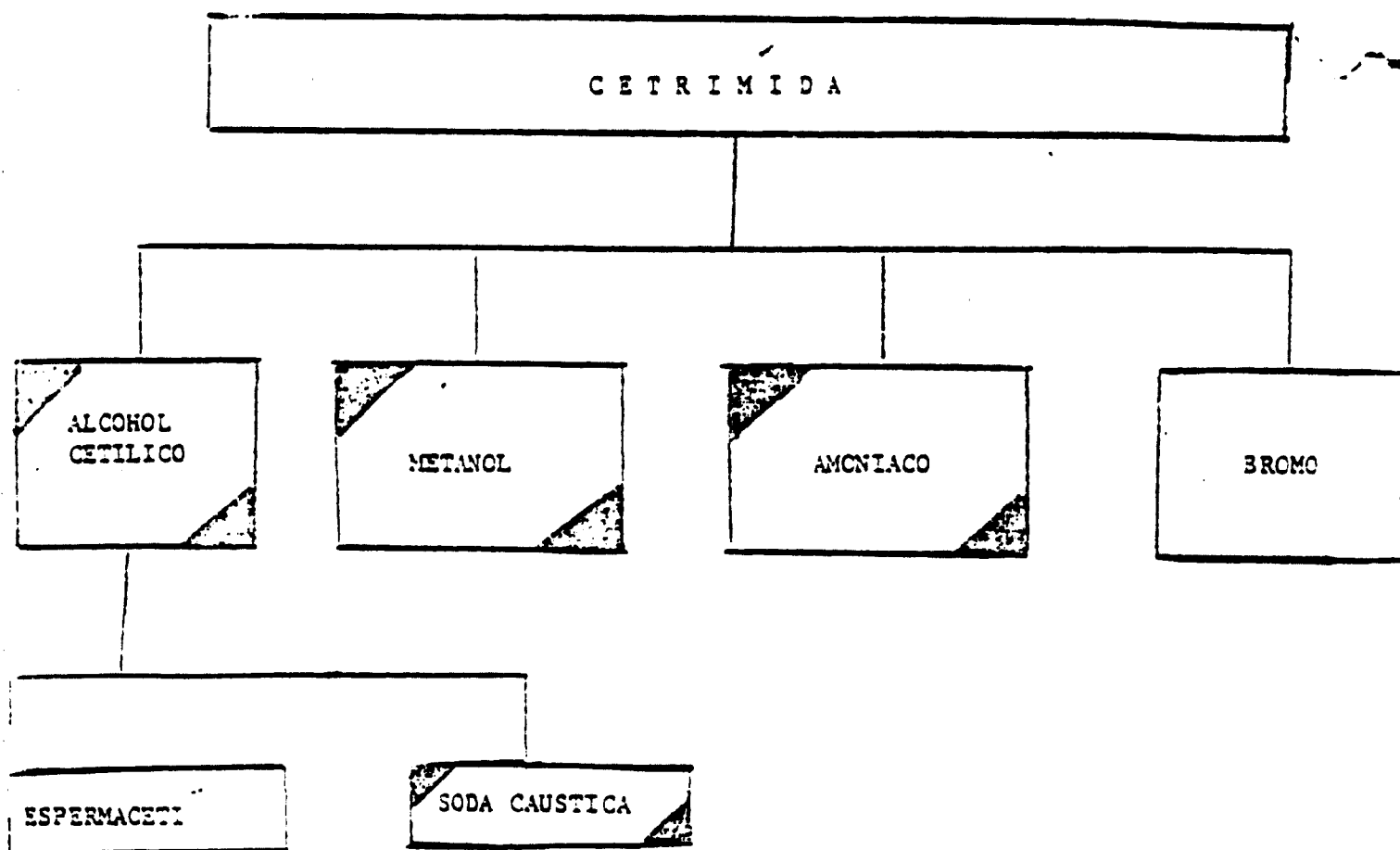
TOLUENANIDA



Materia prima producida en la Subregión Andina

Fuentes: Dpto. Desarrollo Industrial - Junta del Acuerdo de Cartagena

CUADRO N° 13

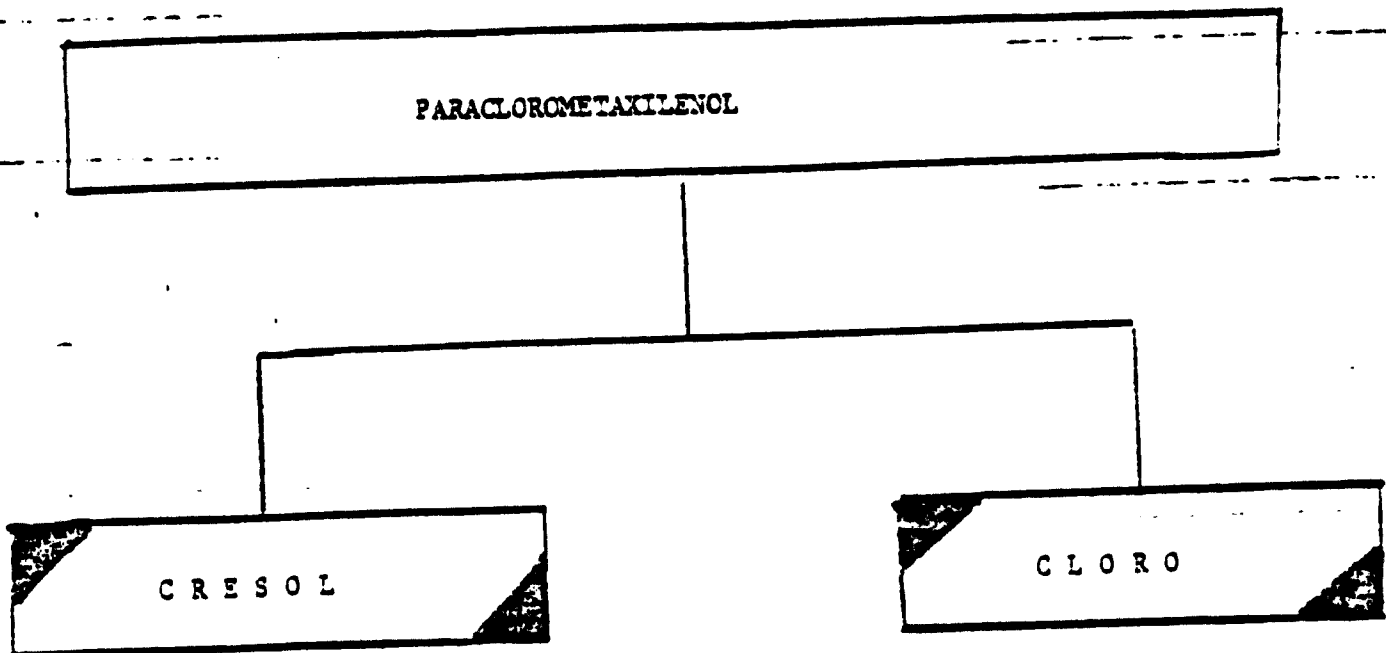


 Materia prima producida en la Subregion Andina

Fuente: Departamento de Desarrollo Industrial - Junta del Acuerdo de Cartagena
Noviembre 1973

BUV/mca.

Cuadro N° 14

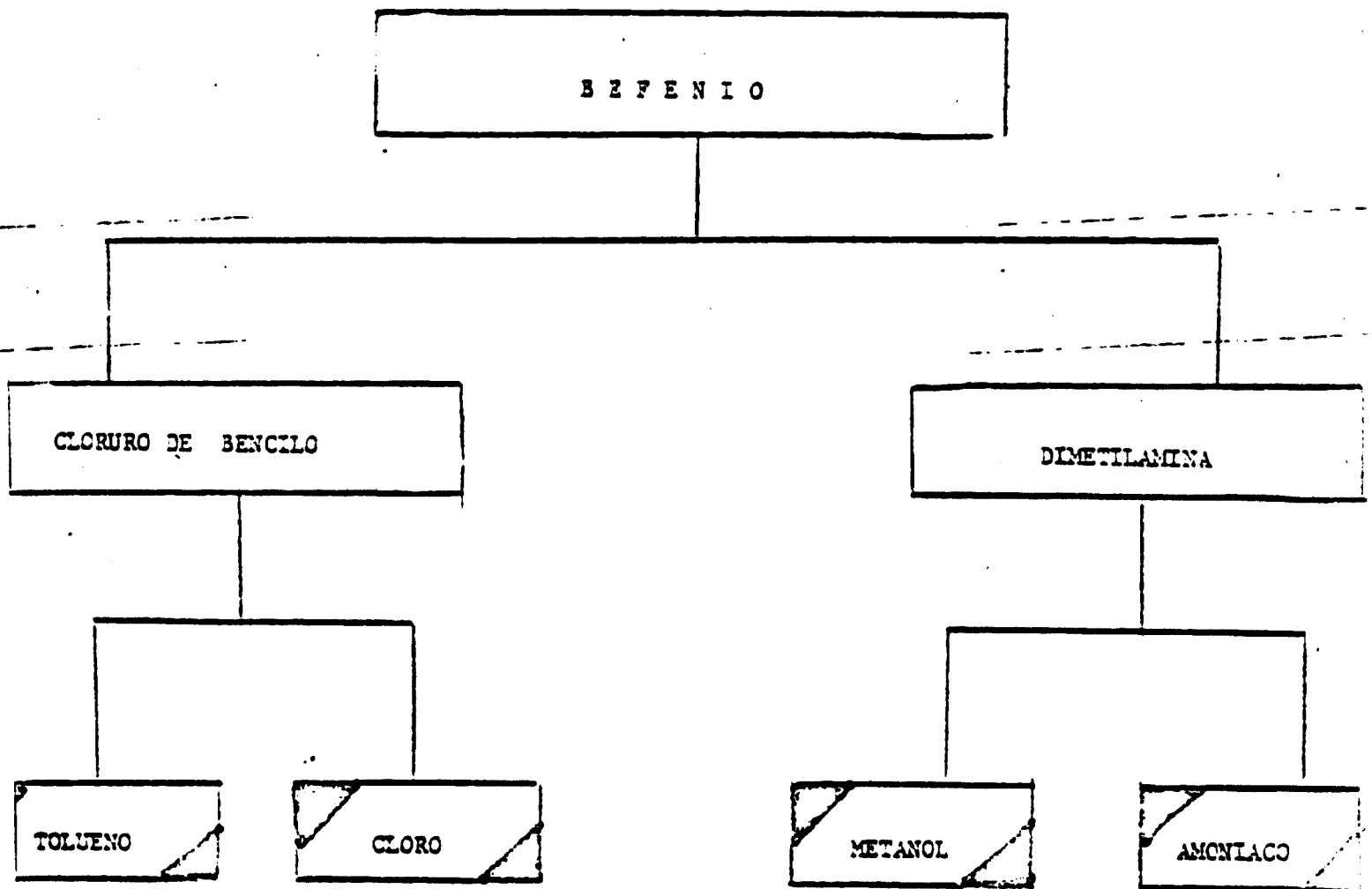


 Materia prima producida en la Subregión Andina

Fuente: Departamento de Desarrollo Industrial - Junta del Acuerdo de Cartagena
Noviembre 1978

BUV/mca.
27.XI.78

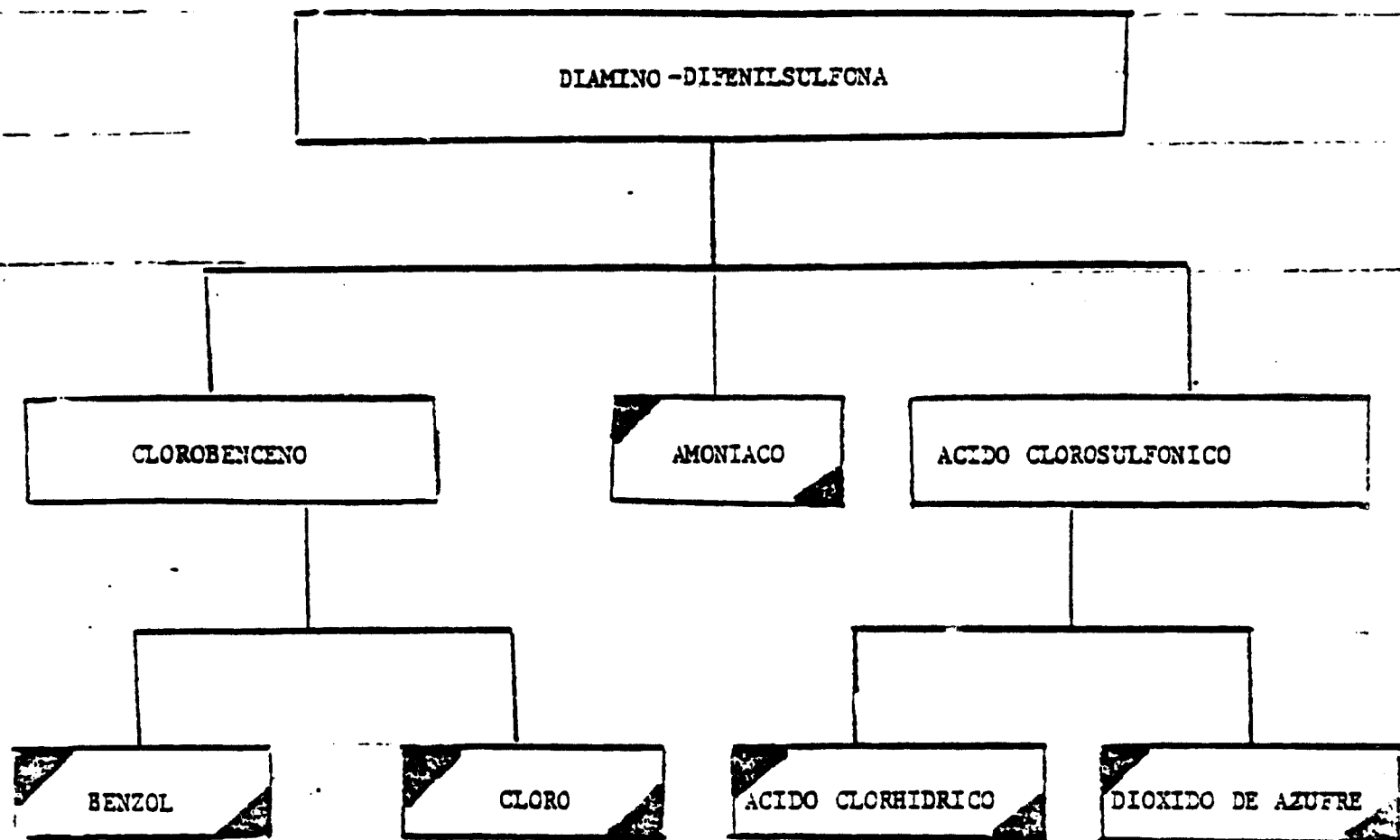
Cuadro N° 15




▣ Materia prima producida en la Subregión Andina

ta: Departamento de Desarrollo Industrial - Junta del Acuerdo de Cartagena
Noviembre 1978

Cuadro N° 16



 Materia prima producida en la Subregión

Fuente: Departamento de Desarrollo Industrial - Junta del Acuerdo de Cartagena
Noviembre 1978

3UV/mta.
27.XI.78

CITRATO DE DIETILCARBAMAZINA

MORCETAROLAMINA

ACIDO CLORIDRICO

CLORURO DE AMONIO

HIDROXIDO DE SODIO

ACIDO CITRICO

ACIDO FERICO

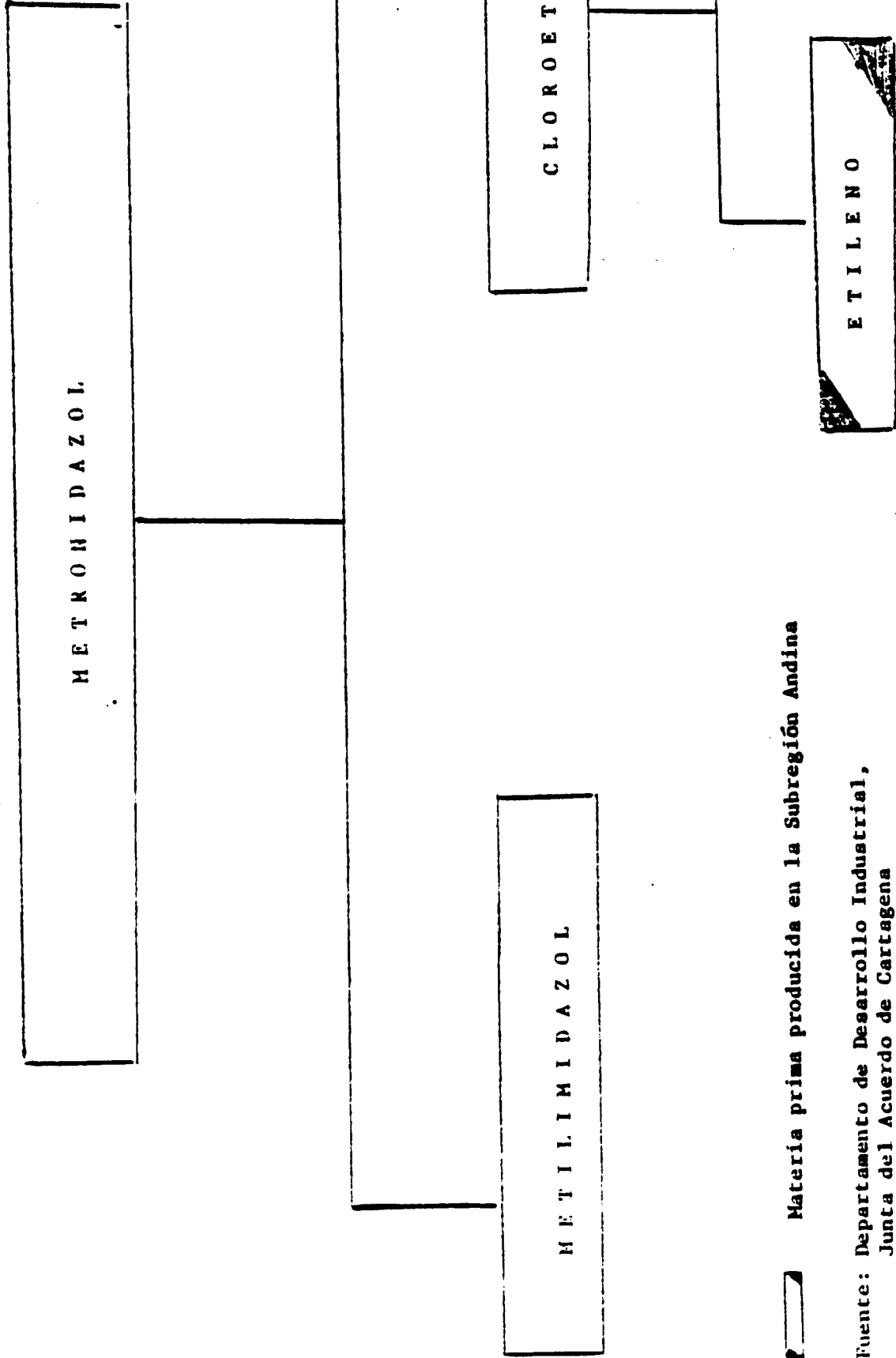
HIDROXIDO DE CARBONO

HIDROXIDO DE SODIO

Materia prima producida en la Subregión Andina

Fuente: Departamento de Desarrollo Industrial - Junta del Acuerdo de Cartagena
Noviembre de 1978

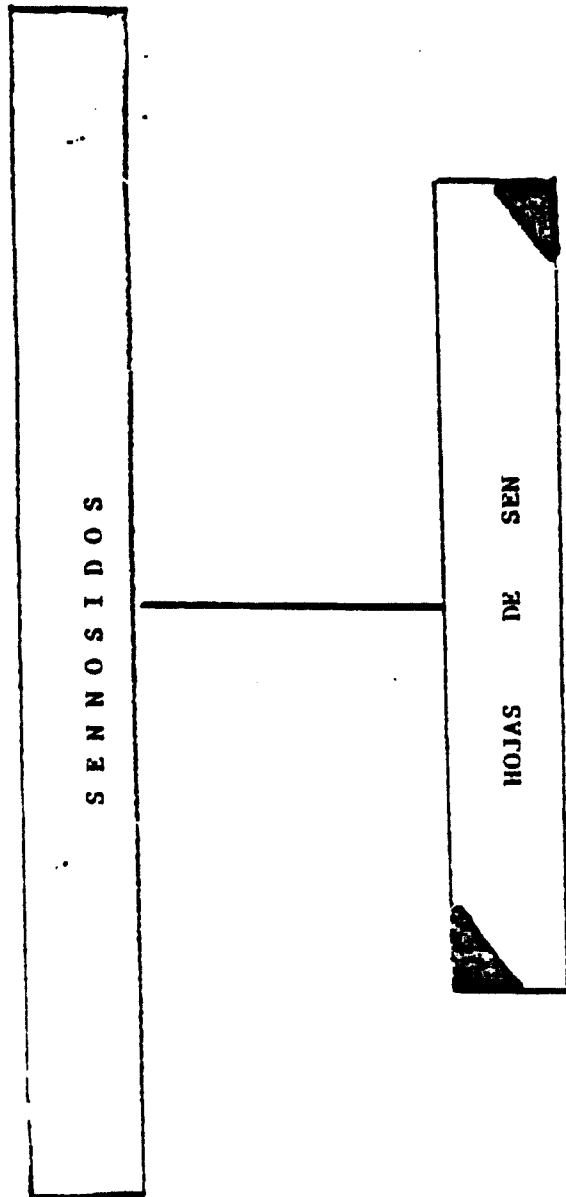
Cuadro N° 18



Materia prima producida en la Subregión Andina

Fuente: Departamento de Desarrollo Industrial,
Junta del Acuerdo de Cartagena
Noviembre 1978

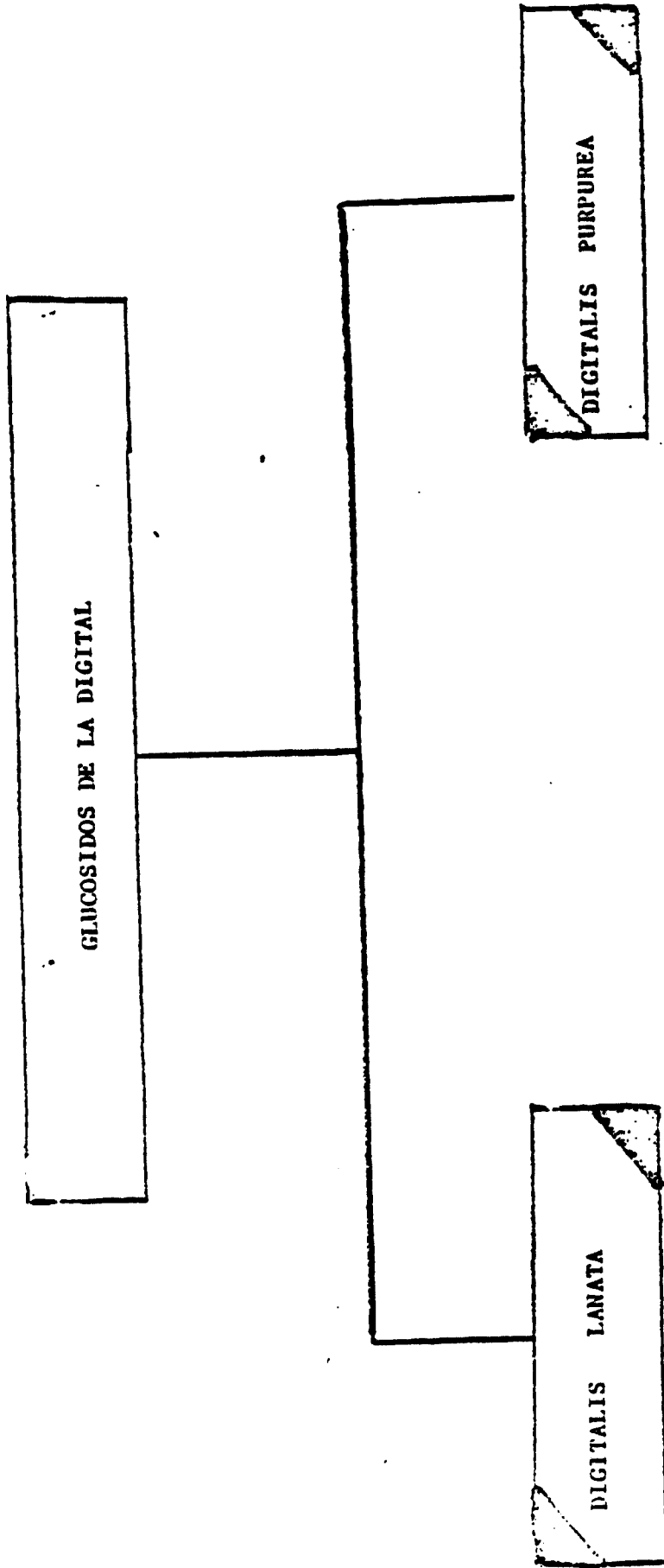
Cuadro N° 19



Materia prima producida en la Subregión Andina

Fuente: Departamento de Desarrollo Industrial - Junta del Abuardo de Cartagena
Noviembre 1978

Cuadro N° 20



▣ Materia prima producida en la Subregión Andina

Fuente: Departamento de Desarrollo Industrial - Junta del Acuerdo de Cartagena
Noviembre 1978

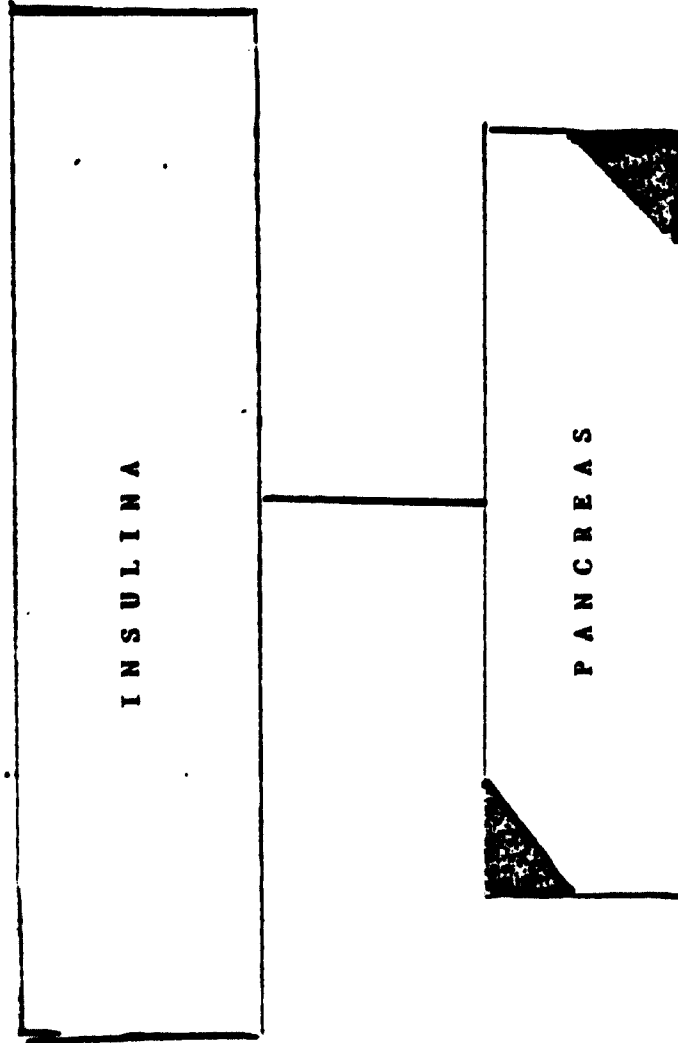
Cuadro N° 21


RESERPINA	
	RAIZ DE RAIMOLFIA

Materia prima producida en la Subregión Andina

Fuente: Departamento de Desarrollo Industrial - Junta del Acuerdo de Cartagena
Noviembre 1978

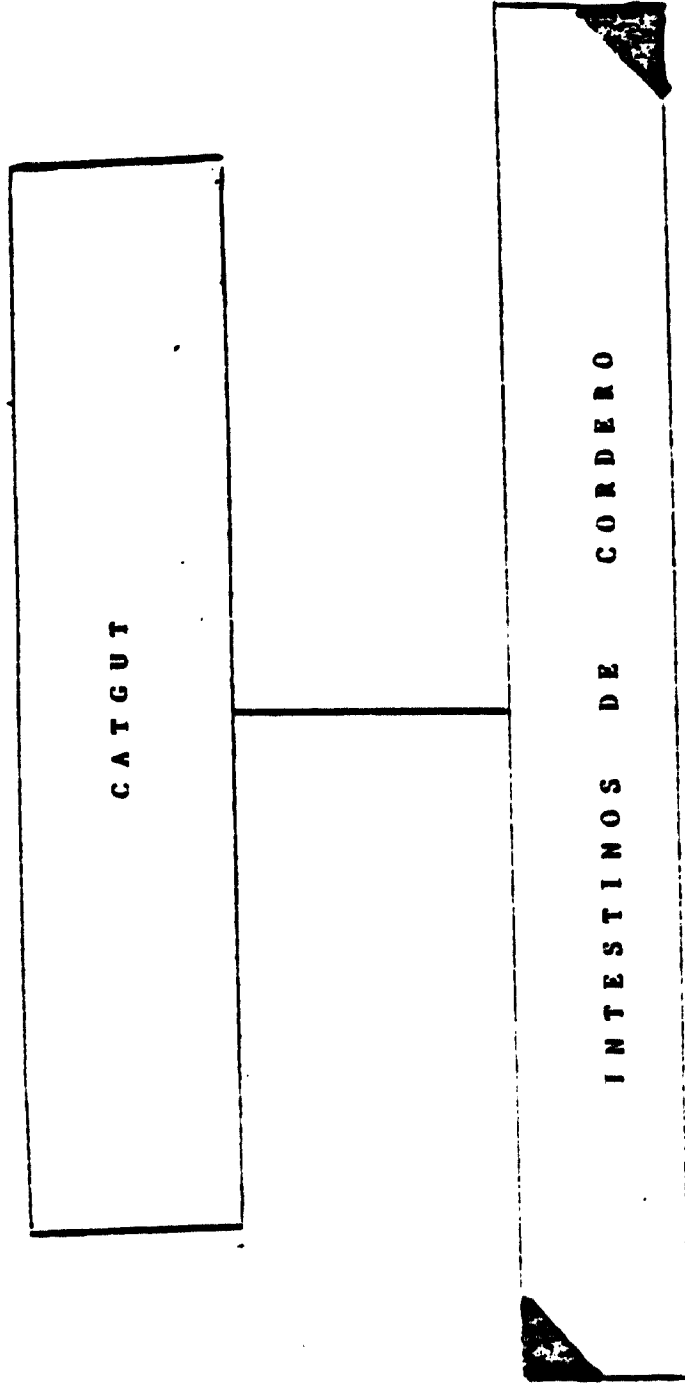
Cuadro N° 22



 Materia prima producida en la Subregión Andina

Fuente: Departamento de Desarrollo Industrial - Junta del Acuerdo de Cartagena
Noviembre 1978

Cuadro N° 23



Material Materia prima producida en la Subregión Andina

Fuente: Departamento de Desarrollo Industrial - Junta del Acuerdo de Cartagena
Noviembre 1978

Quadro N° 24

P E P S I N A		E S T O M A G O S D E C E R D O
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▮ Materia prima producida en la Subregión Andina

Fuente: Departamento de Desarrollo Industrial - Junta del Acuerdo de Cartagena
Noviembre 1978

ANNEX XVIII

Cuadro 3

PRODUCTOS ASIGNABLES: DISTRIBUCION DEL MERCADO AÑO 1990

(Miles de dólares a precios internacionales de referencia para la Subregión de 1977)

PRODUCTOS	BOLIVIA		COLOMBIA		ECUADOR		PERU		VENEZUELA		SUBREGION	
	Ton	US\$	Ton	US\$	Ton	US\$	Ton	US\$	Ton	US\$	Ton	US\$
Penicilina	1.5	45	18.6	558	3.0	90	3.0	240	6.1	243	39.2	1,176
Ampicilina	2.4	288	33.9	4,068	4.2	504	13.1	1,572	13.1	1,572	66.7	8,094
Tetraciclina	2.1	50	41.0	984	3.1	75	9.3	223	15.3	367	70.8	1,639
Oxitetraciclina	0.9	27	18.2	545	1.4	42	4.1	123	6.8	204	31.4	942
Clortetraciclina	0.2	12	4.6	276	0.3	18	1.1	66	1.7	102	7.9	474
Eritromicina	5.3	530	21.3	2,150	9.8	990	26.7	2,670	18.7	1,870	61.8	8,190
Eritromicina	2.0	70	18.9	661	4.1	144	11.2	342	2.6	91	7	258
Sulfacetoxipiridina	0.9	9	6.6	66	1.4	14	3.5	35	3.5	35	15.9	153
Sulfacetamida	0.9	9	5.9	59	1.2	12	3.2	32	3.2	32	14.4	144
Sulfametoxazol	0.9	34	7.3	278	1.5	57	3.8	144	3.8	144	17.3	657
Sulfisoxazol	0.9	15	7.3	124	1.5	25	3.8	65	3.9	65	17.3	294
Trimetoprim	0.1	9	0.7	63	0.1	9	0.3	27	0.3	27	1.5	135
Clorfeniramina	0.9	45	3.3	165	1.4	70	2.0	100	2.7	135	10.3	515
Difenhydramina	0.3	12	2.3	92	0.5	20	1.2	49	1.2	48	5.5	220
Oximetazolina	0.1	6	0.7	46	0.1	6	0.3	20	0.3	20	1.5	99
Terfenadina	0.9	12	7.3	95	1.5	20	3.8	49	3.0	49	17.3	225
Oxifenizamina	0.7	10	1.9	63	0.4	13	1.0	33	1.0	33	4.6	152
Difenhidramina	1.7	31	22.4	403	2.1	30	4.8	86	7.3	131	38.3	699
Lidocaina	0.3	3	1.9	13	0.4	4	1.0	10	1.0	10	4.6	45
Salicilato de metilo	0.9	2	6.6	14	1.4	3	3.5	8	3.5	8	15.9	35
Polibutolida	6.8	3	5.9	23	1.2	5	3.2	13	3.2	13	14.3	57
Acetil-para-amino-fenol	0.3	2	1.9	11	0.4	2	1.0	6	1.0	6	4.6	27
Hidrocortisona	0.1	1	0.7	3	0.1	1	0.3	4	0.3	4	1.5	19
Acido Salicílico	0.6	48	4.3	344	0.9	72	2.3	184	2.3	184	10.4	632
Aspirina	12.9	129	99.7	997	26.3	203	52.2	522	52.2	522	237.3	2,373
Paracetamol	0.3	2	3.3	9	0.4	2	1.0	5	1.0	5	4.6	23
Paralidina	2.4	240	10.9	1,090	3.2	320	6.4	640	10.3	1,090	33.8	3,380
Acido Ascórbico	20.5	164	156.2	1,329	40.2	322	26.1	1,009	57.5	780	450.5	3,604
Piperacilina	37.0	104	282.6	792	57.2	160	45.0	414	145.0	414	672.9	1,684
Peperona	26.0	210	117.0	878	46.0	345	72.0	540	92.0	690	355.0	2,663

ANNEX XIX

Selection of chemicals used either in the production or in the formulation of pharmaceuticals:

ANDEAN GROUP COUNTRIES

Production, Production Capacity, Imports and Exports

1974

GLUCOSE

Country	No. of plants	Capacity mt/year	Production mt/year	IMPORTS		EXPORTS	
				mt	USSCIF (000)	mt	US\$ FOB (000)
Bolivia	-	-	-	188	-	-	-
Colombia	2	7,200	4,800	450*	ND	26	ND
Chile	2	7,000	5,200	252	228	-	-
Ecuador	-	-	-	600	220	-	-
Peru	1	5,200	2,900	121	70	76	19
Venezuela	1	7,200	4,000	609	252	-	-
TOTAL Andean Group	6	26,600	16,800	2,220	ND	102	ND

* Approximate figure

CHLORINE

Country	No. of plants	Capacity mt/year	Production mt/year	IMPORTS		EXPORTS	
				mt	USSCIF (000)	mt	US\$ FOB (000)
Bolivia	-	-	-	15	5	-	-
Colombia	2	33,000 15,000	28,022 7,500	492	186	-	-
Chile	2	49,000 10,000	35,000 7,000*	-	-	-	-
Ecuador	-	-	-	110	30	-	-
Peru	2	30,000 5,000	28,500 5,000	-	-	500	-
Venezuela	2	34,000 10,000	7,400 4,753	183	52	-	-
TOTAL Andean Group	3	146,000 70,000	98,922 27,253	605	273	500	-

HYDROFLUORIC ACID:

Country	No. of plants	Capacity mt/year	Production mt/year	IMPORTS		EXPORTS	
				mt	US\$CIF (000)	mt	US\$FOB (000)
Bolivia	-	-	-	-	-	-	-
Colombia	-	-	-	52*	62*	-	-
Chile	-	-	-	6	8	-	-
Ecuador	-	-	-	28	25	-	-
Peru	-	-	-	10	9	-	-
Venezuela	-	-	-	450*	104	-	-
TOTAL Andean Grp.	-	-	-	546	208	-	-

(* Corresponds to 1973)

AMMONIA:

Country	No. of plants	Capacity mt/year	Production mt/year	IMPORTS		EXPORTS	
				mt	US\$CIF (000)	mt	US\$FOB (000)
Bolivia	-	-	-	50	17	-	-
Colombia	2	121,500	109,000	34,500	ND	-	-
Chile	-	-	-	266	54	-	-
Ecuador	-	-	-	81	ND	-	-
Peru	3	141,700	29,233	11	12	-	-
Venezuela	4	806,000	248,700	-	-	34,500	ND
TOTAL Andean Grp.	9	1,332,400	386,933	71,266	ND	34,500	ND

AMMONIUM HYDROXIDE:

Country	No. of plants	Capacity mt/year	Production mt/year	IMPORTS		EXPORTS	
				mt	US\$CIF (000)	mt	US\$FOB (000)
Bolivia	-	-	-	-	-	-	-
Colombia	-	-	-	200	ND	-	-
Chile	-	-	-	24	23	-	-
Ecuador	-	-	-	3	ND	-	-
Peru	-	-	-	1,793	224	-	-
Venezuela	-	-	-	700	ND	-	-
TOTAL Andean Grp.	-	-	-	2,700	ND	-	-

PROPANOL

Country	No. of plants	Capacity mt/year	Production mt/year	IMPORTS		EXPORTS	
				mt	US\$CIF (000)	mt	US\$FOB (000)
Bolivia	-	-	-	-	-	-	-
Colombia	-	-	-	2,018	248	-	-
Chile	-	-	-	1,000	ND	-	-
Ecuador	-	-	-	457	205	-	-
Peru	-	-	-	285	120	-	-
Venezuela	-	-	-	7,600	ND	-	-
TOTAL Andean Grp.	-	-	-	11,352	ND	-	-

BUTYL ALCOHOLS:

Country	No. of plants	Capacity mt/year	Production mt/year	IMPORTS		EXPORTS	
				mt	US\$CIF (000)	mt	US\$FOB (000)
Bolivia	-	-	-	10	6	-	-
Colombia	-	-	-	1,819	320	-	-
Chile	-	-	-	1,200	ND	-	-
Ecuador	-	-	-	20	11	-	-
Peru	-	-	-	1,261	657	-	-
Venezuela	-	-	-	2,000	ND	-	-
TOTAL Andean Grp.	-	-	-	6,310	ND	-	-

POLYETHYLENE TEREPHTHALATE:

Country	No. of plants	Capacity mt/year	Production mt/year	IMPORTS		EXPORTS	
				mt	USSCIF (000)	mt	US\$FCB (000)
Bolivia	-	-	-	10	10	-	-
Colombia	-	-	-	61900	6,526	-	-
Chile	-	-	-	35530	3,751	-	-
Ecuador	-	-	-	3000	ND	-	-
Peru	-	-	-	5265	288	-	-
Venezuela	-	-	-	57881	ND	-	-
TOTAL Andean Grp.	-	-	-	163596	ND	-	-

ACTIVATED CHARCOAL:

Country	No. of plants	Capacity mt/year	Production mt/year	IMPORTS		EXPORTS	
				mt	USSCIF (000)	mt	US\$FCB (000)
Bolivia	-	-	-	5	7	-	-
Colombia	-	-	-	490	ND	-	-
Chile	1	500	500	432	263	-	-
Ecuador	-	-	-	92	101	-	-
Peru	1	700	600	62	74	-	-
Venezuela	-	-	-	964	ND	-	-
TOTAL Andean Grp.	2	1,200	1,100	2,045	ND	-	-

POLYETHYLENE TEREPHTHALATE:

Country	No. of plants	Capacity mt/year	Production mt/year	IMPORTS		EXPORTS	
				mt	USSCIF (000)	mt	US\$FCB (000)
Bolivia	-	-	-	-	-	-	-
Colombia	-	-	-	ND	ND	-	-
Chile	-	-	-	2,083	2,726	-	-
Ecuador	-	-	-	-	-	-	-
Peru	-	-	-	23	26	-	-
Venezuela	-	-	-	110	128	-	-
TOTAL Andean Grp.	-	-	-	ND	ND	-	-

CINNAMIC ACID:

Country	No. of plants	Capacity mt/year	Production mt/year	IMPORTS		EXPORTS	
				mt	US\$CIF (000)	mt	US\$FOB (000)
Bolivia	-	-	-	30	98	-	-
Colombia	1	2,200	200	1,260	ND	-	-
Chile	1	600	311	167	131	30	ND
Ecuador	-	-	-	178	230	-	-
Peru	-	-	-	506	525	-	-
Venezuela	-	-	-	1,100	ND	-	-
TOTAL Andean Grp.	2	2,800	511	3,511	ND	30	ND

SALICYLIC ACID:

Country	No. of plants	Capacity mt/year	Production mt/year	IMPORTS		EXPORTS	
				mt	US\$CIF (000)	mt	US\$FOB (000)
Bolivia	-	-	-	-	-	-	-
Colombia	-	-	-	440	ND	-	-
Chile	-	-	-	4	8	-	-
Ecuador	-	-	-	2	ND	-	-
Peru	-	-	-	3	7	-	-
Venezuela	-	-	-	20	ND	-	-
TOTAL Andean Grp.	-	-	-	469	ND	-	-

ACETYL SALICYLIC ACID:

Country	No. of plants	Capacity mt/year	Production mt/year	IMPORTS		EXPORTS	
				mt	US\$CIF (000)	mt	US\$FOB (000)
Bolivia	-	-	-	8	ND	-	-
Colombia	2	650	440	-	-	-	-
Chile	-	-	-	158	255	-	-
Ecuador	-	-	-	24	ND	-	-
Peru	-	-	-	51	67	-	-
Venezuela	-	-	-	125	ND	-	-
TOTAL Andean Grp.	2	650	440	366	ND	-	-

Country	No. of plants	Capacity mt/year	Production mt/year	IMPORTS		EXPORTS	
				mt	US\$CIF (000)	mt	US\$FOB (000)
Bolivia	-	-	-	-	-	-	-
Colombia	-	-	-	ND	ND	-	-
Chile	-	-	-	2,083	2,716	-	-
Ecuador	-	-	-	ND	ND	-	-
Peru	-	-	-	2,031	1,611	-	-
Venezuela	-	-	-	120	-	-	-
TOTAL Andean Grp.	-	-	-	ND	ND	-	-

POLYPROPYLENE:

Country	No. of plants	Capacity mt/year	Production mt/year	IMPORTS		EXPORTS	
				mt	US\$CIF (000)	mt	US\$FOB (000)
Bolivia	-	-	-	-	-	-	-
Colombia	-	-	-	3,200	ND	-	-
Chile	-	-	-	2,800	ND	-	-
Ecuador	-	-	-	560	ND	-	-
Peru	-	-	-	1,745	2,057	-	-
Venezuela	-	-	-	4,500	ND	-	-
TOTAL Andean Grp.	-	-	-	12,805	ND	-	-

CARBON PAPER/CELLULOSE:

Country	No. of plants	Capacity mt/year	Production mt/year	IMPORTS		EXPORTS	
				mt	US\$CIF (000)	mt	US\$FOB (000)
Bolivia	-	-	-	15	16	-	-
Colombia	1	3,500	1,700	-	-	870	ND
Chile	-	-	-	200	290	-	-
Ecuador	-	-	-	288	365	-	-
Peru	-	-	-	857	1,064	-	-
Venezuela	1	2,400	2,000	60	72	800	ND
TOTAL Andean Grp.	2	5,900	3,700	1400	1,807	1670	ND

Country	No. of plants	Capacity mt/year	Production mt/year	IMPORTS		EXPORTS	
				mt	US\$CIF (000)	mt	US\$FOB (000)
Bolivia	-	-	-	250	ND	-	-
Colombia	2	9,000	3,330	2,000	ND	-	-
Chile	-	-	-	2,600	2,713	-	-
Ecuador	-	-	-	400	ND	-	-
Peru	-	-	-	2,057	1,558	-	-
Venezuela	1	15,000	10,000	280	ND	4,500	ND
TOTAL Andean Grp.	3	24,000	13,330	7,667	ND	4,500	ND

LACTIC ACID:

Country	No. of plants	Capacity mt/year	Production mt/year	IMPORTS		EXPORTS	
				mt	US\$CIF (000)	mt	US\$FOB (000)
Bolivia	-	-	-	-	-	-	-
Colombia	-	-	-	18	ND	-	-
Chile	-	-	-	26	49	-	-
Ecuador	-	-	-	-	-	-	-
Peru	-	-	-	11	12	-	-
Venezuela	-	-	-	20	25	-	-
TOTAL Andean Grp.	-	-	-	75	ND	-	-

TARTARIC ACID:

Country	No. of plants	Capacity mt/year	Production mt/year	IMPORTS		EXPORTS	
				mt	US\$CIF (000)	mt	US\$FOB (000)
Bolivia	-	-	-	3	6	-	-
Colombia	-	-	-	375	ND	-	-
Chile	2	650	42	-	-	10	ND
Ecuador	-	-	-	41	72	-	-
Peru	-	-	-	108	195	-	-
Venezuela	-	-	-	150	ND	-	-
TOTAL Andean Grp.	2	650	42	677	ND	10	ND

FORMIC ACID:

Country	No. of plants	Capacity mt/year	Production mt/year	IMPORTS		EXPORTS	
				mt	US\$CIF (000)	mt	US\$FOB (000)
Bolivia	-	-	-	-	-	-	-
Colombia	1	650	240	57*	30	-	-
Chile	-	-	-	14	19	-	-
Ecuador	-	-	-	-	-	-	-
Peru	-	-	-	16	24	-	-
Venezuela	-	-	-	335*	102	-	-
TOTAL Andean Grp.	1	650	240	422	175	-	-

(*) figures correspond with those of 1973

SODIUM BICARBONATE:

Country	No. of plants	Capacity mt/year	Production mt/year	IMPORTS		EXPORTS	
				mt	US\$CIF (000)	mt	US\$FOB (000)
Bolivia	-	-	-	5	5	-	-
Colombia	1	650	230	-	-	10	ND
Chile	-	-	-	61	60	-	-
Ecuador	-	-	-	35	48	-	-
Peru	-	-	-	95	79	-	-
Venezuela	1	600	300	100	ND	86	346
TOTAL Andean Grp.	2	1,250	530	296	ND	96	ND

OXALIC ACID:

Country	No. of plants	Capacity mt/year	Production mt/year	IMPORTS		EXPORTS	
				mt	US\$CIF (000)	mt	US\$FOB (000)
Bolivia	-	-	-	4	3	-	-
Colombia	-	-	-	212	ND	-	-
Chile	-	-	-	9	10	-	-
Ecuador	-	-	-	20	12	-	-
Peru	-	-	-	36	21	-	-
Venezuela	-	-	-	168	ND	-	-
TOTAL Andean Grp.	-	-	-	449	ND	-	-

Country	No. of plants	Capacity mt/year	Production mt/year	IMPORTS		EXPORTS	
				mt	US\$CIF (000)	mt	US\$FOB (000)
Bolivia	-	-	-	-	-	-	-
Colombia	-	-	-	628	310	-	-
Chile	-	-	-	82	35	-	-
Ecuador	-	-	-	10	6	-	-
Peru	-	-	-	94	97	-	-
Venezuela	-	-	-	580	312	-	-
TOTAL Andean Grp.	-	-	-	1,394	760	-	-

DIPROPYLENEGLYCOL:

Country	No. of plants	Capacity mt/year	Production mt/year	IMPORTS		EXPORTS	
				mt	US\$CIF (000)	mt	US\$FOB (000)
Bolivia	-	-	-	-	-	-	-
Colombia	-	-	-	120	ND	-	-
Chile	-	-	-	101	59	-	-
Ecuador	-	-	-	-	-	-	-
Peru	-	-	-	39	25	-	-
Venezuela	-	-	-	120	76	-	-
TOTAL Andean Grp.	-	-	-	380	ND	-	-

TRIPROPYLENEGLYCOL:

Country	No. of plants	Capacity mt/year	Production mt/year	IMPORTS		EXPORTS	
				mt	US\$CIF (000)	mt	US\$FOB (000)
Bolivia	-	-	-	-	-	-	-
Colombia	-	-	-	100	58	-	-
Chile	-	-	-	52	36	-	-
Ecuador	-	-	-	-	-	-	-
Peru	-	-	-	-	-	-	-
Venezuela	-	-	-	85	49	-	-
TOTAL Andean Grp.	-	-	-	237	143	-	-

PROPYLENE GLYCOL:

Country	No. of plants	Capacity mt/year	Production mt/year	IMPORTS		EXPORTS	
				mt	US\$CIF (000)	mt	US\$FOB (000)
Bolivia	-	-	-	-	-	-	-
Colombia	-	-	-	600	ND	-	-
Chile	-	-	-	895	551	-	-
Ecuador	-	-	-	24	-	-	-
Peru	-	-	-	353	431	-	-
Venezuela	-	-	-	1,850	ND	-	-
TOTAL Andean Grp.	-	-	-	3,722	-	-	-

PENTAERYTHRITOL:

Country	No. of plants	Capacity mt/year	Production mt/year	IMPORTS		EXPORTS	
				mt	US\$CIF (000)	mt	US\$FOB (000)
Bolivia	-	-	-	8	6	-	-
Colombia	-	-	-	460	ND	-	-
Chile	1	5,000	1,362	26	74	826	ND
Ecuador	-	-	-	20	18	-	-
Peru	-	-	-	121	104	-	-
Venezuela	-	-	-	462	ND	-	-
TOTAL Andean Grp.	1	5,000	1,362	1,097	ND	826	ND

PHENOL:

Country	No. of plants	Capacity mt/year	Production mt/year	IMPORTS		EXPORTS	
				mt	US\$CIF (000)	mt	US\$FOB (000)
Bolivia	-	-	-	28	10	-	-
Colombia	-	-	-	2,200	ND	-	-
Chile	-	-	-	265	350	-	-
Ecuador	-	-	-	4	3	-	-
Peru	-	-	-	6	5	-	-
Venezuela	-	-	-	3,150	ND	-	-
TOTAL Andean Grp.	-	-	-	5,653	ND	-	-

(*) Colombia - based on 1977 figures

METHYL ALCOHOL:

Country	No. of plants	Capacity mt/year	Production mt/year	IMPORTS		EXPORTS	
				mt	US\$CIF (000)	mt	US\$FOB (000)
Bolivia	-	-	-	80	30	-	-
Colombia	-	-	-	6,648*	413	-	-
Chile	-	-	-	1,785	498	-	-
Ecuador	-	-	-	411	ND	-	-
Peru	-	-	-	1,689	268	-	-
Venezuela	-	-	1,200	8,500	ND	-	-
TOTAL Andean Grp.	-	-	1,200	19,113	ND	-	-

(*) Colombia - figure corresponds with 1973

2-BRHYL FEMANOL:

Country	No. of plants	Capacity mt/year	Production mt/year	IMPORTS		EXPORTS	
				mt	US\$CIF (000)	mt	US\$FOB (000)
Bolivia	-	-	-	10	9	-	-
Colombia	-	-	-	4,538*	957	-	-
Chile	-	-	-	2,000	ND	-	-
Ecuador	-	-	-	30	20	-	-
Peru	-	-	-	957	612	-	-
Venezuela	-	-	-	7,100	ND	-	-
TOTAL Andean Grp.	-	-	-	14,635	ND	-	-

(*) Colombia - corresponds with 1973 data.

ETHYLENEGLYCOL:

Country	No. of plants	Capacity mt/year	Production mt/year	IMPORTS		EXPORTS	
				mt	US\$CIF (000)	mt	US\$FOB (000)
Bolivia	-	-	-	-	-	-	-
Colombia	-	-	-	9600	ND	-	-
Chile	-	-	-	266	109	-	-
Ecuador	-	-	-	52	-	-	-
Peru	-	-	-	367	240	-	-
Venezuela	-	-	-	4620	ND	-	-
TOTAL Andean Grp.	-	-	-	14905	ND	-	-

TOLUENE:

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Country	No. of plants	Capacity mt/year	Production mt/year	IMPORTS		EXPORTS	
				mt	US\$CIF (000)	mt	US\$FOB (000)
Bolivia	-	-	-	220	83	-	-
Colombia	1	30,000	5,800	-	-	-	-
Chile	-	-	500	1,440	402	-	-
Ecuador	-	-	-	210	72	-	-
Peru	-	-	-	2,573	ND	-	-
Venezuela	-	-	-	11,000	455	-	-
TOTAL Andean Grp.	1	30,000	5,800	15,451	ND	-	-

CHLOROFORM:

Country	No. of plants	Capacity mt/year	Production mt/year	IMPORTS		EXPORTS	
				mt	US\$CIF (000)	mt	US\$FOB (000)
Bolivia	-	-	-	8	7	-	-
Colombia	-	-	-	46	33	-	-
Chile	-	-	-	21	26	-	-
Ecuador	-	-	-	63	55	-	-
Peru	-	-	-	18	16	-	-
Venezuela	-	-	-	32	56	-	-
TOTAL Andean Grp.	-	-	-	188	193	-	-

HEMICHLOROCYCLOHEXANE:

Country	No. of plants	Capacity mt/year	Production mt/year	IMPORTS		EXPORTS	
				mt	US\$CIF (000)	mt	US\$FOB (000)
Bolivia	-	-	-	-	-	-	-
Colombia	-	-	-	150	157	-	-
Chile	-	-	-	-	-	-	-
Ecuador	-	-	-	-	-	-	-
Peru	-	-	-	112	89	-	-
Venezuela	-	-	-	130	108	-	-
TOTAL Andean Grp.	-	-	-	402	354	-	-

AMMONIUM CHLORIDE:

Country	No. of plants	Capacity mt/year	Production mt/year	IMPORTS		EXPORTS	
				mt	USSCIF (CCO)	mt	USSFOB (CCO)
Bolivia	-	-	-	55	12	-	-
Colombia	-	50	12	1,700	ND	-	-
Chile	-	-	-	556	88	-	-
Ecuador	-	-	-	190	34	-	-
Peru	-	-	-	652	116	-	-
Venezuela	-	-	-	1,920	ND	-	-
TOTAL Andean Grp.	-	-	-	5,052	ND	-	-

CALCIUM CHLORIDE:

Country	No. of plants	Capacity mt/year	Production mt/year	IMPORTS		EXPORTS	
				mt	USSCIF (CCO)	mt	USSFOB (CCO)
Bolivia	-	-	-	60	13	-	-
Colombia	-	-	-	250	ND	-	-
Chile	2	ND	8,000*	9	8	-	-
Ecuador	-	-	-	165	ND	-	-
Peru	1	ND	694	14	7	-	-
Venezuela	-	-	-	1,930	ND	-	-
TOTAL Andean Grp.	3	ND	8,694	2,428	ND	-	-

(* estimated)

MAGNESIUM SULFATE:

Country	No. of plants	Capacity mt/year	Production mt/year	IMPORTS		EXPORTS	
				mt	USSCIF (CCO)	mt	USSFOB (CCO)
Bolivia	-	-	-	45	7	-	-
Colombia	1	150	120	340	135	-	-
Chile	1	1,200	271	-	-	-	-
Ecuador	-	-	-	140	20	-	-
Peru	-	-	-	329	47	-	-
Venezuela	-	-	-	220	31	-	-
TOTAL Andean Grp.	2	1,350	391	1,674	240	-	-

Country	No. of plants	Capacity mt/year	Production mt/year	IMPORTS		EXPORTS	
				mt	US\$CIF (000)	mt	US\$FOB (000)
Bolivia	-	-	-	-	-	-	-
Colombia	-	-	-	90	64	-	-
Chile	1	72	15	-	-	-	-
Ecuador	-	-	-	6	4	-	-
Peru	-	-	-	132	86	-	-
Venezuela	-	-	-	110	78	-	-
TOTAL Andean Grp.	1	72	15	338	232	-	-

NITROBENZENE:

Country	No. of plants	Capacity mt/year	Production mt/year	IMPORTS		EXPORTS	
				mt	US\$CIF (000)	mt	US\$FOB (000)
Bolivia	-	-	-	-	-	-	-
Colombia	-	-	-	991*	108	-	-
Chile	-	-	-	-	-	-	-
Ecuador	-	-	-	-	-	-	-
Peru	-	-	-	7	5	-	-
Venezuela	-	-	-	800	ND	-	-
TOTAL Andean Grp.	-	-	-	1,798	ND	-	-

(*) Colombia - 1973 data

TRINITROTOLUENE:

Country	No. of plants	Capacity mt/year	Production mt/year	IMPORTS		EXPORTS	
				mt	US\$CIF (000)	mt	US\$FOB (000)
Bolivia	-	-	-	-	-	-	-
Colombia	-	-	-	ND	ND	-	-
Chile	-	-	-	187	87	-	-
Ecuador	-	-	-	-	-	-	-
Peru	-	-	-	170	155	-	-
Venezuela	1	3,000	2,062	58	53	-	-
TOTAL Andean Grp.	1	3,000	2,062	ND	ND	-	-

Country	No. of plants	Capacity mt/year	Production mt/year	IMPORTS		EXPORTS	
				mt	US\$CIF (000)	mt	US\$FOB (000)
Bolivia	-	-	-	186	ND	-	-
Colombia	1	ND	20,500*	12	ND	325	ND
Chile	2	ND	28,000	-	-	-	-
Ecuador	-	-	-	125	-	-	-
Peru	2	ND	33,800	-	-	600	ND
Venezuela	1	24,000	9,000	-	-	-	-
TOTAL Andean Grp.	6	ND	95,300	323	ND	925	-

(*) 8,650 mt 100%

SULFURIC ACID:

Country	No. of plants	Capacity mt/year	Production mt/year	IMPORTS		EXPORTS	
				mt	US\$CIF (000)	mt	US\$FOB (000)
Bolivia	2	38,000	2,000	60	ND	-	-
Colombia	5	69,200	67,700	1,857	ND	-	-
Chile	13	800,000	500,000	-	-	-	-
Ecuador	1*	30,000	15,000	500	ND	-	-
Peru	3	120,000	66,300	-	-	-	-
Venezuela	2	213,000	116,076	-	-	1,508	ND
TOTAL Andean Grp.	26	1,270,200	767,676	2,417	ND	1,508	ND

(*) Ecuador - there exist other factories actually in production

BORIC ACID:

Country	No. of plants	Capacity mt/year	Production mt/year	IMPORTS		EXPORTS	
				mt	US\$CIF (000)	mt	US\$FOB (000)
Bolivia	-	-	-	10	8	-	-
Colombia	-	-	-	450	ND	-	-
Chile	1	360	180	39	24	-	-
Ecuador	-	-	-	2	ND	-	-
Peru	-	-	-	175	56	-	-
Venezuela	-	-	-	335	ND	-	-
TOTAL Andean Grp.	-	360	180	1,011	ND	-	-

Country	No. of plants	Capacity mt/year	- 155 - Production mt/year	IMPORTS		EXPORTS	
				mt	US\$CIF (000)	mt	US\$FOB (000)
Bolivia	-	-	-	40	35	-	-
Colombia	-	-	-	2964	264	-	-
Chile	1	600	151	248	263	-	-
Ecuador	-	-	-	162	126	-	-
Peru	-	-	-	2402	1,357	-	-
Venezuela	-	-	-	6316	1,344	-	-
TOTAL Andean Grp.	1	600	151	12132	3,899	-	-

ACETIC ACID:

Country	No. of plants	Capacity mt/year	Production mt/year	IMPORTS		EXPORTS	
				mt	US\$CIF (000)	mt	US\$FOB (000)
Bolivia	-	-	-	40	ND	-	-
Colombia	1	1,500	1,200	-	-	70	ND
Chile	1	800	465	41	65	-	-
Ecuador	-	-	-	84	ND	-	-
Peru	1	1,900	1,778	-	-	55	ND
Venezuela	-	-	-	563	ND	-	-
TOTAL Andean Grp.	3	4,200	3,443	728	ND	125	ND

STEARATES (Ca, Zn, Pb, Ba, Cd):

Country	No. of plants	Capacity mt/year	Production mt/year	IMPORTS		EXPORTS	
				mt	US\$CIF (000)	mt	US\$FOB (000)
Bolivia	-	-	-	-	-	-	-
Colombia	1	ND	ND	100	86	-	-
Chile	1	180	95	2	3	-	-
Ecuador	-	-	-	34	40	-	-
Peru	2	600	200	96	128	-	-
Venezuela	-	ND	ND	281	207	-	-
TOTAL Andean Grp.	3	ND	ND	513	474	-	-

PROPYLENE GLYCOL:

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Country	No. of plants	Capacity mt/year	Production mt/year	IMPORTS		EXPORTS	
				mt	US\$CIF (000)	mt	US\$FOB (000)
Bolivia	-	-	-	-	-	-	-
Colombia	-	-	-	600	ND	-	-
Chile	-	-	-	895	551	-	-
Ecuador	-	-	-	24	-	-	-
Peru	-	-	-	353	431	-	-
Venezuela	-	-	-	1,850	ND	-	-
TOTAL Andean Grp.	-	-	-	3,722	-	-	-

PENTAERYTHRITOL:

Country	No. of plants	Capacity mt/year	Production mt/year	IMPORTS		EXPORTS	
				mt	US\$CIF (000)	mt	US\$FOB (000)
Bolivia	-	-	-	8	6	-	-
Colombia	-	-	-	460	ND	-	-
Chile	1	5,000	1,362	26	74	826	ND
Ecuador	-	-	-	20	18	-	-
Peru	-	-	-	121	104	-	-
Venezuela	-	-	-	462	ND	-	-
TOTAL Andean Grp.	1	5,000	1,362	1,097	ND	826	ND

PHENOL:

Country	No. of plants	Capacity mt/year	Production mt/year	IMPORTS		EXPORTS	
				mt	US\$CIF (000)	mt	US\$FOB (000)
Bolivia	-	-	-	29	10	-	-
Colombia	-	-	-	2,200	ND	-	-
Chile	-	-	-	265	350	-	-
Ecuador	-	-	-	4	3	-	-
Peru	-	-	-	6	5	-	-
Venezuela	-	-	-	3,450	ND	-	-
TOTAL Andean Grp.	-	-	-	5,254	ND	-	-

(*) Colombia - based on 1977 figures

ANNEX XX

PERU AND ANDEAN COUNTRIES

BASIC CHEMICALS PRICES OF A NUMBER OF LOCAL RAW
MATERIALS USED IN PRODUCTION OF ESSENTIAL DRUGS

<u>Chemical</u>	<u>Peru</u>		<u>Andean Countries</u>	
	<u>US\$/Kg</u> <u>1972</u>	<u>MT</u> <u>Quantities</u> <u>1978</u>	<u>US\$/Kg</u> <u>1972</u>	<u>MT</u> <u>Quantities</u> <u>1974</u>
Caustic Soda	1.42	—	0.47	150,000
Acetic Acid	2.84	1,992	0.44	3,500
Urea	n.a.	112,858	0.27	1,300,000
Sugar (Industrial Grade)	0.40	856,472	n.a.	n.a.
Sulphuric Acid	n.a.	23,787	0.61	470,000
Hydrochloric Acid	0.27	32,661	0.13	125,000
Nitric Acid	n.a.	65,500	0.12	260,000
Ammonia	0.55	22,325	0.26	1,300,000
Ethyl Alcohol	0.87	21 Million Litres	0.38	n.a.
Iso-Propyl Alcohol	n.a.	5,000		
Acetone	n.a.	5,000		
Sodium Sulphate	0.32	12,500		
Corn Starch	1.05	2,040		
Corn Steep Liquor	0.12	3,600		
Acetylene			1.50	3,500
Ammonium Chloride			0.55	n.a.
Benzene			0.50	43,000
Chlorine			0.13	125,000
Citric Acid			1.36	2,300
Cresol			1.10	n.a.
Ethylene			0.33	175,000
Glycerine			1.08	n.a.
Methanol			1.08	n.a.
Mercury Oxide			15.10	n.a.
Toluene			0.32	

ANNEX XXI

INDUSTRIAS

INDUSTRIAS DE LA SALUD (FAIS)

1979

FAB	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976
29.35	8.011.980	9.654.715	10.187.019	12.894.832	14.979.208	16.595.148	19.237.775	19.108.079	36.177.365	32.639.650	37.611.113
29.44	3.126.473	3.973.238	4.701.105	6.410.843	6.865.053	8.764.360	9.353.984	11.103.525	16.961.666	17.467.011	17.985.010
29.39	5.503.008	5.420.400	5.199.129	5.401.893	6.188.848	6.678.160	6.970.242	9.145.564	11.608.453	11.752.605	12.915.120
30.03	1.436.541	2.072.378	2.277.984	3.719.614	5.102.710	6.751.518	6.413.767	5.783.344	10.122.950	8.789.501	9.701.439
29.42	2.674.777	2.964.651	1.855.457	2.740.562	3.716.878	3.696.178	4.944.938	6.446.879	11.053.580	10.624.849	9.385.861
29.23	1.395.756	1.800.792	1.560.002	2.133.948	3.258.478	5.072.007	6.455.503	6.323.166	8.970.058	6.937.715	9.292.463
29.38	2.062.728	2.070.464	2.143.375	2.374.125	2.466.575	3.917.157	4.968.224	3.460.552	6.719.856	7.576.935	7.157.790
29.36	1.868.598	1.874.899	1.993.493	2.313.524	3.179.000	3.264.227	4.074.566	4.104.779	6.766.258	5.936.756	5.853.695
29.41	679.960	718.091	698.053	1.276.697	1.395.248	1.332.560	2.023.226	2.177.354	3.991.627	3.521.438	3.246.861
29.25	1.300.538	1.374.997	1.378.092	1.437.853	1.459.337	1.501.705	1.575.746	1.317.164	2.117.706	2.501.768	2.899.096
29.22	521.749	815.864	605.864	989.700	831.922	1.312.544	1.324.159	1.575.985	1.940.974	2.562.785	2.678.183
95.08	511.639	818.905	804.742	990.344	1.304.612	1.273.356	1.145.437	1.082.264	2.310.891	2.136.480	2.019.545
30.02	368.437	555.997	242.428	785.503	1.052.884	2.551.292	1.562.002	1.620.443	2.400.121	1.929.297	1.981.312
29.40	288.712	327.575	432.319	665.123	430.189	701.368	718.570	700.180	1.186.507	1.147.739	1.262.790
Subtotal	29.750.896	34.452.966	34.079.062	44.134.551	52.230.942	63.411.580	70.760.139	74.029.278	122.328.012	115.524.529	123.990.271
Otros	10.335.176	11.849.679	12.947.180	15.221.792	16.939.736	18.443.969	22.428.705	21.953.366	39.193.354	24.545.540	25.091.093
TOTALES	40.086.072	46.302.645	47.026.242	59.356.343	69.170.678	81.855.549	93.196.844	95.982.644	161.521.366	140.070.069	149.071.354

Source: *Industria y Comercio de la Salud (FAIS)*
 Fuente: *Industria y Comercio de la Salud (FAIS)*
 Fuente: *Industria y Comercio de la Salud (FAIS)*

ANNEX XIII

EXPORTACIONES

Posición M.A.D.I.	AÑO 1976		AÑO 1977	
	Volumen (Kgs.)	Valor (u\$s)	Volumen (Kgs.)	Valor (u\$s)
13.03.00.09	924	4.472.--	3.875	21.117.--
15.05.00.01	- . -	- . -	2.000	3.700.--
17.02.00.02	862.557	284.481.--	158.963	65.060.--
28.01.02.01	931	6.343.--	1.613	11.676.--
28.34.00.01	300	2.778.--	2.300	13.952.--
29.08.00.01	- . -	- . -	5.500	29.807.--
29.16.00.01	- . -	- . -	- . -	- . -
29.16.00.05	610	20.516.--	- . -	- . -
29.16.00.06	1.619	61.372.--	5.475	194.487.--
29.16.00.07	6.505	178.264.--	1.615	32.999.--
29.16.00.08	11.500	221.525.--	- . -	- . -
29.16.00.11	10.620	26.752.--	93.000	130.168.--
29.16.00.12	44.000	79.113.--	9.200	15.420.--
29.16.00.13	- . -	- . -	- . -	- . -
29.19.00.01	- . -	- . -	- . -	- . -
29.19.00.02	- . -	- . -	- . -	- . -
29.19.00.03	- . -	- . -	- . -	- . -
29.19.00.04	- . -	- . -	- . -	- . -
29.23.00.09	74.224	154.361.--	3.252	167.474.--
29.23.00.13	7.860	28.712.--	27.710	55.323.--
29.25.00.02	- . -	- . -	160	6.068.--
29.25.00.09	39.343	135.286.--	47.377	362.199.--
29.26.00.09	39.250	1.087.000.--	62.826	1.033.326.--
29.35.00.00	177.317	5.329.674.--	325.207	3.095.037.--
29.36.00.01	- . -	- . -	100	635.--
29.36.00.09	5.109	164.430.--	9.905	338.518.--
29.37.00.01	22.080	155.304.--	23.151	131.000.--
29.38.00.01	2.000	350.--	7	545.--
29.38.00.02	756	38.375.--	157	18.521.--
29.38.00.03	54	1.100.--	- . -	- . -
29.38.00.04	- . -	- . -	- . -	- . -
29.38.00.05	- . -	- . -	- . -	- . -

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Posición N.A.D.I.	AÑO 1976		AÑO 1977	
	Volumen (Kgs.)	Valor (u\$s)	Volumen (Kgs.)	Valor (u\$s)
29.38.00.09	6.290	34.364.--	4.445	26.455.--
29.39.00.01	- . -	- . -	- . -	- . -
29.39.00.02	64	2.367.328.--	93	3.445.458.--
29.39.00.03	- . -	- . -	- . -	- . -
29.39.00.04	88	1.258.508.--	24	2.170.538.--
29.39.00.05	- . -	- . -	- . -	- . -
29.39.00.06	- . -	- . -	- . -	- . -
29.39.00.07	- . -	- . -	- . -	- . -
29.39.00.08	- . -	- . -	- . -	- . -
29.39.00.11	26	19.092.--	- . -	- . -
29.39.00.19	2	15.465.--	8	50.048.--
29.40.00.01	- . -	- . -	- . -	- . -
29.40.00.02	1.324	41.072.--	1.590	47.829.--
29.40.00.09	118	33.415.--	621	158.340.--
29.42.00.01	- . -	- . -	- . -	- . -
29.42.00.02	- . -	- . -	- . -	- . -
29.42.00.03	- . -	- . -	- . -	- . -
29.42.00.05	1.690	303.208.--	2.161	523.600.--
29.44.00.01	138	10.866.--	34	17.560.--
29.44.00.02	- . -	- . -	- . -	- . -
29.44.00.03	- . -	- . -	3	300.--
29.44.00.04	65	4.461.--	384	19.819.--
29.44.00.05	- . -	- . -	- . -	- . -
29.44.00.06	5.427	123.031.--	183	48.297.--
29.44.00.07	788	28.740.--	526	45.613.--
29.44.00.19	146.476	6.233.787.--	173.585	7.455.581.--
30.01.01.01	434.044	765.519.--	608.902	1.044.798.--
30.01.01.02	2.579	230.907.--	361	211.680.--
30.01.01.03	5.090	51.206.--	4.009	59.036.--
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Posición N.A D.I.	AÑO 1976		AÑO 1977	
	Volumen (Kgs.)	Valor (u\$s)	Volumen (Kgs.)	Valor (u\$s)
30.01.01.04			13	16.574.--
30.01.01.05			365	2.839.--
30.01.01.06	9.112	37.369.--	123	8.961.--
30.01.01.07			700	3.144.--
30.01.01.08			- . -	- . -
30.01.01.99			15.145	209.008.--
30.01.02.01	113.406	702.683.--	169.310	910.521.--
30.01.02.02	- . -	- . -	- . -	- . -
30.01.02.03			402	3.416.--
30.01.02.04	- . -	- . -	- . -	- . -
30.01.02.05			52	22.659.--
30.01.02.06	492	384.050.--	1.362	238.224.--
30.01.02.07			25	32.623.--
30.01.02.08	27.226	152.410.--	12.773	131.344.--
30.01.02.09	- . -	- . -	- . -	- . -
30.01.02.10	1.723	130.491.--	1.424	221.526.--
30.01.02.11	- . -	- . -	- . -	- . -
30.01.02.12	- . -	- . -	- . -	- . -
30.01.02.13	132	1.091.--	203	3.226.--
30.01.02.99	(*) 1.398	(*) 56.432.--	20.344	143.096.--
30.01.03.01	- . -	- . -	- . -	- . -
30.01.03.02			958	59.684.--
30.01.03.03			126	32.373.--
30.01.03.04	4.342	262.476.--	150	3.750.--
30.01.03.99			444.449	1.063.667.--
30.02.00.01	4.193	25.708.--	- . -	- . -
30.02.00.02	4.436	68.128.--	4.414	63.254.--
30.02.00.03	6.723	101.762.--	4.379	114.447.--
30.02.00.11	2.091	1.305.--	1.325	3.152.--
30.02.00.12	- . -	- . -	- . -	- . -
30.02.00.13	- . -	- . -	- . -	- . -
30.02.00.19	74	61.080.--	1.956	54.312.--
30.03.00.01	136.343	2.340.222.--	132.008	2.785.670.--
30.03.00.02	206.754	1.241.624.--	101.698	970.202.--
30.03.00.03	3.664	30.571.--	1.310	5.380.--

Posición N.A.D.I.	AÑO 1976		AÑO 1977	
	Volumen (Kgs.)	Valor (u\$s)	Volumen (Kgs.)	Valor (u\$s)
30.03.00.04	98.034	906.789.--	90.481	1.612.444.--
30.03.00.05	797	25.304.--	2.082	52.730.--
30.03.00.09	65.146	909.041.--	102.582	520.357.--
30.05.00.02	801	10.054.--	1.631	25.013.--
30.05.00.03	10	238.--	17	378.--
30.05.00.04	28	2.007.--	75	1.654.--
39.06.02.01	2.197	6.304.347.--	2.247	3.220.958.--
39.06.02.02	- . -	- . -	272	63.809.--
39.06.02.03	- . -	- . -	100	2.238.--
39.06.02.04	- . -	- . -	3	550.--
T O T A L	2.652.503	33.673.535.--	2.756.248	35.759.839.--

(*) El dato registrado incluye exportaciones que pueden haber sido con-
cretadas por las partidas 30.01.02.03, 30.01.02.05 y 30.01.02.07,
que no es factible desglosar por corresponder a una estructura es-
tadística anterior.-

NOMENCLATURA DE EXPORTACION

Posición N.A.D.E.	Descripción
13.03.00.09	Los demás jugos y extractos vegetales; pectinas; agar-agar y otros mucilagos y espesativos naturales, extraído de <u>ve</u> getales
15.05.00.01	Lanolina (anhidra purísima)
17.02.00.02	Glucosa químicamente pura
28.01.02.01	Yodo bisublimado, calidad farmacopea
28.34.00.01	Yodato de potasio
29.08.00.01	Sulfoguayacolato de potasio (tíocol farmacéutico)
29.16.00.01	• Salicilato de metilo
29.16.00.05	Acido cólico
29.16.00.06	Acido denidrocólico
29.16.00.07	Acido desoxicólico
29.16.00.08	Acido biliar
29.16.00.11	Acido acetilsalicílico (aspirina)
29.16.00.12	Gluconato de calcio
29.16.00.13	Gluconato de hierro
29.19.00.01	Acido glicerofosfórico
29.19.00.02	Glicerofosfato de calcio
29.19.00.03	Glicerofosfato de hierro
29.19.00.04	Glicerofosfato de sodio
29.23.00.09	Aminoácidos no especificados
29.23.00.19	Los demás compuestos aminados de funciones oxigenadas, simples o complejas
29.25.00.02	Barbitúricos
29.25.00.09	Los demás compuestos de función amida
29.26.00.09	Los demás compuestos de función imida o de función imina
29.35.00.00	Compuestos heterocíclicos; y ácidos nucleínicos
29.36.00.01	Paraminobenceno sulfamidotiazol (sulfatiazol)
29.36.00.09	Las demás sulfamidas
29.37.00.01	Fenolftaleína
29.38.00.01	Vitaminas A
29.38.00.02	Vitaminas B
29.38.00.03	Vitaminas C
29.38.00.04	Vitaminas D
29.38.00.05	Vitaminas E

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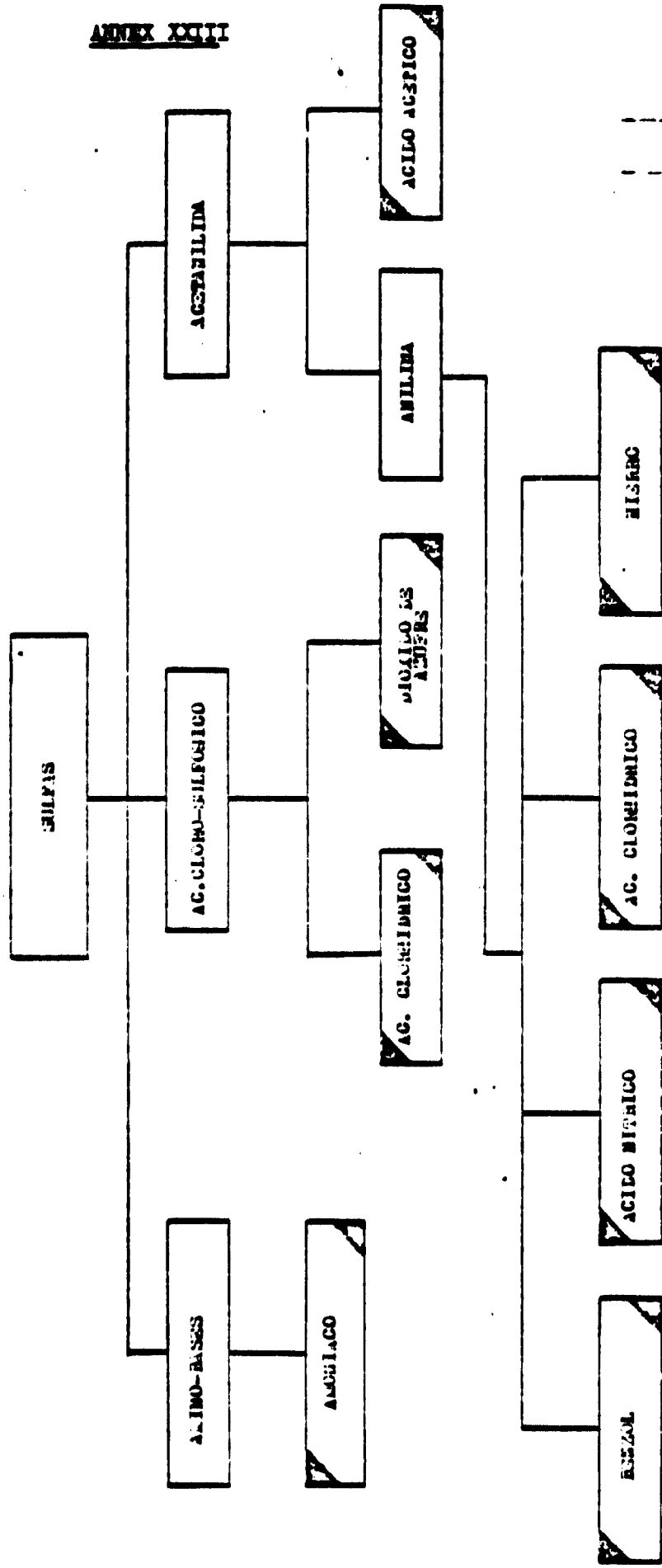
Posición N.A.D.E.	Descripción
29.38.00.09	Las demás provitaminas y vitaminas, naturales o reproducidas por síntesis, (incluso los concentrados naturales) y sus derivados utilizados principalmente como vitaminas, mezclados o no entre sí, incluso en soluciones de cualquier clase)
29.39.00.01	Estrona (foliculina)
29.39.00.02	Insulina en cristales
29.39.00.03	Insulina solución
29.39.00.04	Gonadotropinas
29.39.00.05	Oxitocina
29.39.00.06	Corticosterona
29.39.00.07	Cortisona
29.39.00.08	Adrenalina
29.39.00.11	Testosterona
29.39.00.19	Las demás hormonas, naturales o reproducidas por síntesis y sus derivados utilizados principalmente como hormonas
29.40.00.01	Diastasa concentrada (amilasa)
29.40.00.02	Pepsina
29.40.00.09	Las demás enzimas
29.42.00.01	Tomatina
29.42.00.02	Nicotina
29.42.00.03	Quinina
29.42.00.09	Los demás alcaloides, vegetales, naturales o reproducidos por síntesis, sus sales, éteres, ésteres y otros derivados
29.44.00.01	Penicilina
29.44.00.02	Estreptomina
29.44.00.03	Aureomicina (clorotetraciclina)
29.44.00.04	Cloromicetina (cloranfenicol)
29.44.00.05	Tirocidina
29.44.00.06	Tirotricina
29.44.00.07	Terramicina
29.44.00.19	Los demás antibióticos
-30.01.01.00	Glándulas y demás órganos para usos terapéuticos, desecados, incluso pulverizados
30.01.01.01	Hígado
30.01.01.02	Hipófisis
30.01.01.03	Tiroides
30.01.01.04	Paratiroides
30.01.01.05	Ovario
30.01.01.06	Suprarrenal
30.01.01.07	Testículo
30.01.01.08	Próstata

Posición N.A.D.E.	Descripción
30.01.01.99	Los demás
30.01.02.00	Extractos para usos opoterápicos, de glándulas o de otros órganos o de sus secreciones
30.01.02.01	De hígado
30.01.02.02	De hipófisis
30.01.02.03	De tiroides
30.01.02.04	De paratiroides
30.01.02.05	De ovario
30.01.02.06	De suprarrenal
30.01.02.07	De testículo
30.01.02.08	De páncreas
30.01.02.09	De placenta
30.01.02.10	De bazo
30.01.02.11	De cerebro
30.01.02.12	De glándula mamaria
30.01.02.13	Antropilórico
30.01.02.99	Los demás
30.01.03.00	Otras sustancias animales preparadas para fines terapéuticos o profilácticos
30.01.03.01	Principio antitóxico tisular
30.01.03.02	Factor intrínseco
30.01.03.03	Fracción antitóxica
30.01.03.04	Mucina gástrica
30.01.03.99	Las demás
30.02.00.01	Virus aftoso
30.02.00.02	Vacuna antiaftosa
30.02.00.09	Vacunas en general (excluida la antiaftosa)
30.02.00.11	Sueros en general
30.02.00.12	Toxinas
30.02.00.13	Antitoxinas
30.02.00.19	Los demás sueros de animales o de personas inmunizadas; vacunas microbianas, toxinas, cultivos de microorganismos, (incluidos los fermentos, pero no las levaduras) y otros productos similares
30.03.00.01	Medicamentos para uso humano
30.03.00.02	Medicamentos para uso veterinario (excluidos antisépticos y garrapaticidas)

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Posición N.A.D.E.	Descripción
30.03.00.03'	Antisépticos y garrapaticidas
30.03.00.04'	Especialidades farmacéuticas
30.03.00.05'	Anestésicos
30.03.00.09'	Los demás medicamentos empleados en medicina humana o veterinaria
30.05.00.02'	Catgut para sutura
30.05.00.03'	Hilo para sutura
30.05.00.04'	Laminarias esterilizadas
39.06.02.01'	Heparinas
39.06.02.02'	Heparinoides
39.06.02.03'	Dextrana
39.06.02.04'	Sulfato de condroitin

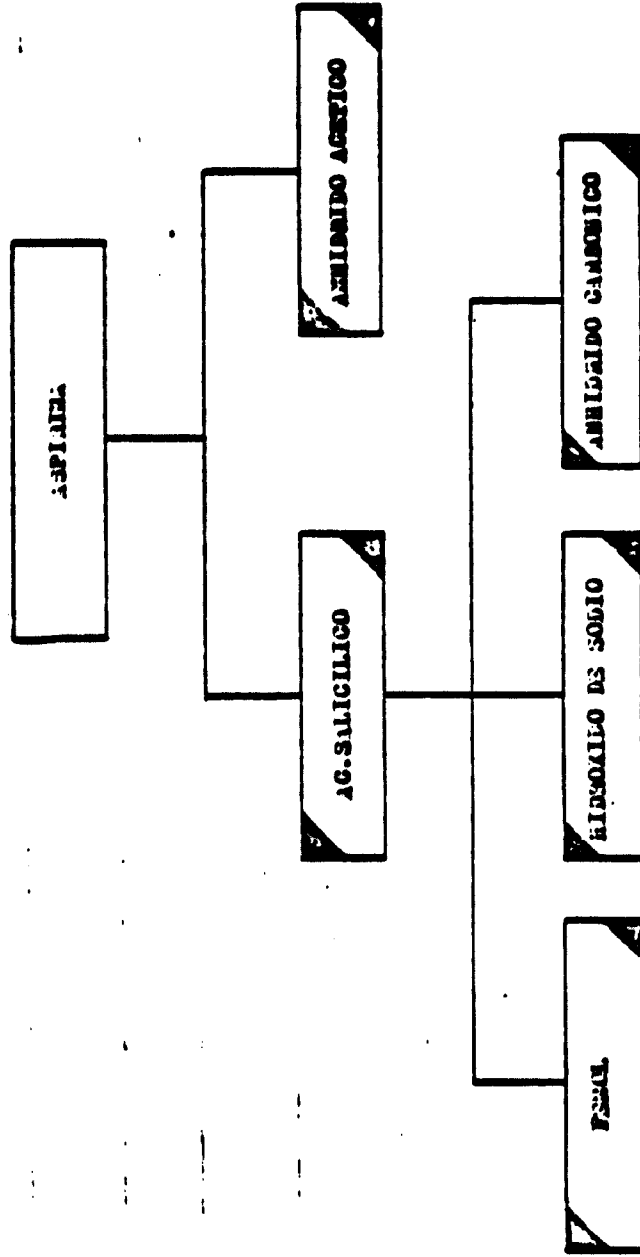
ANEX XXXIII



CLASADO No 1

Material Prima Producida en la Republica Argentina
Año 1979.-

GRUPO 2



Material Prima Producida en la Republica Argentina
Año 1972.-

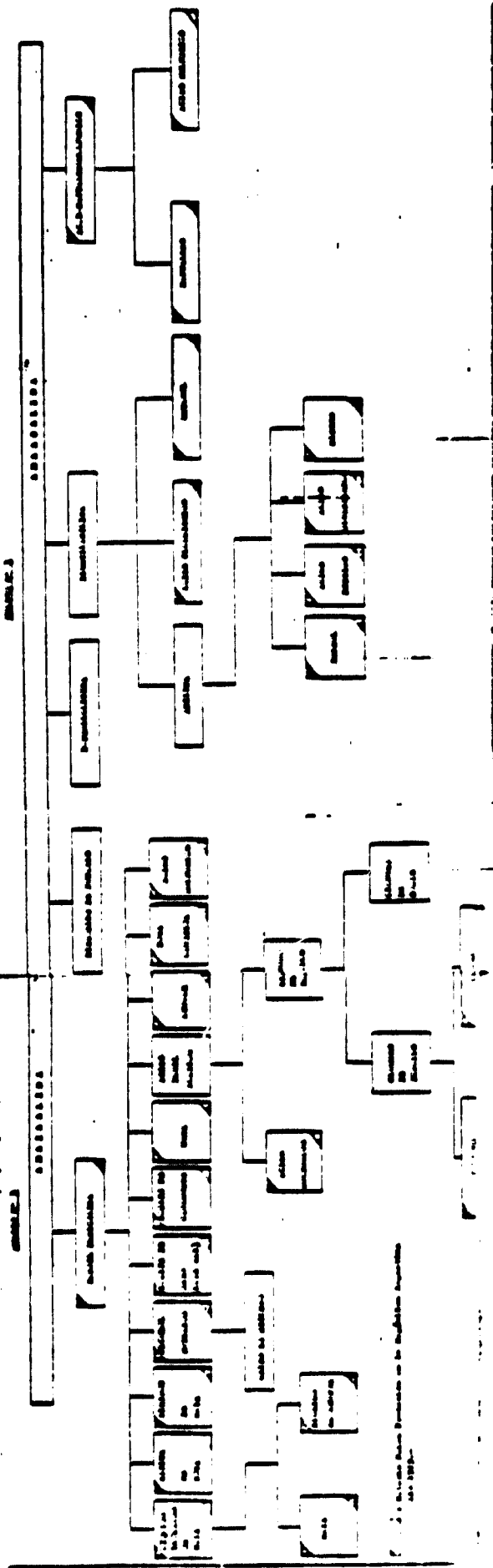
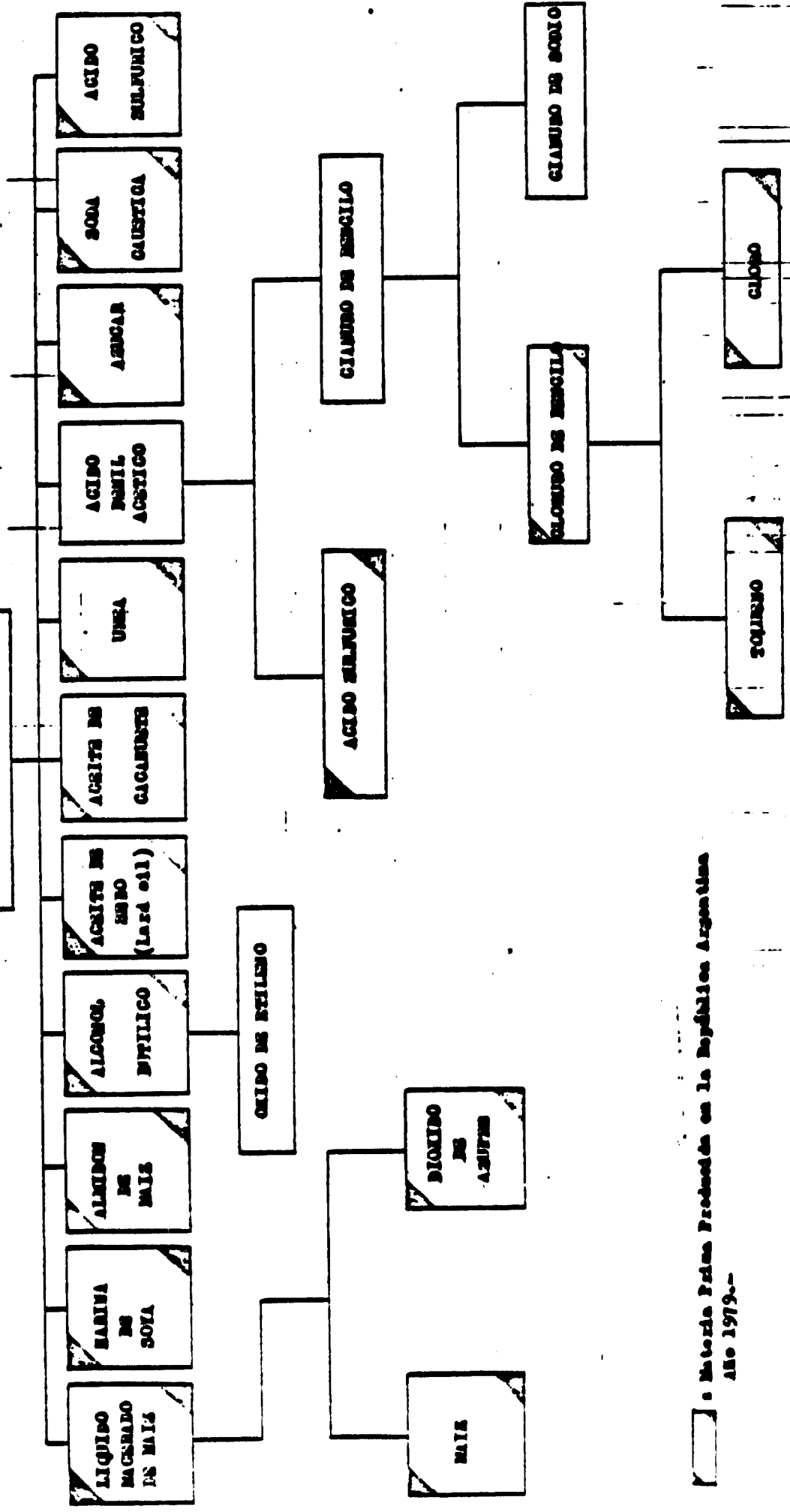


TABLE 1
National Bureau of Standards
1964

TABLE 2

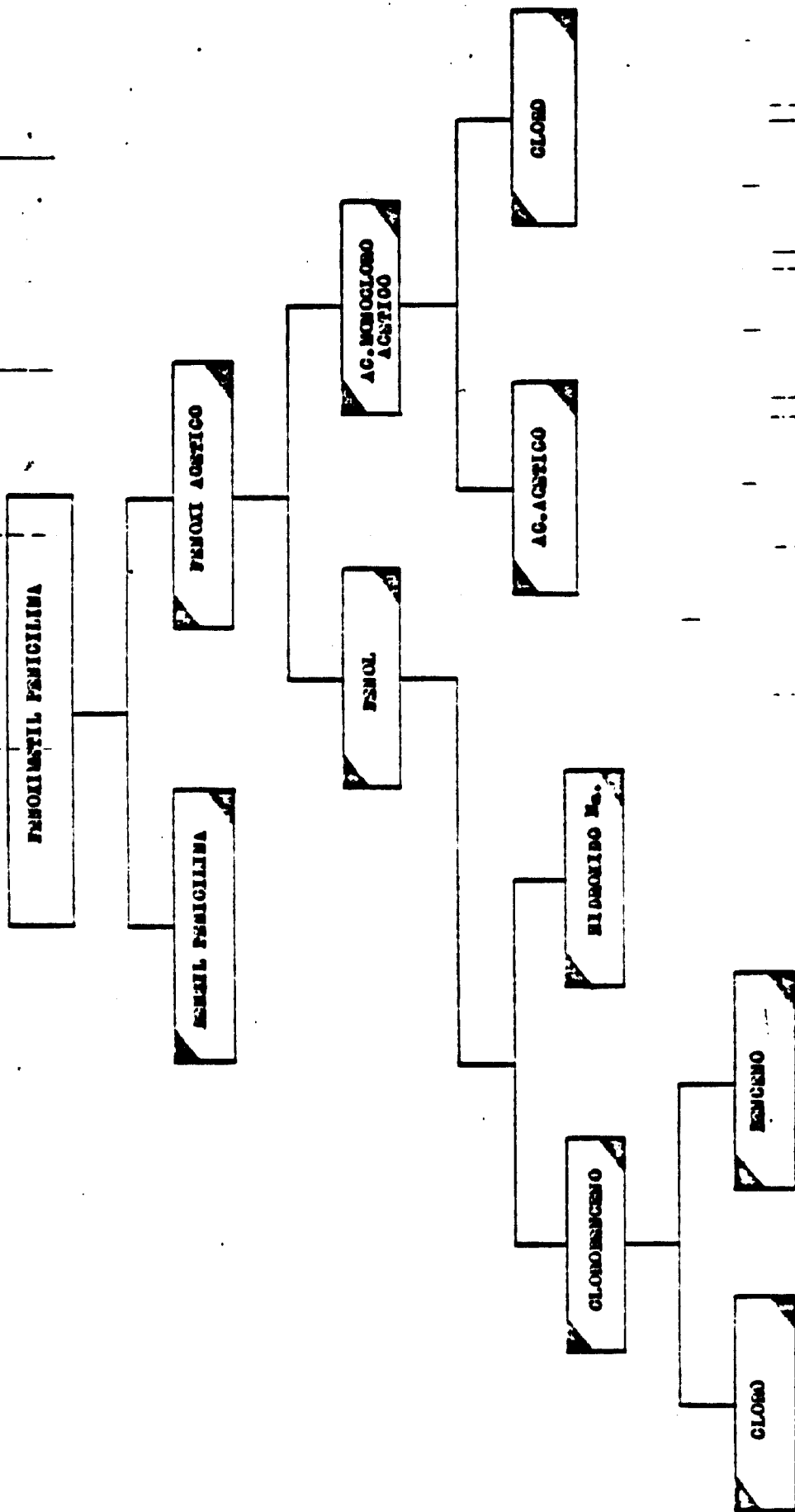
GRUPO N° 4

ESCUFIPENCILINA



Material Prima Producida en la Republica Argentina
Año 1979.-

CUADRO N.º 2



o Materia Prima Producida en la Republica Argentina

Año 1979.-

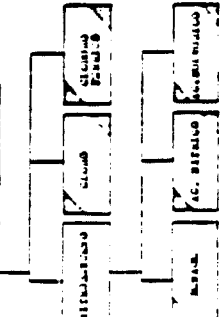
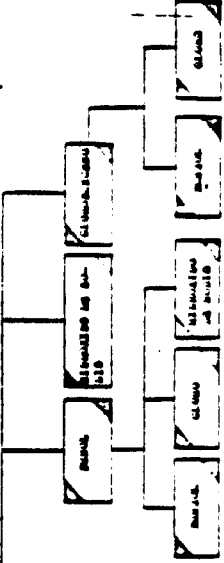
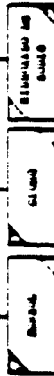
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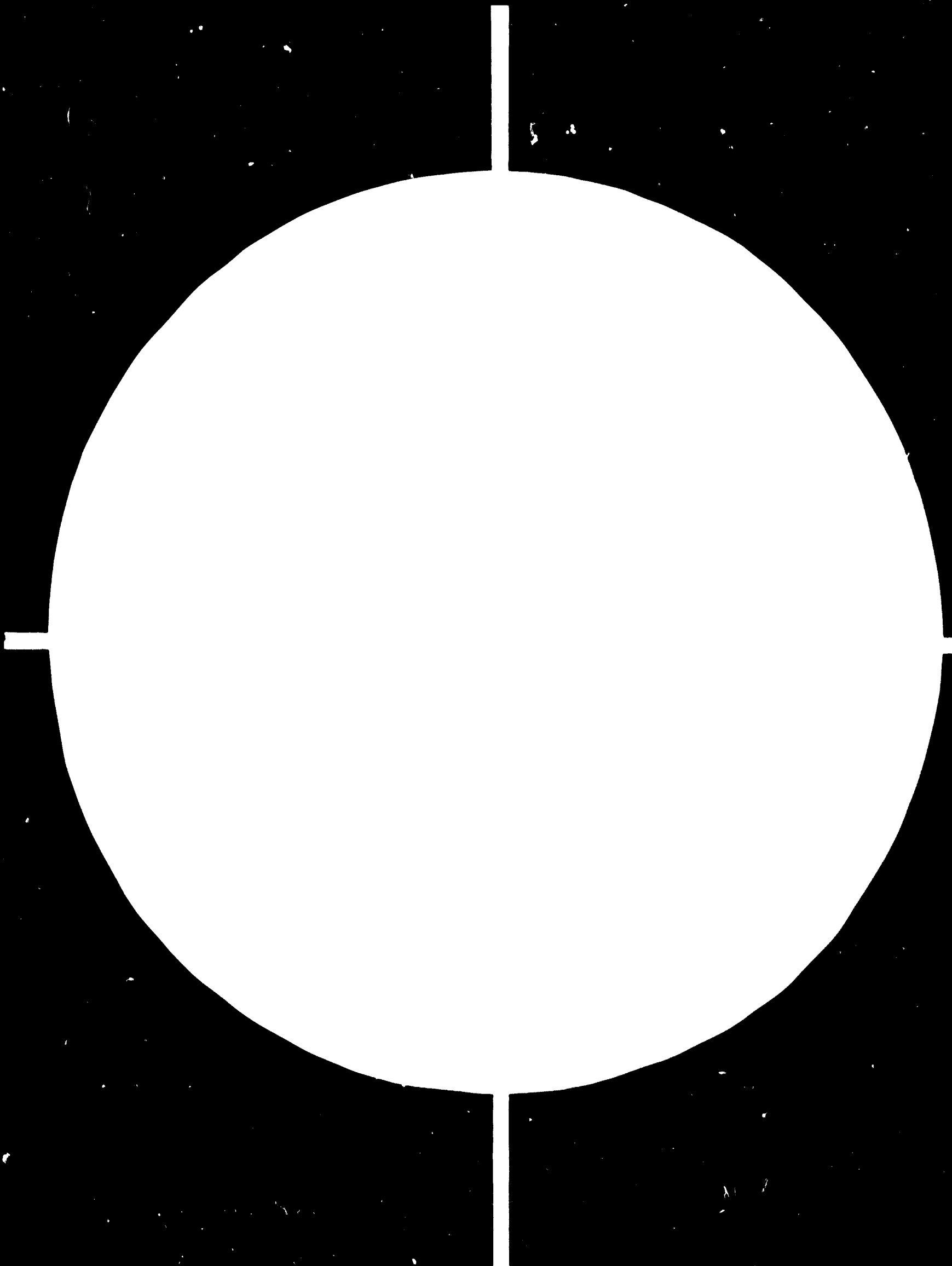
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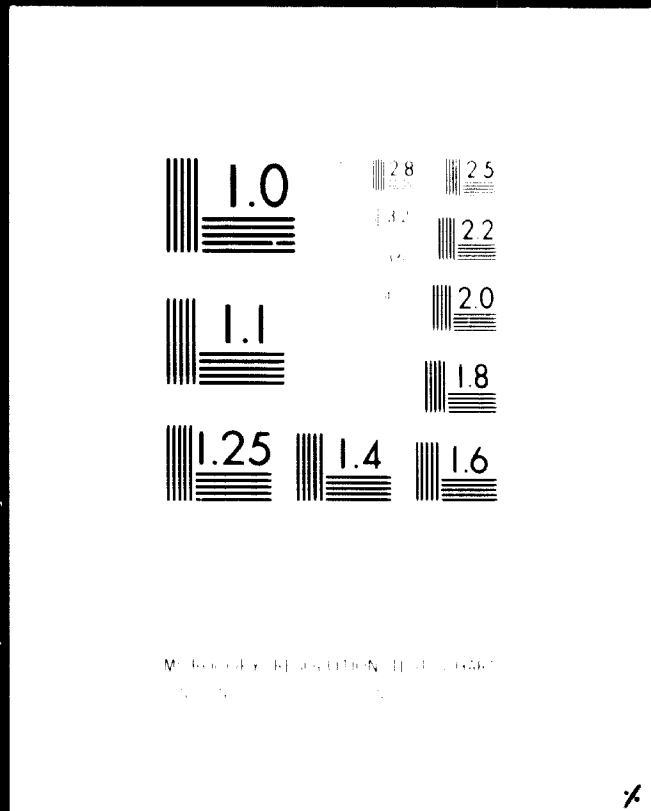


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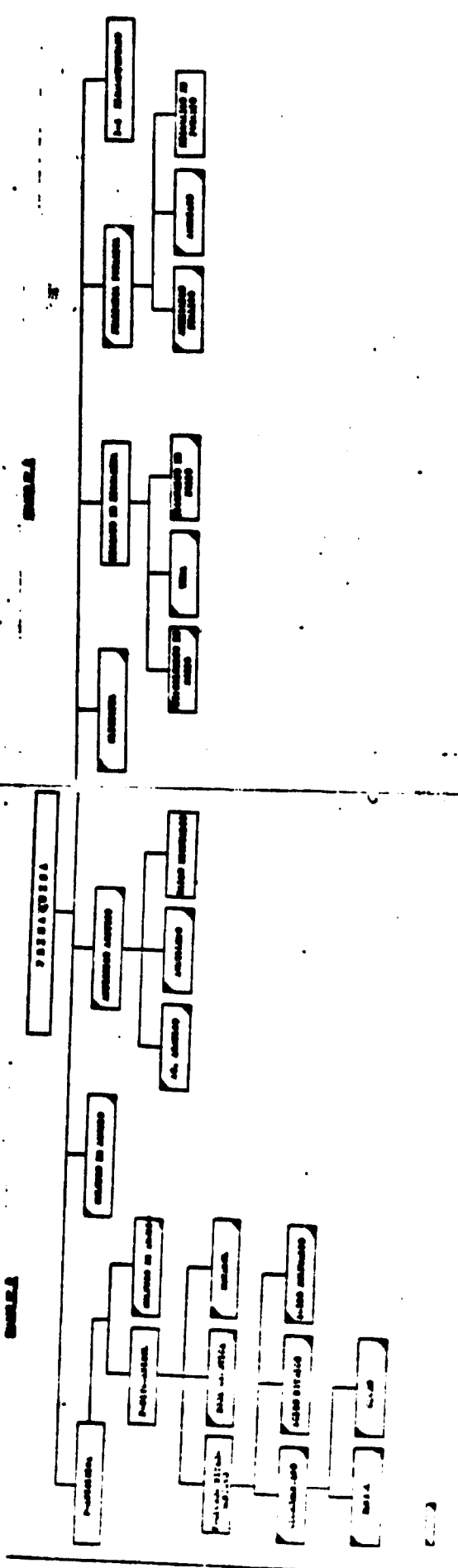


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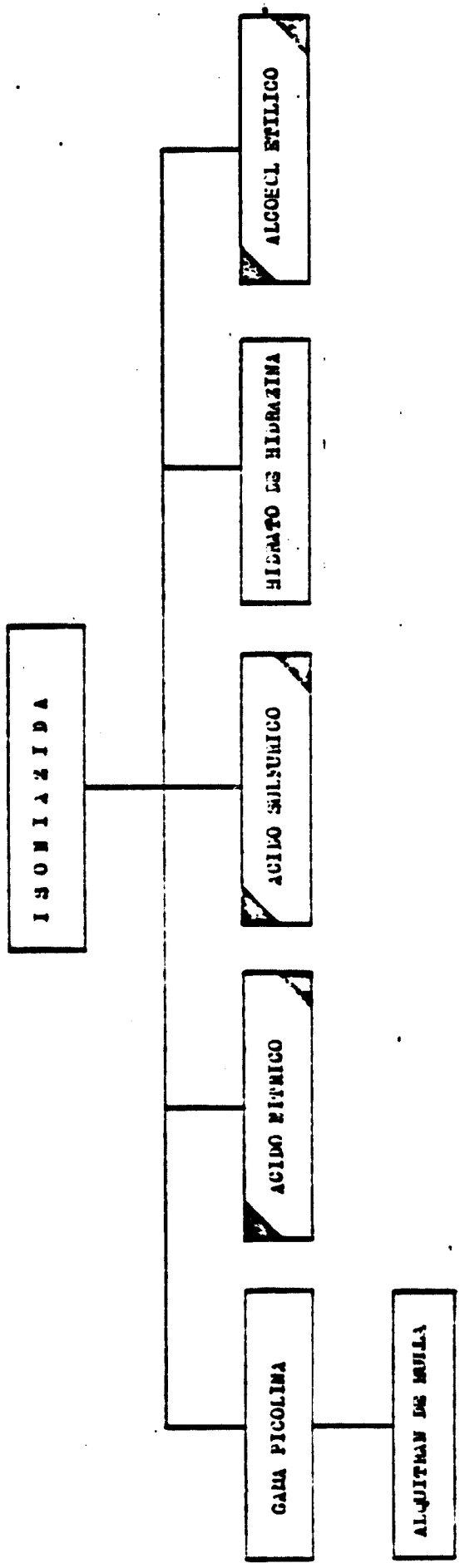
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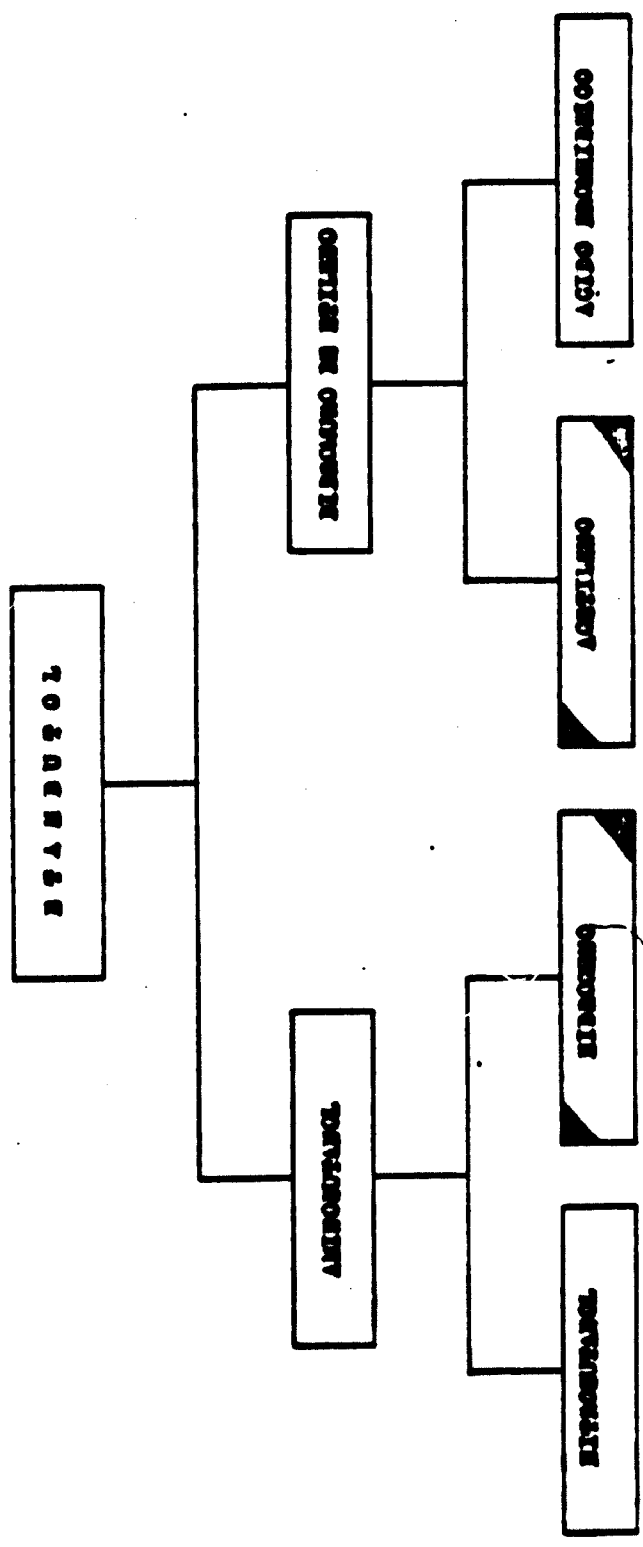


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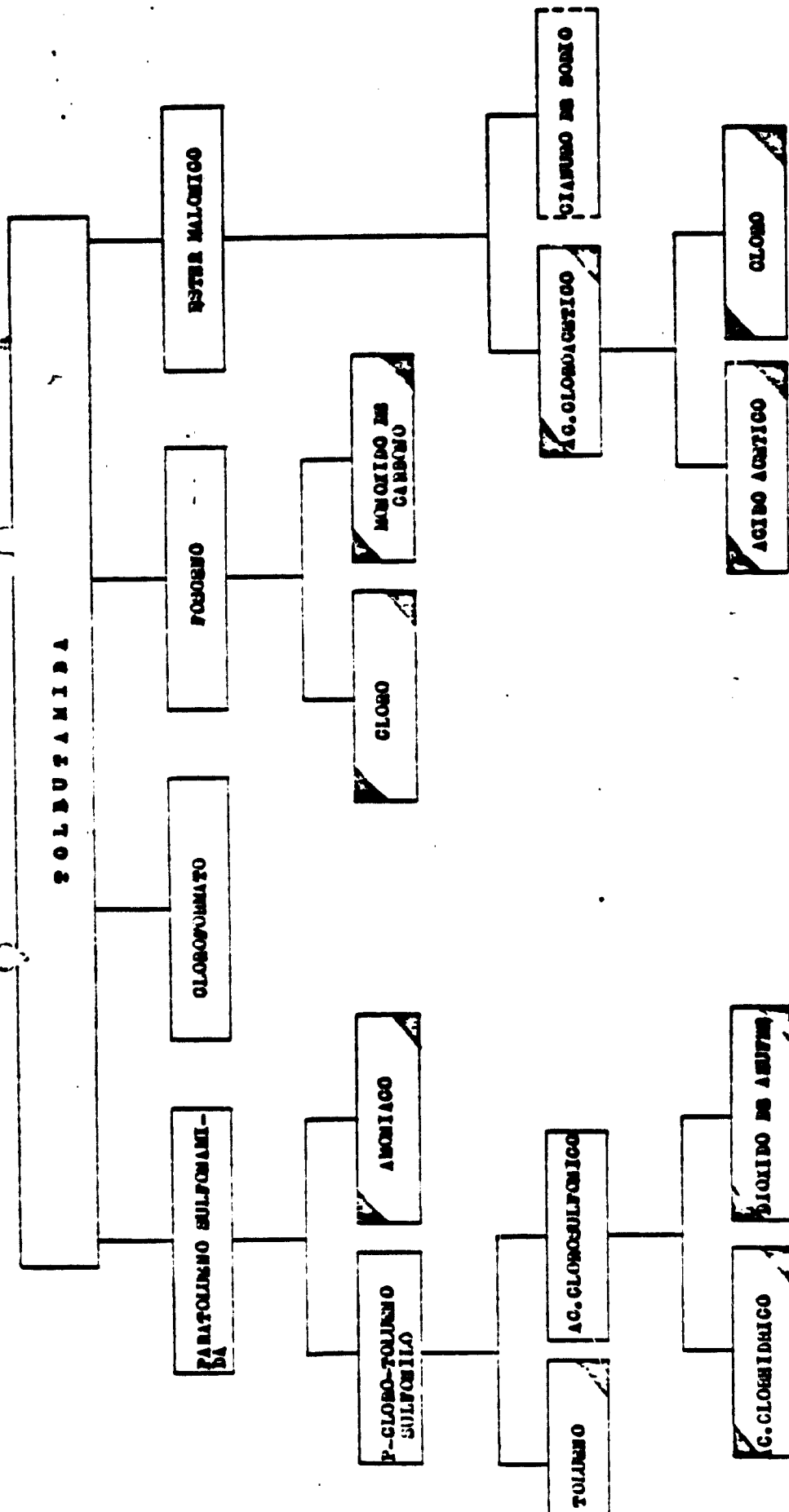
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 AÑO 1979.-

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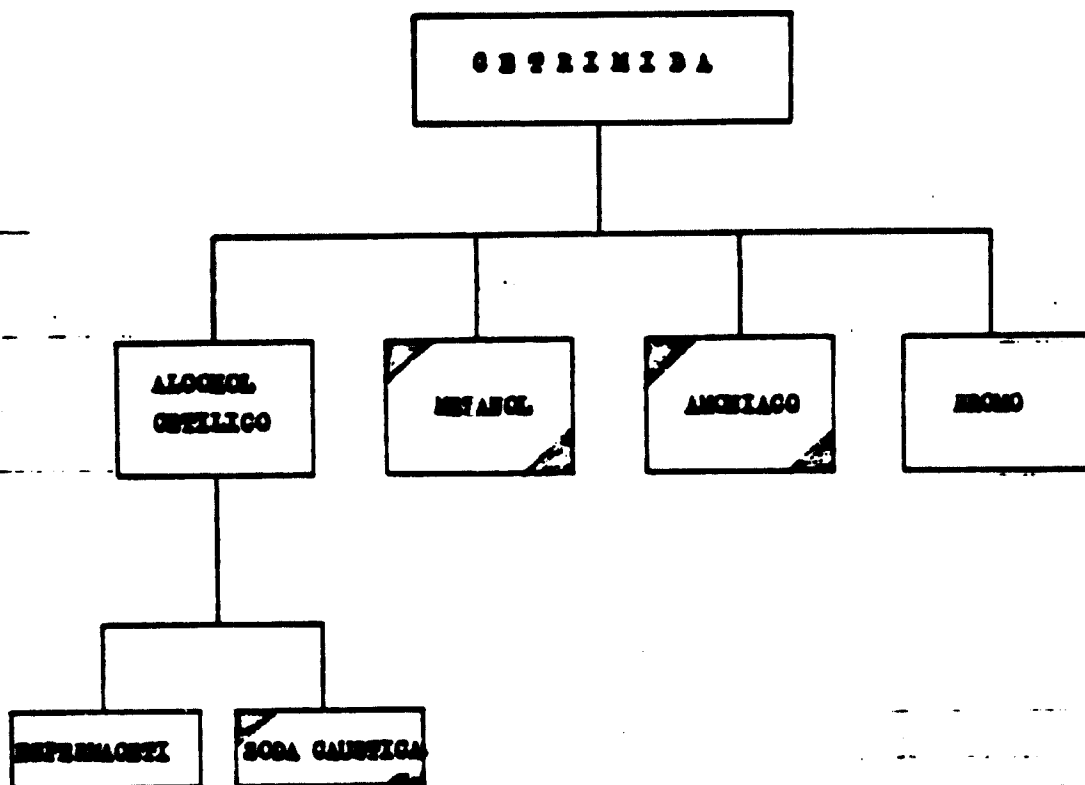
: Materia Prima Producida en la Republica Argentina
 : Año 1979.-

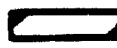
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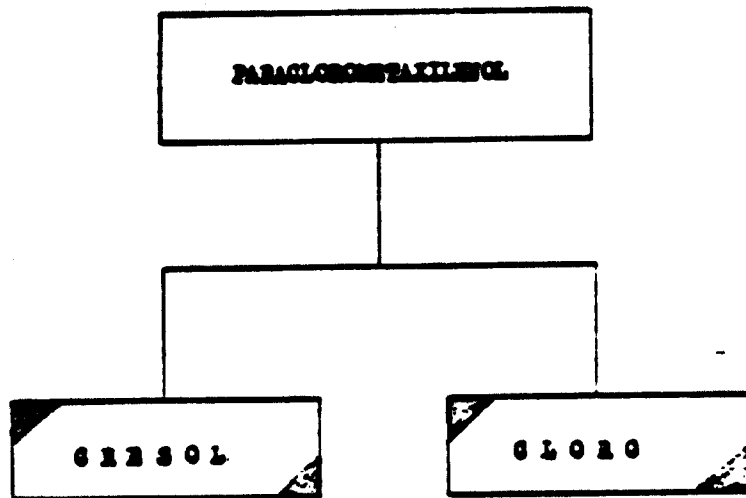
Material Prima Producida en la Republica Argentina
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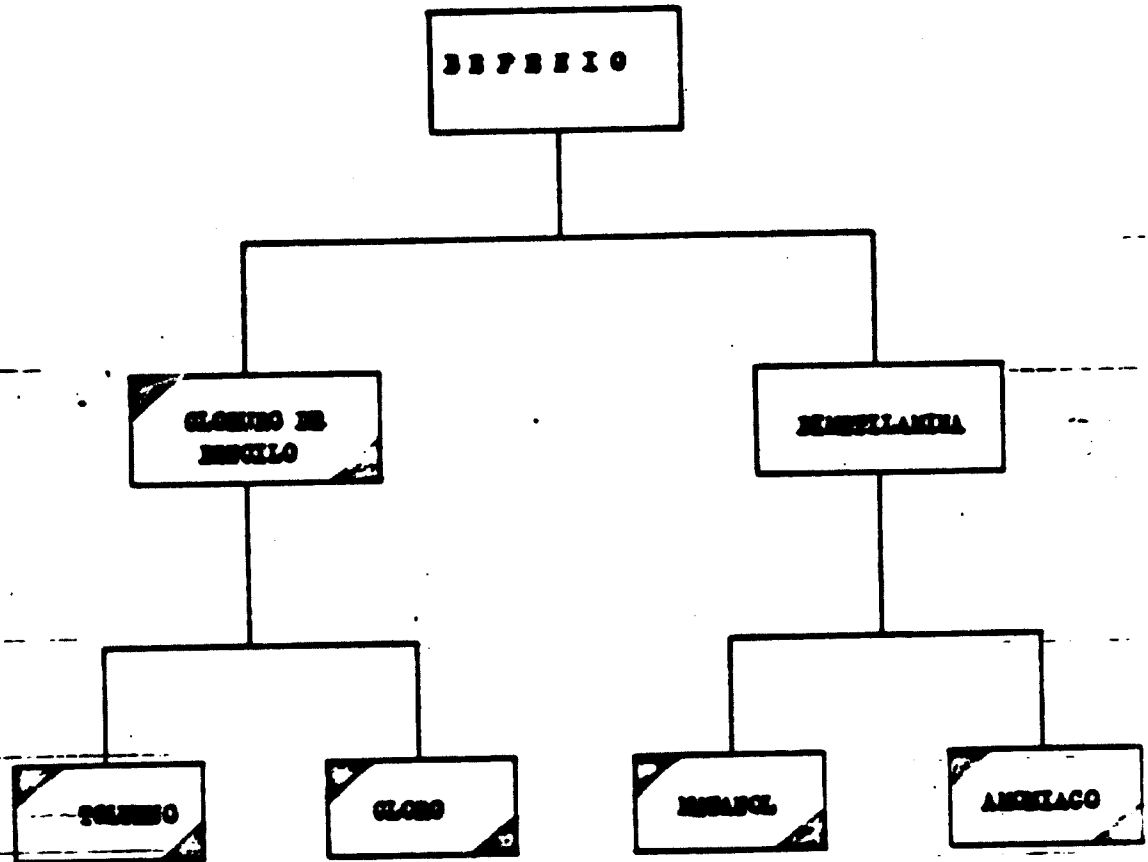
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Año 1979.-


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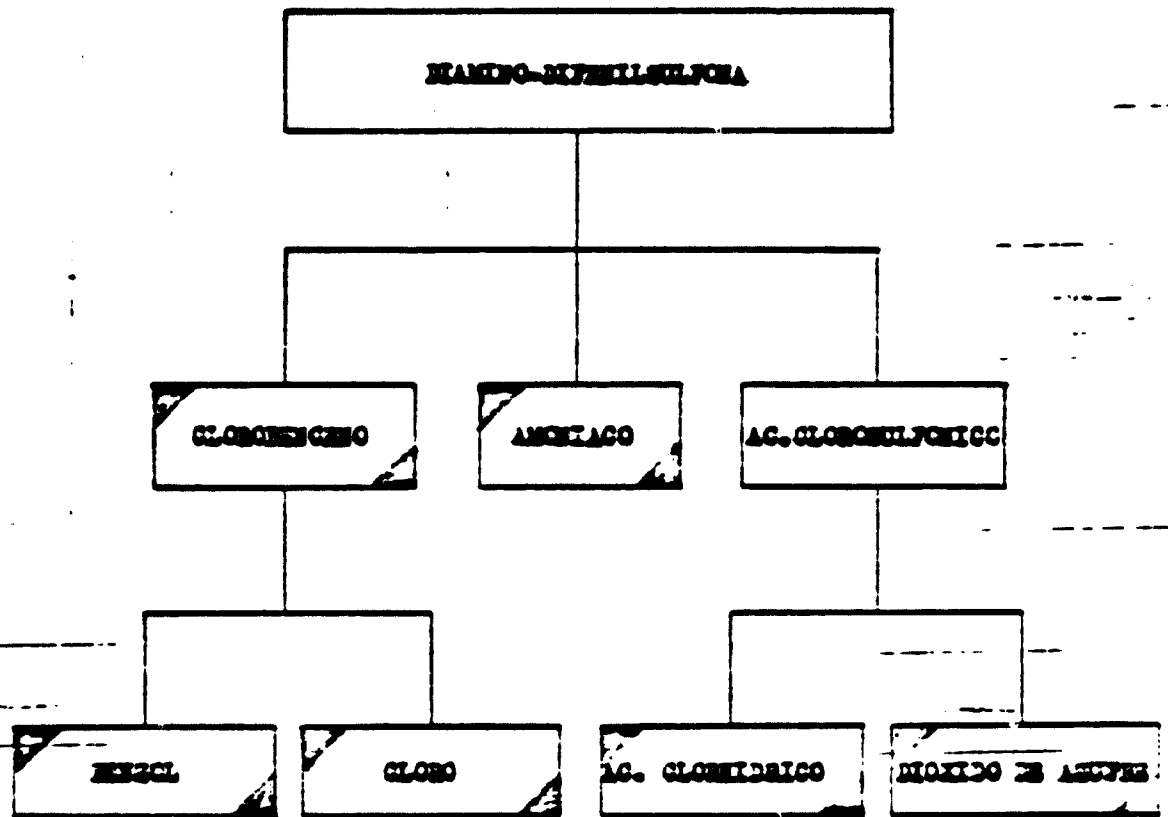
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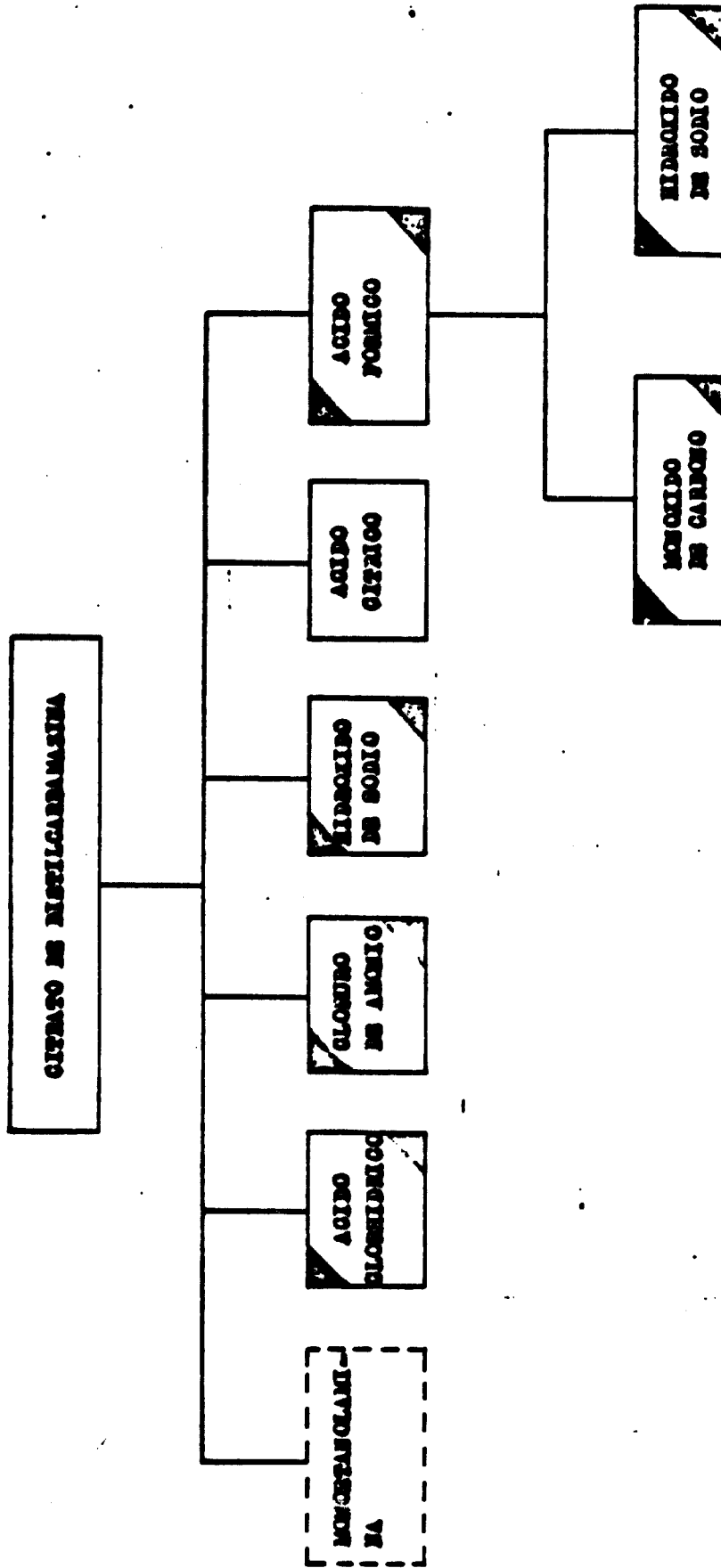
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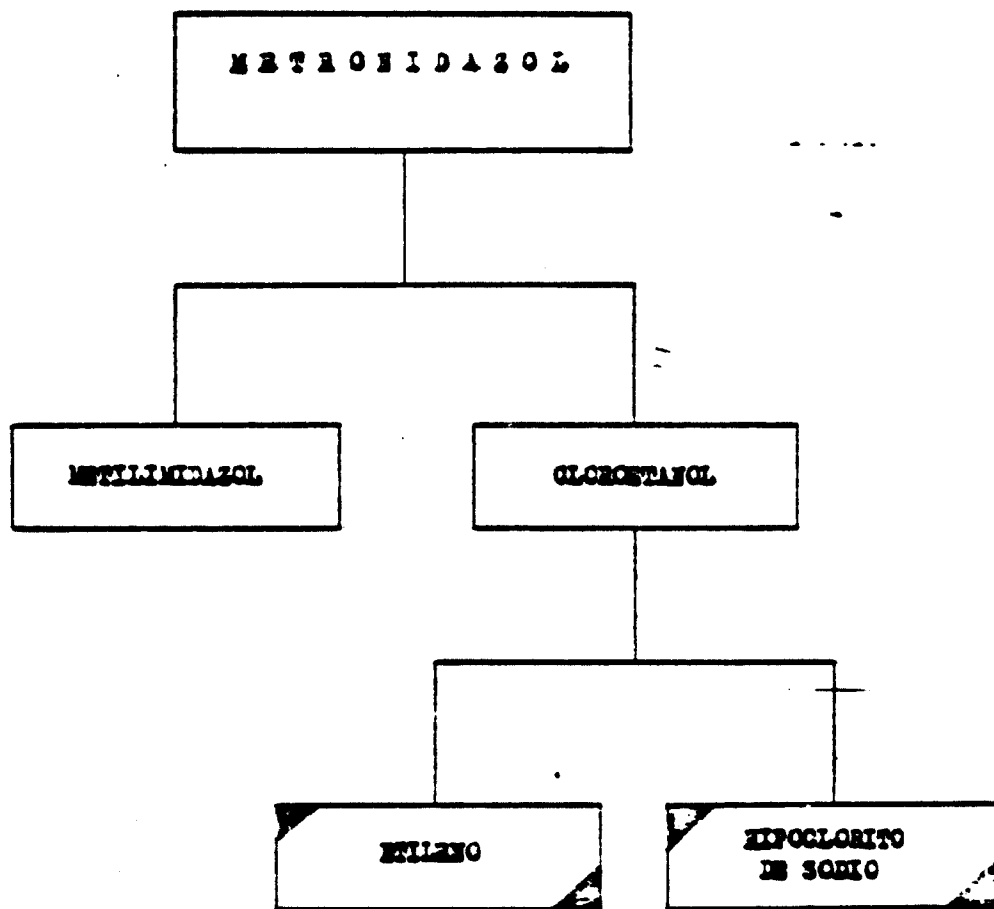
■ : Historia Prima Presentada en la República Argentina
Año 1979.-


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: Materia Prima Producida en la Republica Argentina
 Año 1979.-

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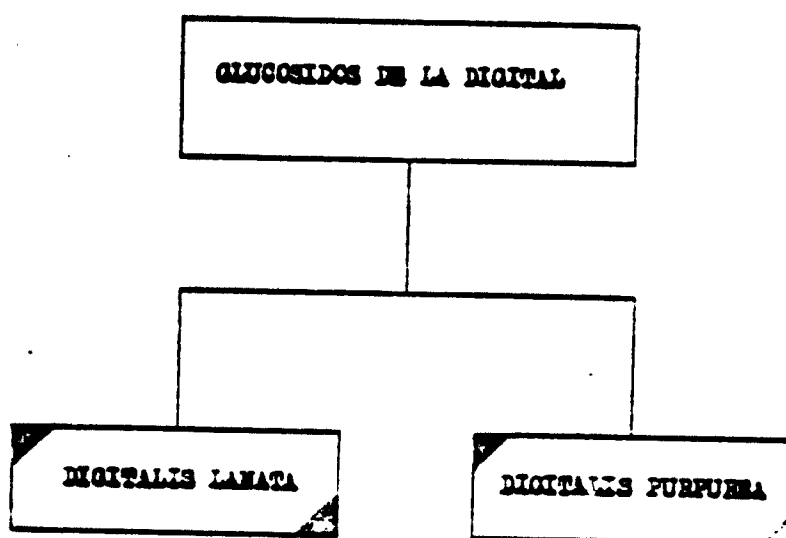
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Año 1979.-

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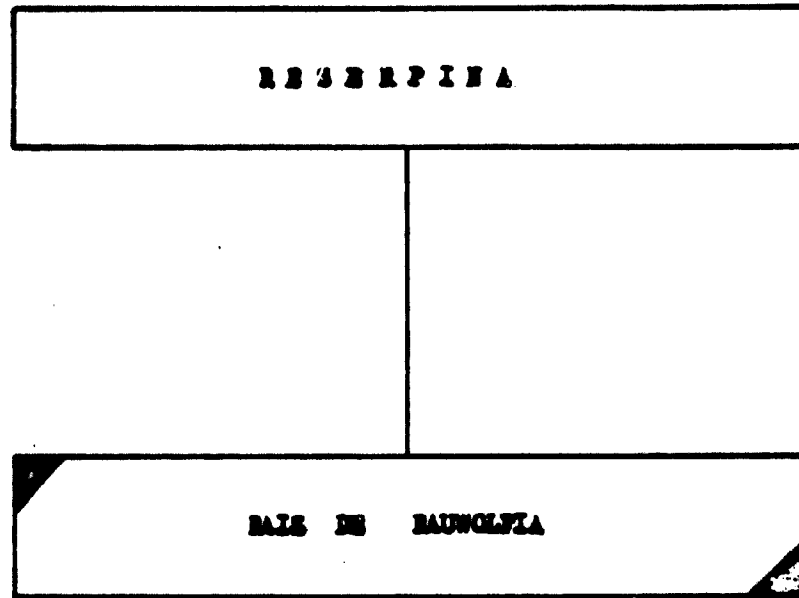
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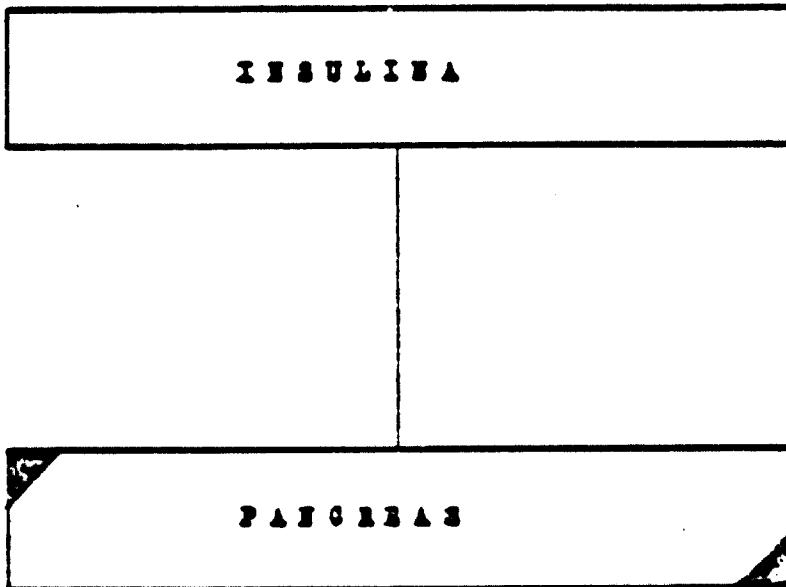
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Año 1979.-

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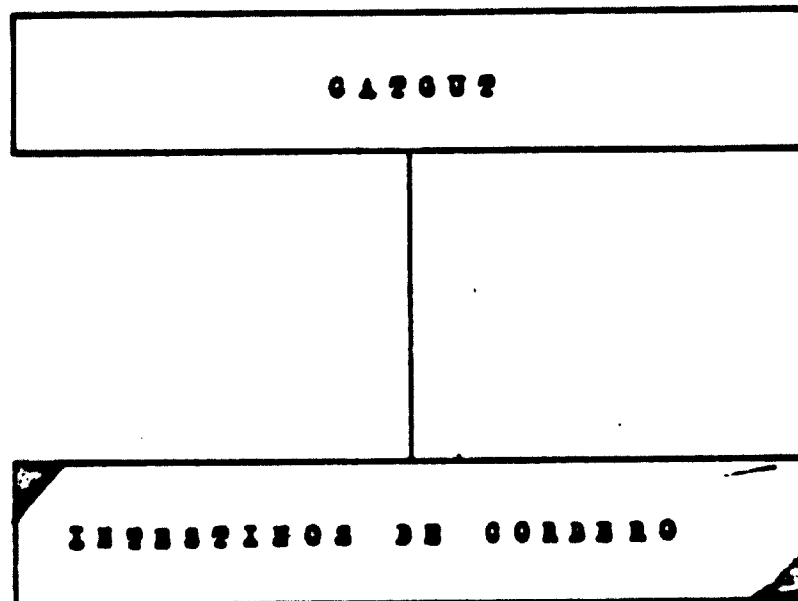
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Año 1979.-

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 : Materia Prima Producida en la Republica Argentina
Año 1979.-

CUADRO N. 21



■ Inicial Prima Producida en la República Argentina
Año 1979.-

GRABO N° 24

PEPSINA

ESTOMACOS DE CERDO



2 Marca Prima Registrada en la Republica Argentina
Año 1979.-

ANNEX XXIV

EXPORTACIONES DE PRODUCTOS QUIMICO-FARMACEUTICOS EN EL PERIODO 1972 - 1976

R U B R O	1976 U \$ S	1975 U \$ S	1974 U \$ S	1973 U \$ S	1972 U \$ S
Glándulas y demás órganos de uso opoterápicos	11.152.394	13.302.124	10.597.030	5.615.520	4.649.221
Antibióticos	6.400.285	5.789.039	7.218.303	5.856.828	4.894.676
Medicamentos empleados en Medicina y Veterinaria	5.454.154	4.918.514	6.109.739	5.770.156	4.672.828
Compuestos Heterocíclicos	5.329.674	4.133.205	4.097.761	2.593.041	1.470.343
Hormonas naturales y re - producidas por síntesis	3.660.393	2.099.382	2.472.086	1.533.573	1.829.043
Ácidos-alcoholes, ácidos - aldehidos, ácidos cetona, ácidos fenoles y otros ácidos de funciones oxigenadas simples o complejas	587.657	1.050.218	1.491.255	1.309.348	971.013
Sueros y Vacunas	258.583	133.376	164.753	178.374	162.158
Sulfamidas	164.430	166.174	146.986	123.557	85.851
Enzimas	74.488	163.648	121.057	126.760	91.878
Otros Rubros	722.139	813.405	975.447	467.836	127.919
T O T A L E S	33.804.797	32.569.085	33.394.417	23.654.993	18.954.930

F U E N T E : Anuario Comercio Exterior.

I.N.D.E.C.

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