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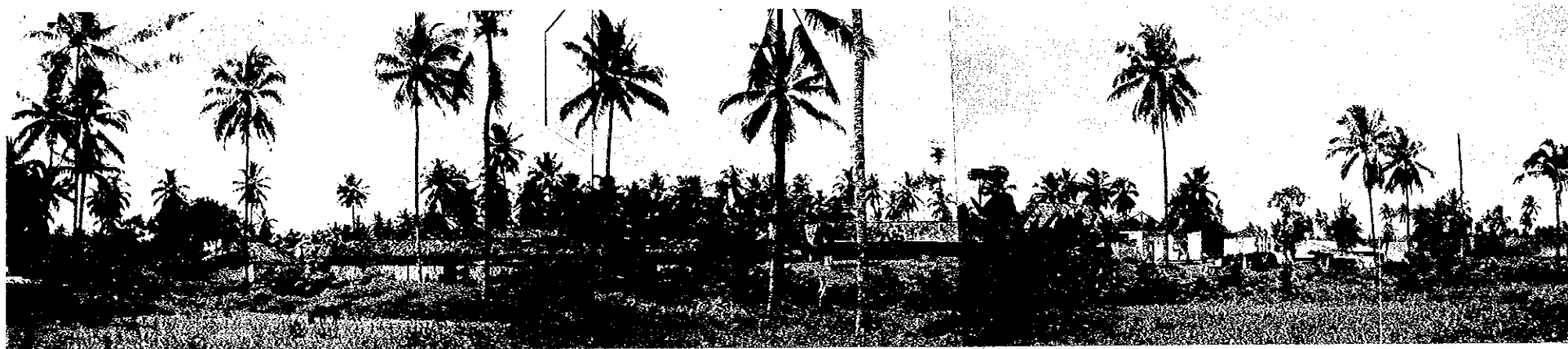
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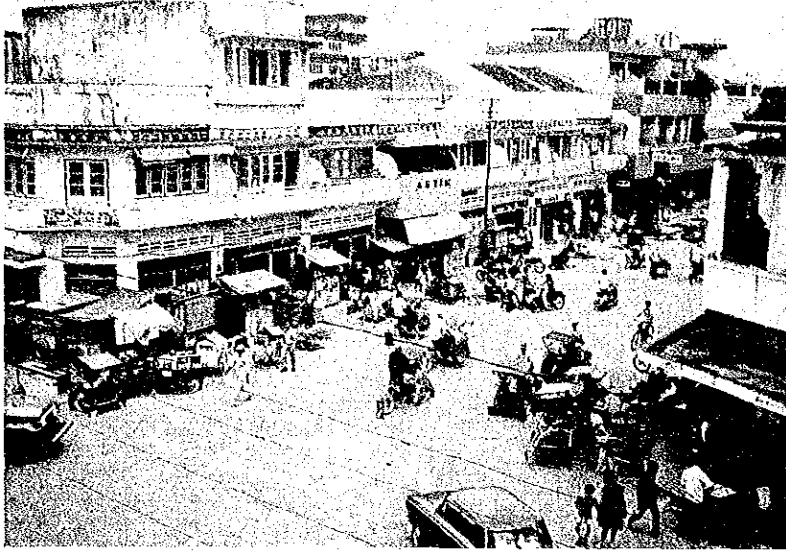
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タンジュンカラン家畜衛生センター工事現場



同上周辺



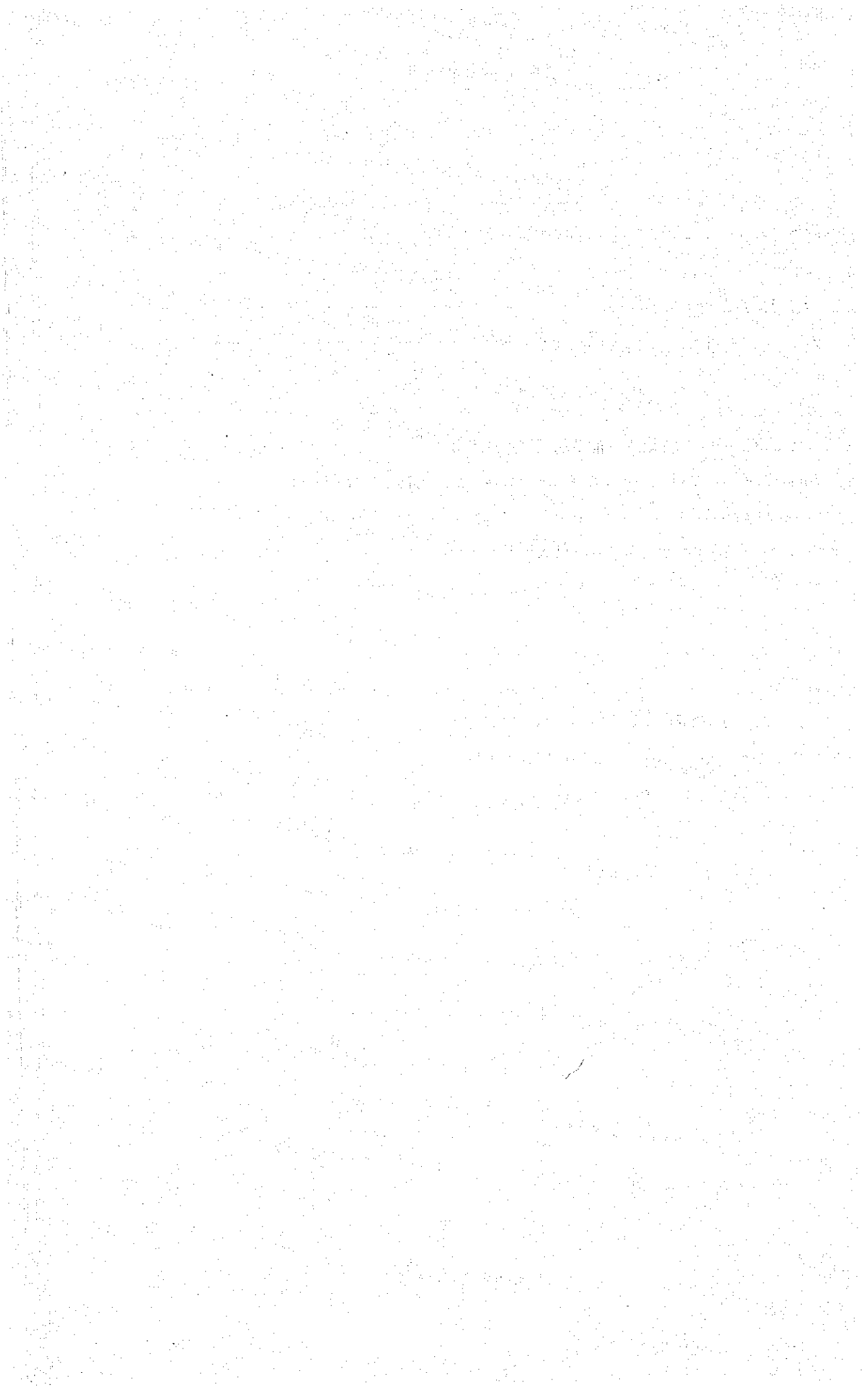
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ホテル MARUKO POLO の一室

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は し が き

インドネシア家畜衛生プロジェクトは昭和52年7月7日、「討議議事録」に署名し、同年10月から専門家3名、アドバイザー1名を派遣して活動を開始した。同プロジェクトはスマトラ島のメダン（北スマトラ州）及びタンジュンカラ（ランボン州）に設立中の家畜衛生センターを中心に周辺のアッチェ州、北スマトラ州、及びベンクル州と南スマトラ州及びランボン州を対象に地域家畜疾病の調査、診断これらに関する試験、家畜衛生、畜産技術者の訓練、地域重要疾病に対するワクチンの試作等を行うというものである。

今般、本プロジェクトの円滑な推進を図るためイ側と「討議議事録」にもとづく具体的な年次別事業計画の策定、53年度機材供与計画の検討を行うため、53年2月21日から3月8日まで計画打合せチームを派遣した。その協議内容は、「インドネシア家畜衛生技術協力プロジェクトに関する最終会議議事録要旨」としてインドネシア側関係者と確認を行いインドネシア側に提出した。

本報告書は同チームの報告をとりまとめたものであり、今後プロジェクトに参画、協力される関係者各位の参考になれば幸いである。

国際協力事業団

農業開発協力部長 金 津 昭 治

I 計画打合せチームの派遣

1 経緯と目的

インドネシア政府より家畜衛生分野の技術協力要請があり、これを受けて昭和51年6月～7月予備調査団（緒方団長他3名）を派遣した。本調査団による調査結果とイ側関係者との協議にもとづいて策定された協力事業の基本構想を具体化するため52年1月～7月2名の長期調査員（1名は2ヶ月間の任期延長）を派遣、さらに52年6月～7月の実施協議チーム（緒方団長他4名）の派遣により討議議事録（R/D）に署名した。

協力事業の概要はスマトラ島、メダン及びランポンに設立される家畜衛生センターを（無償協力により建設中、以下D I Cと呼ぶ）中心にアッチェ州、北スマトラ州、ベンクル州、南スマトラ州、及びランポン州を対象に地域家畜疾病の調査、診断、これらに関する試験、家畜衛生、家畜技術者の訓練、地域重要疾病に対するワクチンの試作等を行うというものである。

R/D及びEx-Notesの規定に従って、昭和52年7月7日から本プロジェクトは事業が開始されることとなり10月から専門家3名（微生物学、鶏病診断、疫学）をメダんに、アドバイザー1名（既に帰国）をジャカルタ畜産総局へ派遣した。

以上の経緯をふまえて、本プロジェクトの円滑な推進をはかるため、イ側とR/D及びEx-Notesの確認、具体的な年次別事業計画の策定、53年度機材供与計画の協議等を行うため53年2月21日から3月8日まで計画打合せチームを派遣した。

本チームはイ側との協議項目として予め次のことを準備した。

1. 年次別事業計画（案）
2. 専門家派遣計画（案）
3. 機材供与計画（機材リスト）
4. 研修員受入計画（案）
5. その他

2 調査日程及び行動

日次	月日	曜日	発	着	利用便	宿泊地	訪問先・調査事項
1	2/21	火	東京 10:30	ジャカルタ 18:40	air	ジャカルタ	出発
2	22	水				〃	日本大使館、JICA事務所〔表敬訪問及び調査事項、日程等打合せ〕
3	23	木				〃	畜産総局、バベナス〔表敬訪問、調査事項、日程等打合せ〕
4	24	金				〃	畜産総局〔年次計画の協議〕
5	25	土				〃	畜産総局〔53年度機材供与計画協議〕
6	26	日				〃	資料整理
7	27	月	ジャカルタ	メダン	air	メダン	移動、日本領事館、北スマトラ州畜産局〔表敬訪問、D I C建設現場視察〕
8	28	火					北スマトラ州畜産局〔協力計画協議〕
9	3/1	水	メダン	ジャカルタ	air	ジャカルタ	移動、資料整理
10	2	木	ジャカルタ	トルクベトン	air	トルクベトン	ランボン州畜産局表敬訪問及び事業計画打合せ、D I C建設現場視察
11	3	金	トルクベトン	ジャカルタ	air	ジャカルタ	移動、資料整理
12	4	土				〃	畜産総局〔協力計画協議〕
13	5	日				〃	資料整理
14	6	月					畜産総局〔最終協議〕
15	7	火	ジャカルタ		air	機中泊	畜産総局〔議事要旨の確認、あいさつ〕
16	8	水		東京	〃		帰国

3 チームの構成

団 長（総括）	貝 塚 一 郎	農林省 動物医薬品検査所、豚コレラ予防 液検査室長
団 員（家畜衛生）	朝 日 光 久	“ 動物検疫所、企画調整課調整係長
“（業務調整）	佐 藤 よし江	国際協力事業団、農業開発協力部、畜産開 発課

Ⅱ 計画打合せ概要

議事録要旨（53年3月6日）

インドネシア家畜衛生改善計画、技術協力プロジェクトに関する最終会議議事録要旨

日 時：1978年3月7日 午前10時～12時

場 所：畜産総局

出席者：（インドネシア側）

Prof. Dr. Hutasoit

Dr. Teken

Dr. Sukobagyo 家畜衛生課長

Mr. Asmara

（日本側）

貝塚 計画打合せチーム団長

朝日 " 団員

佐藤 " "

為季 日本大使館一等書記官

宮下 JICA ジャカルタ事務所

1977年7月7日、日・インドネシア関係者の間で署名された「インドネシア家畜衛生改善計画技術協力プロジェクトに関する討議議事録」及び同Ex-Notesに基づく事業実施計画について協議するため1978年2月21日から16日間、貝塚一郎氏を団長とする計画打合せチームはインドネシア国を訪問し、2月23日の第1回会議をはじめとし、数回の会議を開催した。数回の会議において討議された諸事項を最終的に討議し、双方が確認しあうため、Hutasoit 総局長主宰のもとに最終会議が開催された。

討議の後、両国関係者は、プロジェクトを効率的に実施するため（別紙の）事業実施計画について合意した。

1 事業計画

1-1 総論；協力事業は原則的にR/Dの規定に従って実施される。

1-2 事業年次計画；（別紙1）

2 専門派遣計画

2-1 長期専門家；メダンD I Cに4名、タンジュンカランド I Cに2名の専門家派遣が予定されている。唯し77年10月からメダンへ専門家3名が既に派遣されている。

残りの専門家3名の派遣予定は次の通り。

メダン1名 寄生虫 2ケ年（1978年8月～）

タンジュンカランド 2名（微生物学、疫学）2ケ年（1979年1月～）

現況ではメダンD I Cは9月、タンジュンカランド I Cは10月完成の予定。

2-2 短期専門家；イ側の要望は次の通り。

メダン；病理 1名 3ヶ月（1979年1月～3月）

タンジュンカラン供与機材の受領及び配置等のため 1名 3ヶ月（1978年10月～12月）

日本サイドとしてはタンジュンカランへの上記の短期専門家派遣は人材等の問題から困難であろうと回答したが尚、日本サイドで検討することを約した。

3 カウンターパートの配置計画

イ側はD I C完成後は9名のカウンターパート配置を提示した。具体的には78～79年度内にメダン2名、タンジュンカラン1名の増員を明示した。

4 研修員受入計画

4-1 本プロジェクト第2年次の受入計画はグループ・コース1名の受入れが決定、個別2名の受入れ枠については日本サイドで鋭意検討中と回答した。これに対しイ側は4名の受入れを要望したが日本国内での受入れ機関が限定されている実情から下記4名全員の受入れは困難であろうと説明し、イ側の要望として日本サイドの関係機関と検討する旨回答し、研修分野のみ提示させた。イ側の希望研修分野及び優先順位は次の通り。

微生物学（血清学、蛍光抗体法技術を含む）1名

病理学 1名

寄生虫学 1名

鶏病（ウィルス学を含む） 1名

4-2 オブザーベーションツァ；

イ側から具体的に2名要請したい旨表明されたが本件はR/D、Ex-notesに記載するプロジェクト事業年度の初年度分であるとし、第2事業年度分として更に3名（2週間）を日本に送りたい旨希望があった。日本側としては予算制度の問題から当初の2名については実際にはプロジェクト事業年度の第2年次に相当するものであることを説明した。

なお、これら受入れについてはコロンボ計画にもとづく通常の手続に従って研修員受入要請書（A2、A3フォーム）を早期に日本政府に送付するようコメントするにとどめた。

5 機材供与計画

R/D、及びEx-Notesに規定された機材を日本政府はイ国政府の要請に従って各々の予算年度内に予算の範囲内で供与する計画である。このため今回の調査団は第2年度分メダン及びタンジュンカラ各々のD I Cに供与すべき機材についてイ側と協議し、機材リストを作成した。(別紙2)

討議の結果、イ側は夫々のD I Cに対しプロジェクト・エリアの地域性に鑑み、車輛類の必要性を強く要望、次いで試薬類の重要性を指摘した。その他の機材の優先度については日本人専門家のチーム・リーダー及び専門家に一任するとした。

なお、イ側は、R/D及びEx-Notesに規定されているB及びCタイプD I Cに対する機材として車輛類、病性鑑定材料の保存のための冷蔵庫及び簡単な実験室用器具の供与を日本側に要望した。特に第2年度においてはアッチェ州に設立予定のB-D I Cに対し上記機材を供与してほしい旨強く要請があった。

日本側としてはこの要望に対しては日本サイドで検討を要するとしたが、ある種の機材(病性鑑定材料の保存に必要な機材等)については考慮することを約した。

従って第2年度分の機材リストは以上の事情を考慮して作成されたものである。

別紙 1

1 家畜疾病診断業務及び技術研修の年次別事業計画

	第一年次 77.7~78.7	第二年次 78.7~79.7	第三年次 79.7~80.7	
メ ダ ン D I C	(実験室業務) ①内部寄生虫類の顕微鏡的検査 ②各種血清反応…e.g. ブルセラ病、ニューカッスル病	(実験室業務) ①病原微生物の分離固定 ②蛍光抗体法の基礎技術 ③病理組織学的診断の基礎技術 ④組織培養法の基礎技術 ⑤発育鶏卵培養法の基礎技術	(実験室業務) ①生物学的製剤応用の可能性の検討及び試作 ②蛍光抗体法の応用技術 ③病理組織学的診断の応用技術 ④組織培養法による診断 ⑤発育鶏卵培養法による診断	イ側と協議の上決定
	(野外業務) ①病性鑑定材料収集ルートの確立 ②皮内反応による診断 e.g. 結核	(野外業務) ①不明疾病の調査 ②原因及び診断方法が判明した疾病の野外での実態把握及び調査 ③特定農場における各種疾病の実態把握及び調査 ④病理解剖学的診断の基礎技術	(野外業務) ①病理解剖学的診断の応用技術	
	(その他) ①日本国内における研修 ②DIC職員に対する研修(on the job training方式) ③プロジェクト・エリア在勤獣医師等に対する研修	(その他) ①日本国内における研修 ②DIC職員に対する研修(on the job training方式) ③プロジェクト・エリア在勤獣医師等に対する研修 ④初年度に実施出来なかった業務	(その他) ①日本国内における研修 ②DIC職員に対する研修(on the job training方式) ③プロジェクト・エリア在勤獣医師等に対する研修 ④前年度に実施出来なかった業務	

- イ. 第1年次事業計画はD I C完成の遅延と機材供与計画の関係から当初計画を修正
- ロ. タンジュンカラND I Cにおける業務はメダンに準じて実施する。但し、メダン第3年次における生物学的製剤の試作は含まない。
- ハ. 第2年次以後の計画はD I C完成、及び機材の受入れ完了を前提に作成した。

SUMMARY OF MINUTES OF FINAL MEETING FOR TECHNICAL
COOPERATION PROJECT ON ANIMAL HEALTH IMPROVEMENT
PROGRAMME (ATA-133)

In pursuance of activities under the Record of Discussions (RD) signed on July 7, 1977, the Japanese Consultation Team organized by the Japan International Cooperation Agency and headed by Dr. ICHIRO KAIZUKA, visited Indonesia from Feb. 21 to Mar. 8, 1978, in order to discuss the details of the working programmes for the successful implementation of the project with the Indonesian authorities concerned.

The followings are detailed items discussed for the Disease Investigation Centers (D.I.C.) in Medan and Tanjung Karang.

I. Operational working plan

I-1 General information; The technical cooperation will be performed, in principal, in accordance with provision of the RD.

I-2 Operational working programme for D.I.C.s;

1. First year (July '77 - July '78)

A. Laboratory techniques ;

- (1) Microscopic examinations of internal parasites.
- (2) Various serological tests, e.g. Brucellosis, Newcastle disease.

B. Field works ;

- (1) Establishment of the channel of sample collection.
- (2) Diagnosis by intradermal reaction, e.g. Tuberculosis.

C. Others ;

- (1) Training in Japan.
- (2) Training for counterparts of D.I.C.s (on - the job - training method).
- (3) Training for veterinarians and assistant veterinarians in the project area.

2. Second year (July '78 - July '79)

- (1) Isolation and identification of the pathogens.
- (2) Basic technique of the fluorescent antibody method.
- (3) Basic technique of the histopathological diagnosis.

- (4) Basic technique of the tissue culture.
- (5) Basic technique of the embryonated hen's egg.

B. Field works ;

- (1) Investigation of unknown diseases.
- (2) Survey for the diseases already have been known the cause and method of the diagnosis in the field.
- (3) Survey of the diseases at the selected farms in the project area.
- (4) Basic technique of the pathological diagnosis.

C. Others ;

- (1) Impractical works in the first year.
- (2) Training in Japan.
- (3) Training for counterparts of D.I.C.s (on - the job - training method).
- (4) Training for veterinarians and assistant veterinarians in the project area.

3. Third year (July '79 - June '80)

A. Laboratory techniques ;

- (1) Investigation of the possibility of application and trial production for the veterinary biologics.
- (2) Applied techniques for the diagnosis using the fluorescent antibody method.
- (3) Applied techniques of the histopathological diagnosis.
- (4) Diagnosis by the tissue culture.
- (5) Diagnosis by the embryonated hen's egg.

B. Field works ;

- (1) Applied techniques of the pathological diagnosis.

C. Others ;

- (1) Impractical works in the second year.
- (2) Training in Japan.
- (3) Training for counterparts of D.I.C.s.
- (4) Training for veterinarians and assistant veterinarians in the project area.

Remarks ;

1. It is inevitable to amend the programme for the first year because of incompleteness of D.I.C. facilities and deficiency of equipments, machinery, materials, etc.
2. As far as the activities of the D.I.C. in Tanjung Karang will be carried out in accordance with the activities of the D.I.C. in Medan, excepting the trial production of veterinary biologics.
3. The programme is formulated on the assumption that the completion of D.I.C.s and the receiving of equipments, materials, etc. as to be provided would be done.

II. Expertise

II-1 Long term experts ;

4 (four) Japanese experts to D.I.C. in Medan 2 (two) experts to D.I.C. in Tanjung Karang will be assigned respectively after the completion of D.I.C., in accordance with the RD, however 3 (three) of them had been already assigned since October '77.

Further assignment of Japanese expert (parasitology) for Medan should be from August '78, and other 2 (two) experts (microbiology and epidemiology) for Tanjung Karang should be from January '79.

According to the present situation of the D.I.C.s. in Medan and Tanjung Karang will be completed in September and October '78 respectively.

II-2 Short term experts ;

The expert in the field of pathology has not been sent to D.I.C. in Medan so far.

The Indonesian side has requested 1 (One) short term expert for 3 (three) months who will be concerned in receiving and/or installing of equipment to be provided by the Japanese Government in Tanjung Karang from Oct. '78 to Dec. '78, and also 1 (one) short term expert in the field of pathology from Jan. '79 to Mar. '79 for Medan.

For the Japanese side, however, much difficulties might be encountered in finding out such expert for Tanjung Karang.

Concerning to this problem, further discussions should be done by the Japanese side.

III. Counterpart officials for D.I.C.s.

Indonesian counterpart officials to each D.I.C. in Medan and Tanjung Karang will be assigned at least 3 (three) more (two for Medan, one for Tanjung Karang) in the year of 1978/1979.

The counterpart officials for D.I.C.s will be at least 9 (nine) after the completion of each D.I.C. of this project.

The full number of the individual course for veterinary officials are still under the considerations at the Japanese side as to be 2 (two).

Indonesian side has requested 4 (four) veterinary official for (six) months, 1 (one) for the field of microbiology including serology and fluorescent antibody methods, 1 (one) for the pathology, 1 (one) for the parasitology and 1 (one) for the poultry diseases including virology.

Priority of the requested field should be followed as to be mentioned above.

For the Japanese side, the most important problem in this respect is to find out the suitable facilities to accept the said trainees.

As to the observation tour described in explanatory notes of the RD for the first year of project will be realized in the second fiscal year of the Japanese side.

For the second year of the project, Indonesian side has requested 3 (three) persons for about 2 (two) weeks in different time for the observation tour.

The applications for these fellowships (Form A₂, A₃) should be expedited to the Government of Japan through the normal procedures of the Colombo plan.

V. Provision of equipment, machinery and materials etc.

Supply of equipments, machinery and materials necessary for the project from the Government of Japan will be arranged, on request from the Government of Indonesia, within the budgetary limitation in each fiscal year. A list of them was discussed for the second year of the project for both D.I.C. in Medan and Tanjung Karang.

It was decided, as a result, that the priority should be given to the vehicles and reagents among the list, while other items should be selected, in accordance with the priority given by the team leader of Japanese experts.

Indonesian side has expected that vehicles, equipments, machinery and materials for the transportation and storage of collected specimens and simple laboratory works should be provided to B and C type D.I.C.s in project area by the Government of Japan.

Concerning to this items, priority was given to the B type D.I.C. in Aceh by the Indonesian side in the second year of the project.

Japanese side has also recognized that certain materials etc. should be provided to the B and C type D.I.C.s. in project area within the budgetary limitation. The list of equipment etc. has been arranged under such consideration by the Japanese side, however further consideration was required by the Indonesian side to those items for the purpose mentioned above.

After through discussions, both parties has confirmed on the operational working programme for an effective implementation of the project.

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JAKARTA

MARCH 7 th, 1978

別紙 2 List of equipment, materials to be provided for DIC, Medan (1978)

I. PATHOLOGY

(Non-expendable equipment)

1. Dissecting instrument set; set in leather case	1
" ; set in wooden case	1
2. Photographic apparatus; for photographing of organs	1
3. Microphotographic apparatus	1
4. Autotechnicon	1
5. Microtome	1
6. Microtome knife; for paraffin	1
7. Microtome knife sharpner; automatic	1
8. Microtome knife sharpning instrument set; whetstone	1
" ; leather whetstone	1
" ; sheath	1
" ; haft	1
" ; whetpaste No.1 - 4	1
9. Refrigerator	1
10. Freezer; -20°C	1
11. Microscope; binocular with light sources, Apo object lenses	1
plan lense (x10, 4), ocular lense (10x2), Apo lense	
(40x)	
12. Paraffin melting oven	1
13. Incubator	1
14. Object staining apparatus	1
15. Hair dryer	1
16. Slideglass rack; for 20 pieces, metal goods	1
17. Slideglass warmer	2
18. Cabinet for color film; wooden goods	2
19. Cabinet for slide glass; plastic goods, for 100 pieces	2
20. " ; for 800 pieces	2
21. Frame for slide glass; wooden & paper goods, for	50 x 2
20 & 36 pieces	
22.	
23. Enameled tank; 20 l.	2
24. Weighing machine for organs; 0 - 50 kg	1
25. Tape measure; 50 m	1
26. Paper holder; B 5.	10

27. Tripod; H 20 cm, ϕ 13 cm, for burner 5
28. Gas burner; for propane gas, GS type 5

(Expendable equipment)

1. Staining pot for silver staining 4
2. Basket for dehydrate 5
3. Beaker; 50, 100, 200, 500, 1000, 2000 ml 20 each
4. Reagent bottle with wide mouth; 250, 500, 1000 ml 50 each
5. Enameled jug; 100, 200, 300, 500, 1000 ml 20 each
6. Porcelain dish; L, M, S size 20 each
7. Leaden frame for paraffine embedding; L, M, S size 5 each
8. Stainless washing rack; for 60 pieces 4
9. Scalpel; keen edge, length of edge - 40 mm 6
10. Aspirator; glass goods 4
11. Diamond pencil 3
12. Slideglass holder; for 20 pieces, metal goods 5
13. Machine oil; 1 kg, for microtome 10
14. NT cutter; with substitute edges 4
15. Set of Paper knife & scissors 2
16. Nonfreezing oil; 18 l. 1
19. Synthetic detergent; neutral, 18 l. 5
20. Tape measure; 5 m. with stop device 2
21. Manicure liquid; brown, 12 ml. 20
22. Label; various 100 each
23. Bottle for balsam; glass goods 20
24. Sterilizer; boiling, with gas range, special large size 3
25. " ; schimmelbusch, 250 x 120 x 70 mm 5
26. Brown bottle with narrow mouth; 20, 50, 100 ml. 20 each
27. Mortar; porcelain goods, outside diameter 90,180 mm 10
28. Pestle; for above mortar 10
29. Medicine spoon set; stainless goods, L, M, S size 2
30. Glass stick; various 10
31. Erlenmeyer flask; 100, 200, 500, 1000, 2000 ml 50 each
32. Wooden tag. 100
33. Stainless cup; for paraffin 2
34. Dish for paraffin embedding; L size - 90 x 58 mm, porcelain goods 20
; M " - 68 x 45 mm, " 20

35. Dish for paraffin embedding; S size - 50 x 30 mm, porcelain goods	20
36. Wooden block; L size - 30 x 22 x 14 mm,	100
" ; M " - 27 x 20 x 12 mm,	100
" ; S " - 24 x 15 x 12 mm	100
37. Basket for embedding; 35 x 10 mm, stainless goods	20
38. Small basket; L size - 30 mm, yellow copper goods	20
with nickel gilding	
" ; M " - 25 mm, "	20
" ; S " - 20 mm, "	20
39. Small basket; 25 x 10 mm, polyethylene goods	20
" ; 20 x 9 mm, "	20
40. Stainless pin with haft; 180 mm, tapering	10
41. Stainless tweezers; 110 mm, tapering	10
42. Bottle for celloidin; L size - ϕ 110 mm, H 140 mm, glass goods	20
" ; S size - ϕ 80 mm, H 110 mm, "	20
43. Pin for specimen; length - 48 mm, ϕ 0.5 mm, stainless goods,	4
50 pins	
44. Bottle for staining; glass goods, B type, for 10 pcs.	30
45. " ; " , T-67-A	30
46. Basket for staining; A type, stainless goods, for 15 pcs.	30
47. Bottle for staining; cylindrical type, for 5 pcs.	10
48. Bottle for coloring matter; 60 ml, 100 ml	12 each
49. Deck tweezers	10
50. Writing brush	10
51. Label for slideglass; 25 x 25, 25 x 10 mm	100 each
52. Specimen bottle; cylindrical type, inside measure -	100
H 26. ϕ 21 cm, H 32. ϕ 27 cm, H 39. ϕ 33 cm	
H 40. ϕ 36 cm	
53. " ; 6 x 6 cm, 100 cc	100
" ; 9 x 5 cm, 120 cc	100
" ; 14 x 6 cm, 300 cc	100
" ; 18 x 7.5 cm, 650 cc	100
54. " ; 18 x 6 x 16 cm (L x W x H)	100
" ; 24 x 9 x 18 cm (")	100
55. " ; cylindrical type, H 7.5 ϕ 6.5 cm,	100
H 10 ϕ 8 cm, H 11 ϕ 9 cm	
56. " ; cylindrical type, H 9.5 ϕ 5.5 cm,	100
H 6.2 ϕ 11 cm, H 7 ϕ 12 cm	

57. Specimen tube with cork stopper (or rubber);	100
H 9 2.9 cm, H 10 3.6 cm, H 10 4.5 cm	
58. Spatula for blaze	5
59. Moisture box; plastic goods, with cover, 300 x 400 mm	4
60. Corner for moisture box; plastic square stick	8

II. PATHOLOGY (FOR FA)

(Non-expendable equipment)

1. Centrifuge; with cooling device, a few types of rotors	1
2. " ; used on a table, complete set of attachment	1
3. Spectrophotometer; digital	1
4. Fraction corrector; square-weight type	1
5. Selfrecording ultraviolet absorber	1
6. Incubator	1
7. Balance; automatic, 0 - 200 g	1
8. " ; 0 - 500 g	1
9. Electrophoresic apparatus	1
10. Specimen washer for FA (vibrator)	1
11. Vacuum pump; exhaust rapidity 18 l/min.	1
12. All-purpose mixer; 400 - 4000 rpm	1
13. PH meter; digital, PH 0.00 - 14.00	1
" ; electrode (spare)	1
14. Homogenizer set	1
15. Shaker	1
16. Magnetic stirrer	2
17. Vacuum freeze dryer; with freeze tank (spare)	1
18. Cryostat	1
19. Pipet box; 400 x 200 x 25 mm, for measuring pipettes, 5 decker	5
20. Desicator; W 44 x D 33 x H 39 cm, complete set of attachment, chloride vinyl	4
" ; glass goods, inside measure ϕ 30 cm	2
21. Test tube stand; stainless goods, 12 holes, for small size tube	10
22. Enameled tray; 20 x 15 x 30, 29 x 23 x 45, 37 x 33 x 50 cm	5 each
23. Pocket timer; 0 - 60 min.	10
24. Table timer; 0 - 60 min.	1
25. Tank for sulfuric acid; ϕ 22 x H 24 cm	2
26. Pipet tank for sulfuric acid; chloride vinyl goods	2

27. Gas burner	3
28. Retort stand; pincher & ring 5 each	3
29. Funnel stand; steel goods, large size	2
30. Clamp; for small tube	5
31. " ; standard type, double door	5
32. Tripod; for burner, ϕ 12 cm	3
33. Supporting stand; flask pincher 4, 75 cm	5
34. Bunsen's rack; measure of stand - 13 x 20 cm, length - 75 cm, with pincher	5
35. Rack for cover glass; stainless goods, for 18 x 18 cm	10
36. Moisture box; H 7 x W 20 x D 25 cm	4
37. Wire net with asbestos; 15 x 15 cm, 18 x 18 cm	20 each
38. Polyethylene bucket; with cover, lock system	5
39. Test tube stand; stainless goods, ϕ 18 cm, 24 holes	5
40. Fixed voltage & current apparatus	1
41. Agar gel electrophoresis apparatus	1
42. Agar plate holder	1
43. Horizontal stand; horizontal bar, level, 28 x 28 cm	1
44. Rack for agar; with inner flame	1
45. Immuno-viewer; with magnifying glass	1
46. Cutter for cellulose membrane; with scale	1
47. Applicator; for 20 samples, 20 graduated	1
48. Staining rack; 13 x 7 x 4 cm	5
49. Water bath	1

(Expendable equipment)

1. Filter paper; No.2 60 x 60 cm, 100 pcs.	10
2. Glassfiber cotton (kg)	1
3. Glass tube; ϕ 8 x 1000 mm (kg)	5
4. Rubber tube (m); ϕ 8 mm	10
5. Beaker; polyethylen - 50, 100, 200, 300 ml, glass - 50, 100, 200, 500 ml	20 each
6. Erlenmeyer flask; 50, 100, 200, 300, 500, 1000 ml	20 each
7. Glass funnel; ϕ 5 cm, ϕ 7.5 cm	10 each
8. Measuring pipettes; 0.5, 1.0, 10.0 ml, komagome pipettes 5, 10 ml	20 each
9. Centrifuge tube; polycarbonate 50 ml, with cap	20

10. Vacuum filter bottle; 500, 1000 ml	10 each
11. Thermometer; stick type, 0 - 100°C	10
12. Graduated cylinder; 50, 100, 500, 1000 ml	10 each
13. Komagome rubber; L & S sizes	10 each
14. Volumetric flask with cap; 500, 1000, 2000 ml	10 each
15. Flat bottom flask; 100, 200, 500, 1000 ml	10 each
16. Bottle with lower mouth; polyethylene goods, 5, 10 l	5 each
17. Washing bottle; polyethylene goods, 500 ml	20
18. Siphon (baby pump); polyethylene goods, L & S size	5 each
19. PH testing paper; 8 kinds	10
20. Standard discoloration table for PH; for 8 sets, 0.4 - 13.6	5
21. Porcelain buchner funnel; outside measure ϕ 160 mm	5
22. Magnetic stirring rods; 1.5, 2.0, 3.0, 4.0 cm	10 each
23. Quartz cell for spectrophotometer; 10 m/m	4
24. Glass column; ϕ 1.5 cm x 1 m, ϕ 2.5 cm x 80 cm, ϕ 1.5 cm x 60 cm	20 each
25. Pinch cock; maul - L, M, S sizes, hofman - L, M, S sizes	10 each
26. Small test tube; 13 m/m x 10 m/m	100
27. Slide glass; 50 pcs. No.1	5
28. Cover glass; 18 x 18 mm, 200 pcs.	20
29. Dialytic film; cellophane tube, 100 feet, 8/36, 18/36, 36/36	1
30. Hemp yarn	2
31. Diamond pencil	2
32. Washing bottle; for vibrator	10
33. Fraction tube; 18.5 x 130 m/m 100 pcs.	2
34. Manicure liquid; 12 ml	1
35. Millipore filter; 0.45 μ m, 2 kinds (100 filter each)	1
36. Pre-filter	100
37. Filter holder set; 47 mm	1
38. Swinny holder; 13 mm	1
39. Cylinder; 5 cc	5
40. Successive dispenser; 1 - 5 ml	3
41. Color film; reversal, ASA 160, 36 exp.	20
42. Parafilm; 4 inch x 125 feet roll	10
43. Ampule for freez-dry; 2 ml	1000
44. Funnel; stainless, ϕ 20 cm	3
45. Agar knife	3
46. Agar punch; 2 pcs.	6

47. Oxoid; 36 x 5 cm, 50 pcs.	5
48. Ultra micropipette; 0.8 μ l, 55 pcs.	1
49. Tweezers; stainless, 5 pcs.	2

III. PARASITOLOGY

(Non-expendable equipment)

1. Incubator; W 60 x D 50 x H 60 cm	1
2. Centrifuge; used on a table, complete set of attachment	1
3. Autoclave; small type	1
4. Balance; automatic, 0 - 200 g	1
5. Microscope; binocular, ocular lenses (10x2), object lenses (x4, x10, x40), Apo object lense (x100)	1
6. Homogenizer set	1
7. Water bath; with plastic cover, L 40 x W 30 x H 22 cm	1
8. Funnel stand; with holding ring, large size, steel goods	1
9. Light trap	1
10. Magnifying glass; ϕ 10 cm	1
11. Refrigerator	1

(Expendable equipment)

1. Slide glass; 50 pcs.	10
2. Cover glass; 18 x 18 cm, 200 pcs.	20
3. Filter paper; 60 x 60 cm, 100 pcs., No.2	5
4. Cellophane; No. 600, 40 μ thick, 100 pcs.	5
5. Test tube; small size, 13 m/m x 150 m/m	200
6. Cover glass; 24 x 18 mm, 100 pcs.	10
7. Gauze; 10 m/roll	24
8. Centrifuge tube; 10 ml	24
9. Rubber stopper; butyl, various size No. 0 - 17	100 each
10. Measuring pipettes; extreme tip, 0.5, 1, 2, 5, 10 ml	100 each
11. Beaker; 100, 200, 300, 500, 1000 ml	30 each
12. Glass funnel; ϕ 75, ϕ 90 ml	10 each
13. Stole tube	10
14. Cover glass; 22 x 40 cm, 100 pcs.	10
15. Test tube; middle size, 15 m/m x 165 m/m	200
16. Wire net; 80, 100, 120, 150, 200 mesh, 3 x 3 m	2 each

17. Vacuum funnel; 500, 1000 ml	10 each
18. PH testing paper; 7 kinds 1 set	10
19. Standard discoloration table for PH	5
20. Vinyl bag; L & S size, 50 pcs. each	10 each
21. Cellotape; 1 - 1.5 cm, 10 pcs.	10
22. Blood cell counting set; Thoma	1
23. Injector; 1, 2, 5, 10, 20, 50, 100 ml	5 dozen each
24. Medicine spoon set; L, M, S size/set	2
25. Polyethylen bag; L & S size, 50 pcs. each	10 each
26. Mortar; with pestle, porcelain goods, outside diameter 90, 180 mm	5 each
27. Needle for injector; for blood correcting, intravenous, subcutaneous. 1/1, 1/2, 1/3, 1/4 each	10 each
28. Brush for washing; various	2 dozen each
29. Calico; 10 m/roll	1
30. Graduated cylinder; 5, 20, 50, 100, 200 ml	20 each
" ; 300, 500, 1000, 2000 ml	20 each
31. Petri dish; L & S size	100 each
32. Mesh for insect catch	20
33. Insecticide (kg)	1
34. Erlenmeyer flask; 100, 200, 500, 1000, 2000 ml	50 each
35. Absorbent cotton; 500 g	12
36. Scissor for hair cutting; for animals, 15, 17 cm	6 each
37. Sahli's pipette; 0.02 ml	12
38. Glass bar; 1 m x ϕ 8 mm	1 kg
39. Glass ball; ϕ 3 mm L, M, & S sizes	1 kg each
40. Rubber tube; ϕ 8 mm	10 m
41. Pinch cock; maul - L, M, S sizes, hofman - L, M, S sizes	10 each
42. Komagome pipette; 2, 5, 10, 20, 30 ml	30 each
43. Rack for test tube; stainless goods, middle size, ϕ 18 mm, 24 holes	15
44. " ; stainless goods, small size, 12 holes	15
45. Rubber ball; 10, 20, 30 g	10 each
46. Sterilizing can; for pipette	10

IV. PHOTOGRAPHIC MATERIALS

(Non-expendable equipment)

1. Tank for development; for 35 mm film, 2 films	2
2. Measure cup; 1000, 2000 ml	2 each
3. Enlarger set	1
4. Lens; for enlargement, 50 mm	1
5. Tray; for quarter & sixth size	3 each
6. Dryer; for photograph	1
7. Felloe for dryer	2
8. Rubber roller W	2
9. Cutter; for quarter size	1
10. Timer; for enlargement, 0.1 - 90 min.	1
11. Easel mask for enlargement, quarter size	1

(Expendable equipment)

1. Thermometer for liquid	2
2. Brown bottle; 1, 2 l	2 each
3. Film clip; 10 pcs.	2
4. Polyethylene bucket; 10 l	2
5. Electric bulb for enlargement; 100 V, 150 W	1
6. " for dark room; red & green	2 each
7. Triple safe light glass	2
8. Tweezers; bamboo goods	3
9. Printing paper; cabinet size - 250 pcs., card size - 500 pcs., 1 each service size - 1000 pcs.	1
10. Developer for printing paper; 1 box/2 ml	12
11. " for film; micro-fine 1 box/600 ml	10
12. Fixing solution; 1 box/2 l	10
13. Glacial acetic acid; 500 ml	2

V. VIROLOGY

(Non-expendable equipment)

1. Autoclave; small size - on a table	1
2. Centrifuge; complete set of attachment, 4000 rpm	1
3. Inverted microscope	1

4. Aseptic box; W 60 x D 45 x H 55 cm	1
5. Filtering apparatus; Seitz type, stainless, ϕ 145 mm, 1.7l	1
6. Millipore filter apparatus; 13 mm, with filter holder set	20
" ; 25, 47 mm, with filter holder set	10 each
7. Successive dispenser; 1, 5, 10 ml	5 each
8. Case for sterilizing can; H 33 x D 50 x W 27 cm	1
9. Incubator for hatch; 336 eggs	1
10. Egg stand; for 20 eggs, D 31.5 x W 81.5 x H 5.5 cm	5
11. Egg tester	2
12. Microtiter set; with washing bath	4
13. Rotary pump; exhaust rapidity 18 l/min.	1
14. CO ₂ incubator; complete set of attachment	1
15. Incubator; complete set of attachment, 5°C - 50°C	1
16. Bacterial filter set	2
17. Electric file; portable type	1

(Expendable equipment)

1. Sterilizing lamp; for aseptic box, GL 15	10
2. Magnetic stirring rods; 15, 30, 40, 50 mm	20 each
3. Filter paper; for Seitz type, 145 mm - 0.45, 0.22 μ	400 & 200
4. " ; for Millipore type, 0.45 μ - 13, 25, 47 mm	400 each
5. " ; , 0.22 μ - 13, 25, 47 mm	400 each
6. " ; , pre-filter - 22, 42 mm	400 & 800
7. " ; No.2 (d. 12.5 cm), No.6 (d. 12.5 cm), No.9 (d. 12.5 cm)	400 each
8. " ; No.6 (s. 65 x 65)	200
9. Electric bulb; 100 V, 80 W	7
10. " ; for colony counter	7
11. Micro tube for hematocrit	250
12. Microtiter dropper; 0.025, 0.05 ml	200 each
13. Microtiter diluter; 0.025 ml	100
14. Microtiter paper; 0.025 ml - pack, 0.05 ml - pack	2 each
15. Microtiter cartridge; 0.05 ml	200
16. Lead weight; 5 mm thick	2
17. File; flat type, 15 cm	20
18. Scissor; stainless goods, round, sharp & ophthalmologic	40 each
19. Surgical knife; stainless goods, round, sharp & ophthalmologic	40 each

20. Forceps; stainless goods, mouse teeth - 130 mm,	40 each
pointed - 110, 130 mm	
Pean	20
21. Dispenser (spare); 1, 2, 5 & 10 ml	20 each
22. Needle for aspirator; 15 cm	20
23. CO ₂ gas cylinder; 40 l, 30 kg	12
24. Electrified file (spare); 2 mm thick, ϕ 1 cm, rough	24

VI. BACTERIOLOGY

(Non-expendable equipment)

1. Microscope; trinocular with plan object lenses (40 x 100) & source of light	1
2. Micrometer	1
3. Aseptic box; W 60 x D 45 x H 55 cm	2
4. Water bath; with cover, W 40 x D 30 x H 22 cm	1
5. Homogenizer; with refrigerating bath	1
6. Homogenizer cup; 100, 50, 30 ml	1 each
7. Magnetic stirrer; small type	1
8. " ; large type	2
9. Mini-vacuum pump; for used on a table	1
10. Successive dispenser; 1, 2, 5, 10 ml	1 each
11. Supporting stand	2
12. PH meter; digital, 0.00 - 14.0	1
13. Balance; 0 - 5 kg	1
14. Table balance; digital, 0.00001 - 100 g	1
15. Automatic balance; 0 - 50 g	1
16. Case for sterilizing can; W 27 x D 50 x H 33 cm	3
17. Colony counter; automatic	1
18. Rotary pump; exhaust rapidity 18 l/min.	1
19. Centrifuge; for used on a table, complete set of attachment	1
20. Autoclave; for used on a table, small type	1
21. Incubator	1
22. Freezer; - 20°C, 460 l	1
23. Anaerobic culture system; complete set of attachment	1
24. Anaerobic culture jar	1
25. Bacteria identification set	1
26. Stereoscopic microscope	1

(Expendable equipment)

1. Sterilizing lamp; for aseptic box, GL 15	20
2. Electric bulb for colony counter	7
3. Nichrome wire; 0.5 & 0.1 mm	20 each
4. Cornet forceps; for slide glass	10
5. Minitic disk set	10
6. Anaerobic bacteria culture disk; No. 25 131 - No. 25 134	10
7. Catalyzer for exchange	10
8. Gas pack - H/CO ₂ gas generating pack; 10 pcs.	10
9. Gas pack - anaerobic indicator; 10 pcs.	10
10. Double bottle; 30 ml	20
11. Safety pipette; 25 & 50 ml	20
12. TGL test tube; ϕ 20 x 150 m/m	200
13. Rack for TGL test tube; wooden goods, 20 holes, 40 x 9 x 10.5 cm	20
14. Platinum loop	24
15. Washing bottle; polyethylene goods, 500 ml	30
16. Bottle with narrow - lower mouth; polyethylene goods, 10 l	2
17. Rack for coloring matter bottle; 6 pcs., 60 ml/1 bottle	3
18. Bottle for coloring matter; with cap, 60 ml	24

VII. EPIDEMIOLOGY

(Non-expendable equipment)

1. Polaroid camera; complete set of attachment, with film 1 dozen	1
2. Stopwatch	2
3. Enameled tray; 170 x 130 mm, 200 x 150 mm, 285 x 220 mm	10 each
4. " ; 370 x 325 mm	5
5. Stainless steel tray; 18 x 24, 21 x 27, 24 x 30, 27 x 33, 30 x 36 cm	2 each

6. Case for sterilizing can; W 27 x D 50 x H 33 cm	3
7. Hand tally counter; 0 - 999	7
8. Tripod for burner; ϕ 13 cm	4
9. Case for bandage	7
10. Cabinet for slide glass; plastic goods, for 100 pcs.	9
11. Holder for cattle	7
12. " for pig	7

(Expendable equipment)

1. Cage for mice; with attachment	20
2. " for rabbits; with attachment	10
3. Diagnostic set for liver fluke; in wooden case, popular type	9
4. " for anaplasmosis; " , "	9
5. " for anthrax; " , Kabori type	9
6. Lamp for fluorescent microscope; ultra high tension mercury lamp	5
7. Color film; reversal, ASA 100, 35 mm, 20 exp.	70
8. " for polaroid camera; ASA 75, S x 70	200
9. " for fluorescent microscope; reversal, ASA 160, 35 mm, 50 36 exp.	50
10. Spare lamp for projector; 100 V, 300 W	7
11. Pipettes for blood cell; for red & white cell	200 each
12. Rubber holder for pipettes (for blood cell)	300
13. Paper clay (kg)	1
14. Supporting core; various	20
15. Bottle for specimen; 100 & 250 ml	1000 each
16. Cotton stick	1000
17. Vacuum tube for blood correcting; 5, 10 & 20 ml	1000 each
18. Needle for injector; disposable, SC 1/1, IV 1/1	1500 each

19. Rubber gloves for operation; L, M & S size	20
20. " ; thick, L, M & S size	20
21. Talcum powder; 500 g	10
22. White robe; LL, L, M & S size	20 each
23. Rubber high boots; LL, L, M & S size	10 each
24. Thermometer for animal	100
25. Bandage; various	40 each
26. Paper cutter; 2 kinds	20 each
27. Filter paper for blood correcting; L type, 100 pcs.	2000
28. Feed; for mice & rabbits, 20 kg/pack	20 each
29. Frame for overhead projector; B 5	200
30. Slide glass box; plastic goods, 10 pcs.	1000
31. Cassette tape; for 60 min.	60
32. Automatic dispenser; 0.2 - 1.0 ml	10

VIII. FOR COMMON USE IN DIC

1. Water distilling apparatus; 50 l/1 h	1
2. Sterizing can for pippets; stainless steel	10
3. " for petri dishes of roller tubes	3
4. Timer; pocket size	5
5. Wall clock; 24 hours	1
6. Mercurial battery	2
7. Laboratory cart; a set of spare part	7
8. Disinfectant vase for pipettes	4
9. Slide warmer	7
10. Gas burner	5
11. Cork hole drill set	1
12. Sterilizer boiling	5
13. Support for hand disinfecting basin; a pair	5
14. Medicine spoon set	4
15. Standing light	1
16. Laboratory cart (Wagon)	4
17. Autoclave	1
18. Refrigerater	1
19. Ice making machine	1
20. Table balance; 0 - 200 g	1
21. " ; 0 - 500 g	1
22. Electric dispenser; a set	1
23. Supersonic pipette washer	1
24. Pippet drier machine	1
25. Oven	1

(Expendable equipment)

1. Desicator without cork; glass, 30 diameter	4
2. " with cork; "	4
3. Brush for washer; various sizes	40
4. Brush for washing; "	40
5. Scrubbing brush; "	40
6. Funnel; d. 30 mm, 45 mm, 60 mm, 90 mm, 150 mm	20 each
7. Kettle; 18 l	1

8. Disinfecting basin; d. 30 cm	10	
9. Towel; cotton 100%	200	
10. Photo copier paper	2000	
11. Spare light for standing light	10	
12. Measuring pipettes; between points, 0.5 ml	200	
	1.0 ml	400
	2.0 ml	400
	5.0 ml	300
	10 ml	300
	20 ml	200
" ; extreme tip, 0.25 ml	200	
	0.5 ml	300
	1 ml	400
	2 ml	400
	5 ml	300
	10 ml	200
13. Volumetric pipettes; hold type, 50 ml, 100 ml	40 each	
14. Komagome pipettes; 2 ml, 5 ml	60 each	
" ; 10 ml	30	
15. Test tube; 12 x 105 mm	3000	
	16.5 x 165 mm	1000
	25 x 200 mm	600
	21 x 165 mm	1000
	10 x 50 mm	1000
17. Petri dish; 75 x 20 mm	500	
	90 x 15 mm	500
	30 x 10 mm	500
18. Beaker; 30 ml, 50 ml	20 each	
	100 ml, 200 ml	40 each
	300 ml, 500 ml, 1,000 ml, 2,000 ml	20
19. Graduated cylinder; 50 ml	15	
	100 ml, 500 ml, 1,000 ml, 2,000 ml	20 each
20. Volumetric flask with cap; 100 ml, 200 ml, 500 ml, 1,000 ml, 2,000 ml	10 each	
21. Erlenmeyer flask; 50 ml	20	
	100 ml, 200 ml, 300 ml, 500 ml	40 each
	1,000 ml, 2,000 ml	20 each
	3,000 ml	10

22. Centrifuge tube; with cap, 10 ml, 15 ml	300 each
40 ml	100
23. Trypsinization flask; 300 ml	20
24. Cover glass; 18 x 18 mm, 100 pcs.	70
20 x 20 mm, 100 pcs.	70
24 x 36 mm, 100 pcs.	50
20 x 40 mm, 100 pcs.	30
25. " for blood cell counter chamber; 16 x 22 mm, 25 pcs.	6
26. Slide glass; case with 50 pcs., ordinal	700
" FA	20
27. Chamber slide; FA, round mark	10
" hole	70
28. Slide glass box; 100 pcs.	70
29. Reagent bottle with narrow mouth; 120 ml	20
250 ml	20
500 ml	20
1000 ml	40
2000 ml	20
250 ml	20
500 ml	20
1000 ml	20
30. " with wide mouth; 250 ml, 500 ml, 1000 ml	50 each
31. Polyethylene bottle; 100 ml, 500 ml	30 each
1000 ml	10
5000 ml	5
5000 ml with cork, 10000 ml with cork	5 each
32. Gas washing bottle; 500 ml	5
33. Filtering flask; 1000 ml, 2000 ml	5
3000 ml	3
34. Roller tube for Tissue culture; 15 x 90 mm	1000
35. Culture bottle; 40 x 50 x 100 mm, 35 x 90 x 90 mm	200
36. Specimen bottle; 15 x 15 mm, 18 x 21 mm	20
37. Agglutination tray; d. 16, 80 hole, plastic	40
38. Metal stopper for test tube; 12 x 21 mm	1000
16.5 x 165 mm, 21 x 165 mm	600 each
10 x 50 mm	500
39. Silicon stopper for test tube; 16.5 x 165 mm	700
25 x 200 mm	600
21 x 165 mm	800

40. Rubber stopper; No. 0	800
No. 1	1500
No. 2	300
No. 3, No. 4	100
No. 5, No. 6	200
No. 7, No. 8	100
No. 9, No. 10, No. 11, No. 12	40 each
No. 13, No. 14, No. 15	20 each
41. Glass syringe; 0.5 ml, 1 ml, 2 ml, 5 ml (Luer), 10 ml (Luer)	200 each
20 ml, 50 ml, (Luer)	100 each
100 ml (Luer)	40
0.5 ml, 1.0 ml, 2.0 ml (TB)	100 each
42. Metal syringe; 10 ml, 20 ml, 50 ml	100 each
43. Continuity injector; 1 ml	10
44. Needle for injection; SC 1/1, 1/2, 1/3, 1/4, 1/5	100 each
45. " ; IV 1/1, 1/2, 1/3, 1/4, 1/5	100 each
46. " ; ID YAOI 1/3 (IP)	100
47. Needle for bleeding; 1.8 x 50 mm, 1.5 x 40 mm,	200 each
1.8 x 50 mm, 2.2 x 50 mm	
48. Silicon rubber tube; d. 8, 9, 10, 12 mm	200 each
49. Teflon tube; d. 3, 5, 7, 9, 10, 12 mm	100 each
50. Rubber tube for gas	100
51. Rubber tube for tap water	100
52. Pinch cock; big, middle, small size	50 each
53. Rubber band; No. 16, box	6
54. Powder paper; 10 x 10 cm	1000
55. Vernier caliper; 150 mm	2
56. Rack for small size tube; d. 13 mm	40
57. " for middle size tube; d. 16 mm	40
" for large size tube; d. 19 mm	30
58. " cover glass; stainless, 18 mm x 18 mm	10
59. " for slide glass; stainless, 26 mm x 76 mm	10
60. Aspirator, polyethylene; baby pump	10
61. Glass tube; various sizes, 10 kg	20 each
63. Glass rod; "	10
64. Asbest; various kind	10 each
65. Metal mesh; 100 mesh, 2 m	4
200 mesh, 2 m	4

66. Paraffin paper; 900 mm x 1000 mm	250
67. Gauze; 10 m	600
68. Absorbent cotton; 50 g	100
69. Alminum lunch box; 170 x 110 mm, depth 50 mm	40
70. Polyetylene bucket; 18 l	20
71. Paraffin; 41 N x 125 FTROLL	4
72. Glass pencil	2
73. Vinyl tape; various colors	10
74. Vinyl bag; various sizes	600
75. Paper string; 20 m	40
76. Hamp yarn; 50 m	40
77. Squirt; 5 ml, 10 ml, 20 ml, 30 ml	50
78. Index; various type	2000
79. Cotton glove; various type	50
80. Sandal; wooden, S, M, L	40 each
81. PH test paper; 7 sorts	2 each
82. PH standard color table; 7 sorts	3 each
83. Aluminium foil; 25 x 25	50
84. Oil condensor; 500 ml	2
85. Minipon oil; 18 l can	2
86. Oil for Ishida type balance	1
87. Spare parts for microsyringe filter holder mesh; d. 13 mm, 5 ml	10
88. Pencil; HB, B	10 each
89. Color pencil; 12 colors	10
90. Magic pencil; red & black	20
91. Report pad; B 4, 100 sheets	100
92. Magnet button; round, various sizes	50 each
93. Buffer solution; standard, ph 4, 7, 9, 500 ml	10 each
94. Aspirator bottle; 10 l, 20 l	10 each
95. Polythal with cap; 50 l	20
96. Thermometer; 0 - 200	10
97. " ; alcohol 0 - 100	10
98. Spare parts for despensor with spare parts	5
99. Bottle with narrow mouth; 3 l, 5 l	20 each
100. Depergent; neutral, 4 kg	200
111. Stainless steel mesh basket; square, 45 x 24 x 20	5
24 x 24 x 20	5
112. " round, d. 27 cm, h. 28 cm	10

113. Tissue paper; box, 197 x 232 mm

10

(Vehicles)

1. Mini-bus

1

(Reagents and Chemicals)

1. Formalin;	18 l	10
	500 ml	40
2. Ethanol for disinfection:	18 l	60
	500 ml	200
3. Acetone;	18 l	20
	500 ml, gr. 30, ep.20	50
4. Cresol;	18 l	25
	500 ml	20
5. Absolute alcohol (Ethanol)	18 l	5
	500 ml	50
6. Paraffine: mp. 56-58, mp.45-52		each 20
7. Mounting medium (Biolight);	100 g	20
8. Formaline; J-P,	500 ml	50
9. Ammonia Solution;	500 ml	10
10. KOH;	500 g	20
11. Copper Sulphate;	500 g	30
12. Mercury (II) chloride;	25 g	10
13. Trichloroacetic acid;	500 g	30
14. Acetic Acid;	500 ml	30
15. Acetic acid anhydrate	500 ml	30
16. Iodine;	25 g	20
17. Potassium iodate;	25 g	20
18. Sodium Thiosulfate;	500 g	10
19. Sodium Thiosulfate solution;	500 ml	10
20. Chloroform;	500 ml	15
21. Potassium dichromate;	500 g	35
22. Chromium trioxide;	500 g	15
23. Picric acid;	25 g	15
24. Sodium Sulfate;	500 g	15
25. Nitric acid;	25 g	4
26. Citric acid;	500 g	25
27. Phenolphthalein;	25 g	4
28. Methyl red;	25 g	4
29. Ammonium oxalate;	500 g	10
30. Aluminium potassium sulfate;	500 g	10
31. HCl;	500 ml, JIS-gr	30
	JIS-ep	20

32. Formic acid;	500 g		5
33. Sodium citrate;	500 g		20
34. Aluminium chloride;	500 g		5
35. Xyrol;	500 ml		40
36. Benzol;	500 ml		10
37. Cedar oil;	500 ml		5
38. Glycerin;	JIS-gr 500 ml		50
39. NaOH;	500 g, pellet		35
40. Eosin alcohol and soluble,	25 g		10
41. Light green;	25 g		4
42. Erythrocin;	25 g		4
43. Fuchsin basic;	25 g		5
44. Fuchsin acid;	25 g		8
45. Orange;	25 g		4
46. Mechyl blue;	25 g		4
47. Methyl green;	25 g		4
48. Gentiana violet;	25 g		8
49. Thionine;	25 g		4
50. Toluidine blue;	25 g		10
51. Sudan III;	25 g		5
52. Hemotoxylin;	25 g		5
53. Balsam;	25 g		10
54. NaHCO ₃ ;	500 g		40
55. Lithium carbonate	25 g		4
56. Chloral hydrate;	25 g , 500 g	each	10
57. Ammonium alum	500, 50 g,	each	4
58. Sodium iodate;			4
59. Iron (III) chloride;	50 g		4
60. Phosphomolybdic acid;	25 g		4
61. Aniline blue;	25 g		4
62. Orange G;	25 g		4
63. Azocarmine;	25 g		4
64. Azocarmine G;	25 g		4
65. Aniline;	25 g		4
66. Resorcin;	25 g		4
67. Potassium permanganate;	500 g		10

68. Oxalic acid;	500 g	5
69. Silver nitrate;	25 g	4
70. Gold chloride;	0.1 g	10
71. Iron (III) Ammonium sulfate;	25 g	4
	100 g	10
72. Paraffin; Liquid JIS-gr	500 g	10
73. Potassium bisulfite;	500 g	10
74. Silver ammonium; JIS-gr	25 g	4
75. Potassium bisulfite; meta,	25 g	10
76. Periodic acid; JIS-gr	25 g	5
77. Naphtol; JIS-gr	25 g	5
78. Sodium bisulfite JIS-gr	500 g	10
79. Pyronine;	25 g	5
80. Butyl Alcohol;	500 ml	10
81. Neutral red;	25 g	10
82. Methyl violet;	25 g	5
83. Potassium Ferrocyanide;	25 g	5
84. Giemsa solution;	100 ml	30
85. Pyrogallol;	25 g	5
86. Metanil yellow;	25 g	2
87. Hydrogen peroxide;	500 ml	10
88. Benzidine;	500 g	5
89. FITC;	100 mg	5
90. Sephadex G25;	100 g	10
91. DEAE Cellulose;	100 g	10
92. Ammonium sulfate;	100 g	100
93. Buffer solution standard;	pH 4.01, 6.86, 9.18	each 20
94. Nessler solution	100 ml	10
95. Antisera Rabies, Newcastle disease, Hog cholera,	100 ml	each 1
96. Polyethylene glycol;	400,	20
	4,000,	10
97. Na ₂ CO ₃ ;	500 g	25
98. Adjuvant; complete freund (Difco),	10 ml	20
99. " incomplete freund (Difco),	10 ml	20
100. Veronal buffer;		24
101. Decahydronaphthalene;	500 ml	10
102. Ponceau 3R;	25 g	5

103. Methanol;	500 g	70
104. Agarose;	100 g	2
105. Special noble agar;	500 g	1
106. Barbituric acid;	25 g	4
	500 g	2
107. Sodium barbiturate;	25 g	4
	500 g	2
108. Merzonin tink;	500 ml	10
109. Mercury (II) chloride;	500 g	5
110. Polyvinyl;	500 g	3
111. Merzonin;	5 g	2
112. Malachite green;	25 g	5
113. Magnesium sulfate; J-p		20
114. HCl (dilute); J-p		10
115. Sodium nitrate;	500 g	5
116. Asparagin;	500 g	10
117. Horse serum;	100 ml	12
118. Meat extract;	500 g	10
119. Cystine hydrochloride;	25 g	5
120. Glucose;	500 g	10
121. Toluene;	500 ml	10
122. Azur II;	25 g	4
123. Tannic acid;	50 g	2
124. Antiformin (Sodium hypochloride);	500 g	5
125. Pepsine;	25 g	5
126. Lactphenol;	25 g	5
127. Lactic acid;	500 g	5
128. Carmine;	25 g	4
129. Ethyl acetate	500 ml	5
130. Arabic gum;	500 g	5
131. Sodium borate	500 g	15
132. Eagle's MEM media (I);	100 g	20
133. Hanks solution;	100 g	20
134. Earls solution;	100 g	40
135. 199 media;	100 g	10
136. PBS (-) powder;	100 g	60
137. Mg, Ca ion for PBS (+);	10 ml	20

138. Lactalbumin hydrolysate for tissue culture			4
139. Tryptose phosphate broth;	454 g		4
140. Yeast extract:	454 g		4
141. Bovine albumin powder fraction V;	10 g		60
142. Trypsin (1 : 250);	25 g		40
143. NaCl;	JIS-gr	500 g	120
144. KCl;	JIS-gr	500 g	10
145. Na ₂ HPO ₄ · 12H ₂ O;	JIS-gr	500 g	10
146. Na ₂ HPO ₄ · 2H ₂ O;	JIS-gr	500 g	20
147. Na ₂ HPO ₄ · H ₂ O;	JIS-gr	500 g	20
148. Na ₂ HPO ₄ ;	JIS-gr	500 g	50
149. NaH ₂ PO ₄ · H ₂ O;	JIS-gr	500 g	50
150. KH ₂ PO ₄ ;	JIS-gr	500 g	4
151. MgSO ₄ · 7H ₂ O;	JIS-gr	500 g	4
152. MgCl ₂ · 6H ₂ O;	JIS-gr	500 g	4
153. CaCl ₂ · 2H ₂ O;	JIS-gr	500 g	10
154. Glucose	JIS-gr	500 g	4
155. Cacl ₂ ;	JIS-gr	500 g	20
156. Tris (hydroxymethyl)-amino ethane;	100 g		4
157. HEPES buffer;	500 g		4
158. Egg albumin soluble;	100 g		6
159. Special noble agar1	1 lb.		4
160. L-glutamine;	JIS-gr	25 g	4
161. L-glutamine;	JIS-gr	0.3 g	60
162. Penicillin G crystal;	1,000,000 unit		60
163. Streptomycin Sulphate Crystal;	1 g unit		60
164. Kanamycin sulphate crystal;	1 g unit		60
165. Amphotericin B;	50 mg		20
166. EDTA disodium salt;	25 g		4
167. Phenol red;	25 g		4
168. Crystal violet;	25 g		8
169. Methylene blue;	25 g		15
170. Nigrosin;	10 g		4
171. Barbitol;	GIS-gr	25 g	4
172. Gelatin bacto;	1 lb.		4
173. H ₃ BO ₃ ;	JIS-gr	500 g	4
174. Silicagel medium gramular; blue,	500 g		20
175. Kaolin acid washed;	1 lb.		4

176. RDE;	500 ml	5
177. KIO ₄ ; JIS-gr	25 g	4
178. 2-Mercapto ethanol; JIS-gr	25 g	6
179. Ethylether; JIS-gr	500 ml	35
180. Heart infusion agar;	100 g	40
181. Heart infusion broth;	100 g	15
182. Tryptosoy agar;	100 g	25
183. Tryptosoy broth;	100 g	8
184. Nutrient agar;	100 g	160
185. Nutrient broth;	100 g	80
186. YCC broth;	100 g	20
187. Cooked meat;	100 g	15
188. BTB;	100 g	20
189. PEA azide agar;	100 g	6
190. Hugh leifson;	100 g	6
191. VP semisolid agar;	100 g	9
192. Glucose phosphate peptone;	100 g	9
193. SF agar;	100 g	9
194. XV disc;	100 g	9
195. XV disc;	set	9
196. Indol testing paper;	50 pcs	10
197. Bacitracin disc;	50 pcs	5
198. Cytochrome disc;	50 pcs	5
199. Biotest set;	12 sorts	10
200. SS agar;	1200 g	5
201. Mcconkey agar;	100 g	80
202. DHL agar;	300 g	6
203. Brilliant green agar;	100 g	15
204. Urea broth;	5 ml x 5 amp	5
205. Selenite broth;	300 g	8
206. Desoxycholate agar;	300 g	8
207. Desoxycholate disc;	50 pcs	8
208. BGLB broth;	300 g	5
209. Potato dextrose agar;	300 g	6
210. BS broth;	100 g	6
211. Mannitol salt agar;	300 g	10
212. Staphylo coccus 110;	300 g	10
213. PP agar;	100 g	10
214. Rabbit plasma;	1 ml x 5	10

215. TGC;	300 g	20
216. TGC for clinical use;	300 g	10
217. Albumin;	200 ml x 6	2
218. PPLD media;	500 g	50
219. Candida GS agar;	300 g	6
220. Sabouraud dextrose agar;	300 g	10
221. Mycocel agar;	700 g	6
222. Tridiscs;	10 sorts	10
223. Sensitivity disc media;	300 g	10
224. Sensitivity disc;	10 sorts	10
225. Stamp agar; roll type		20
226. EMB;	300 g	10
227. EEM broth;	100 g	10
228. Sp media;	100 g	20
229. Klingler media;	300 g	10
230. SM media;	100 g	10
231. Ugon media;	100 g	10
232. EC media;	100 g	2
233. NAC media;	300 g	6
234. Gluconate media;	20 times	6
235. Peptone;	100 g	20
236. Anaerobe agar;	300 g	10
237. Anaerobe semisolid agar		8
238. Saprarine;	25 g	4
239. Bismarck brown;	25 g	4
240. H ₂ SO ₄ ;	500 ml	20
241. Phenol;	500 ml	40
	18 l	4
242. Purelox;	18 l	20
243. Pacoma;	18 l	20
244. Brucella antigen for rapid agglutination test;	5 ml	20
245. " " for tube test;	5 ml	20
246. " " for CF test;	5 ml	20
247. Bovine adeno-pera influenza 3 HI test antigen;	10 times	20
248. Tuberculin for bovine use;	5 ml	100
249. HA antigen for toxoplasma;	60 times use	30
250. Intra dermal antigen for toxoplasmosis;	2 ml x 10	100

251. HA antigen for newcastle disease;	0.5 ml	100
252. Agglutination antigen for CRD;	5 ml	40
253. Pullulolum antigen;	5 ml	20
254. Penicillin; water soluble,	20 unit	400
255. " oil ,	20 unit	400
256. Streptomycin;		600
257. Kanamycin;		400
258. Erythromycin		200
259. Sulpha drug (Sulphaisoxazol)		100
260. Cardiac; Caffein sodium benzoate, camphor		40
261. Vitamin B ₁₂ -Linger solution;	500 ml x 12	200
262. DL-Methionine; 2% injector,	50 ml x 5A	200
263. Laxatives or/and purgatives;	50 g x 2	48
264. Hemolysin;	25 g	60
265. Complement dried;	1 ml x 10	60
266. Anti-diarrhea drugs;	50 g x100	24
267. Distilled water for injection;	12 ml x 10A	1,000
268. Piperazine agipate;	100 g x 50	100
269. Fluorescent labelled serum; toxoplasma,	0.5 ml	40

List of equipment, materials to be provided for DIC, Tanjung Karang (1978/79)

(Non-expendable equipment)	RANKING		
	C	B	A
1. Incubator; middle size	2	2	2
2. Freezer; -20C, middle size	2	2	2
3. " ; -70C, "	1	1	1
4. Refrigerator with outlet, large size	2	2	1
5. Refrigerator; for storage of medicine etc.	1	1	1
6. Hot air sterilizer; middle size	1	1	1
7. Autoclave; middle size	2	1	1
8. " ; small size	1	1	1
9. Centrifuge; used on a table, 4000 rpm, with balances, a few types of rotors	1	1	1
10. Fluorescent microscope	1	1	1
11. Dark field condenser	1		
12. Inversion microscope	1	1	1
13. Microscope; binocular with light sources, apo object lenses	2	2	2
14. " ; trinocular with plan object lenses and light sources	1	1	1
15. Micrometer; for object and ocular lenses	each 1	1	1
16. Photographic set	1	1	1
17. Polaroid camera	1		
18. Aseptic box	2	2	1
19. Water bath with cover	1	1	1
20. Homogenizer; with cooling bathes (100, 50, 30 ml)	1	1	1
21. Homogenizer cup; 100, 50, 30 ml	each 10	10	5
22. Hair dryer	1	1	1
23. Magnetic stirrer, small size	1	2	1
24. " large size	1	1	1
25. Vacuum pump "MINIPON"	1	1	1
26. Filterating apparatus; stainless steel filter holder Seitz, 145 ml	1	1	1
27. " ; microsyringe filter holder, 13 mm & 25 mm	each 20	10	10
28. " ; filter holder (polycarbonate) 47 mm	10	5	5

	C	B	A
29. Water distilling apparatus; Aquaria apparatus with pre-ion	1	1	1
30. Water distilling apparatus; glass distilling apparatus	1	1	1
31. Dispenser; 1, 2, 5, 10 ml	each 5	3	1
32. Support for dispenser; two kinds	each 2	2	1
33. Ph meter; digital	1	1	1
34. Balance; up to 5 kg	2	1	1
35. Table balance; digital, 0.00001 - 100 g	1	1	1
36. " ; Ishida type	1	1	1
37. Stop watch	2	2	1
38. Desicator, Amber, cubic	5	10	5
39. Tray; enameled, 170 x 130 mm	10	5	5
40. " , 200 x 150 mm	10	5	5
41. " , 285 x 220 mm	10	5	5
42. " , 370 x 325 mm	5	2	2
43. " ; stainless, sizes S, M, L	each 10	2	2
44. Sterilizing can for pipettes, stainless steel	20	10	5
45. " for petri dishes or roller tubes, stainless steel	5	5	5
46. Wooden drawers for cans	3	3	
47. Vibrator for tray	2		
48. Timer, table	5	5	2
49. " , pocket size	5	10	4
50. Hatcher with capacity of 100 eggs	1	1	1
51. Egg table	5	5	5
52. Egg tester (handling)	2	2	1
53. Laboratory cart	3	3	2
54. Colony counter	1	1	1
55. Test tube washer, automatic	1	2	1
56. Pipette washer, syphon type	2	2	1
57. Disinfectant vase for pipettes	6	6	3
58. Slide projector	2	2	1
59. Screen, portable	2	1	1
60. Overhead projector	1	1	1
61. Slide warmer	2	1	1

	C	B	A
62. Dissecting instrument set; for poultry	2	2	1
63. " ; for large animals	2	1	1
64. Hand tally counter	3	3	2
65. Ice box (cooler); small size	2	2	2
66. " ; jar	5	5	3
67. Funnel support stand	5	5	3
68. Gas range; propane	5	3	2
69. Gas burner; propane	5	5	5
70. Tripad for gas burner	6	6	3
71. Magnifying glass	5	5	1
72. Bandage container	3	3	1
73. Slideglass cabinet	1	10	5
74. Microtiter kit with vibrator, washer and mirror	1	2	1
75. Holder for cattle	3	2	2
76. " for pig	3	2	2
77. Center laboratory bench (capable to be bent); large & small type	each 1	1	1
78. Working desk (side bench)	2	5	1
79. Medicine storage cabinet	2	2	1
80. Equipment cabinet	2	3	2
81. Meat grinder	1	1	
82. Paper holder (metal)	10	5	3
83. Transformer; 220 V - 110 V	10	7	5
84. Slidetrans	2	2	1
85. Rotary pump	1	1	
86. Cork hole drill set	1	1	1
87. Support for glassware drying	1	1	1
88. Sprayer for disinfection; portable	5	2	2
89. " ; hanging on shoulder	2	1	1
90. " ; gasoline engine	2	1	1
91. Sterilizer, boiling	5	5	1
92. Footwear disinfecting bath	10	5	3
93. Fumigation locker	2	1	1
94. Enamelled waste can	10	5	2
95. Support for hand disinfecting basin. (a pair)	10	10	5
96. Blood cell counting set; Thoma	10	5	3
97. " ; Bürker	10	5	3

	C	B	A
98. Haemogram calculator	2	2	1
99. Sahlly's set	10	5	2
100. Rapid agglutination testing set	3	2	1
101. Refractometer (protein)	1	1	1
102. Stethoscope (two kinds)	3	3	2
103. Blood cell pipette washer	1	1	1
104. Haematocrit centrifuge	1	1	1
105. Medicine spoon set	1	1	1
106. Photo copier	1	1	1
107. Typewriter, English	1	1	1
108. Washing machine	1	2	1
109. Wall clock, mercury battery	4	2	1
110. Standing light	4	5	2
111. Measure; 50 m	1	1	1
112. " ; 5 m, metal	2	2	1
113. Electric thermometer (for large animals)	2	1	1
114. Cage for mice	10	10	10
115. " for rabbits	5	5	3
116. Set for liver fluke diagnosis	1	1	1
117. Anaplasmosis diagnosis kit	1	1	1
118. Anthrax diagnosis kit	1	1	1
119. Bacteria Identification set	1	1	1
120. Handy microscope	5	3	3
121. Cassette recorder with radio (AM, FM, SW), wireless microphone, loud-speaker	2	2	1
122. Surgery tool set	1	1	1
123. Obstetrics tool set	1	1	1
124. Mouth opening equipment for pigs	2	2	1
125. " for cattle	2	2	1
126. Black board; metal	2	4	2
127. Electric pencil sharpener	2	2	1
128. Electric calculator	2	2	1
129. Unglazed pottery for water filtration, set with spare parts	1	1	1
130. Stomach tube	3	3	1
131. Handy megaphone with battery, wireless	2	2	1

(Additional non-expendable equipment)	C	B	A
A-1. Dry oven	1		
A-2. Criostat	1		
A-3. Autotechnicon	1		
A-4. Freezer dryer	1		
A-5. Incubator (CO ₂)	1		
A-6. Refrigerated Centrifuge	1		

(Vehicles)

1. Jeep, hard top, gasoline engine, long body with air conditioner 2	4	4	4
2. Motor cycle; 125 cc	5	5	5
3. Mini-truck, 2 ton	1	1	1
4. Mini-bus; 24 seats	1	1	1

(Reference Book)

1. Diagnosis of Veterinary Parasitisms J. J. Whitlock Latest ed. Lea and Febiger	1	1	1
2. Veterinary Helminthology Morgan and Hawkins Latest ed. Burgess Publishing Co.	1	1	1
3. Veterinary Protozoology Richrdson and Kendall Latest ed. F. A. Davis Co.	1	1	1
4. Diseases of Cattle	1	1	1
5. Diseases of Swine	1	1	1
6. Diseases of Poultry	1	1	1
7. Black's Veterinary Dictionary	1	1	1
8. Veterinary Encyclopedia	1	1	1
9. Merck's Veterinary Manual	1	1	1
10. Merck Index	1	1	1

(Expendable materials)	C	B	A
1. Stainless steel mesh basket; square	10	10	5
2. " ; round	10	10	5
3. Ice maker in refrigerator	4	4	4
4. Light bulbs for microscopes	6	6	
5. " for fluorescent microscope	2	2	
6. Tissue paper, box	40	40	20
7. Color film for camera; 35 mm	30	30	15
8. " for polaroid camera	200	150	
9. " for fluorescent microscope; ASA 160, reversal	10	10	10
10. UV light for aseptic box	10	5	3
11. Magnetic stirring rods; 15 cm	10	5	3
12. " ; 30 cm	10	5	3
13. " ; 40 cm	10	5	3
14. " ; 50 cm	10	5	3
15. Filter paper; Seitz, 145 mm, 0.45	100	70	50
16. " ; " " 0.22	100	70	50
17. " ; Millipore, 13 mm, 0.45 μ	200	150	100
18. " ; " 25 mm, "	200	150	100
19. " ; " 47 mm, "	200	150	100
20. " ; " 13 mm, 0.22 μ	200	150	100
21. " ; " 25 mm, "	200	150	100
22. " ; " 47 mm, "	200	150	100
23. " ; " 22 mm, prefilter	400	300	200
24. " ; " 42 mm, "	400	300	200
25. Filter paper; ordinal, No.2 (d. 12.5 cm)	200	200	100
26. " ; " , No.6 (")	200	200	100
27. " ; " , No.9 (")	200	200	100
28. " ; " , No.6 (s. 65 x 65)	100	80	50
29. Spares of glass distilling apparatus	3	3	1
30. Cartridges of aquaria apparatus	300	100	50
31. Desiccator, glass without cock	2	2	2
32. " , glass with cock	2	2	2
33. Light bulb for egg tester (candling)	3	3	2
34. " for colony counter	3	5	5
35. Brush for washer; various sizes	each 10	5	5
36. Brush for washing; various sizes	each 10	10	5
37. Scrubbing brush; various sizes	each 10	10	5
38. Light bulb for projectors	3	3	3

	C	B	A
39. Funnel, d. 30 mm	10	10	5
40. " , 45 mm	10	10	5
41. " , 60 mm	10	10	5
42. " , 90 mm	10	10	5
43. " , 150 mm	10	10	5
44. Kettle	2	2	2
45. Disinfecting basin	20	20	20
46. Blood cell pipette; white cells	100	50	30
47. " ; red cells	100	50	30
48. Rubber tube for blood cell pipette	200	100	60
49. Towel	200	100	50
50. Paper clay; kg	1	1	1
51. Microtube for haematocrit	100	100	50
52. Photo copier paper; pieces	5000		
53. Spare light for standing lights	10		
54. Microtiter dropper; 0.025 ml	100	50	50
55. " ; 0.05 ml	10	10	5
56. Microtiter diluter; 0.025 ml	50	50	25
57. " paper ; 0.025 ml, pack	1	1	1
58. " ; 0.05 ml, pack	1	1	1
59. " cartridge; for 0.05 ml	100	50	25
60. Measuring pipettes; between points, 0.5 ml	100	75	50
61. " ; " , 1.0 ml	300	200	100
62. " ; " , 2.0 ml	300	200	100
63. " ; " , 5.0 ml	200	100	50
64. " ; " , 10.0 ml	200	100	50
65. " ; " , 20.0 ml	100	75	30
66. " ; extreme tip , 0.25 ml	100	100	50
67. " ; " , 0.50 ml	200	100	50
68. " ; " , 1.0 ml	300	200	100
69. " ; " , 2.0 ml	300	300	100
70. " ; " , 5.0 ml	200	200	100
71. " ; " , 10.0 ml	100	100	50
72. Volumetric pipettes; hold type, 50.0 ml	30	30	10
73. " ; " , 100.0 ml	30	30	10
74. " ; Komagome type, 2.0 ml	50	50	25
75. " ; " , 5.0 ml	50	50	25
76. " ; " , 10.0 ml	20	20	10

	C	B	A
77. Test tube; 12 x 105 mm	1500	1500	750
78. " ; 16.5 x 165 mm	500	500	250
79. " ; 25 x 200 mm	300	300	100
80. " ; 21 x 165 mm	500	500	100
81. " ; 10 x 50 mm	300	200	200
82. Petri dish; 75 x 20 mm	300	200	200
83. " ; 90 x 15 mm	300	300	300
84. " ; 30 x 10 mm	300	20	20
85. Beaker; 30 ml	10	10	10
86. " ; 50 ml	10	10	10
87. " ; 100 ml	20	20	10
88. " ; 200 ml	20	20	10
89. " ; 300 ml	10	10	10
90. " ; 500 ml	10	10	10
91. " ; 1,000 ml	10	10	5
92. " ; 2,000 ml	10	10	5
93. Graduated cylinder; 50 ml	5	5	5
94. " ; 100 ml	10	10	10
95. " ; 500 ml	10	10	5
96. " ; 1,000 ml	10	10	5
97. " ; 2,000 ml	10	10	5
98. Volumetric flask with cap; 100 ml	5	5	3
99. " ; 200 ml	5	5	3
100. " ; 500 ml	5	5	3
101. " ; 1,000 ml	5	5	3
102. " ; 2,000 ml	5	5	3
103. Erlenmeyer flask; 50 ml	10	5	5
104. " ; 100 ml	20	10	10

		C	B	A
105.	Erlenmeyer flask; 200 ml	20	20	20
106.	" ; 300 ml	20	20	20
107.	" ; 500 ml	20	20	20
108.	" ; 1,000 ml	10	10	10
109.	" ; 2,000 ml	10	10	5
110.	" ; 3,000 ml	5	5	3
111.	Centrifuge tube, half of them with caps; 10 ml	200	200	100
112.	" ; 15 ml	200	200	100
113.	" ; 40 ml	50	50	25
114.	Trypsinization flask; 300 ml	10	10	5
115.	Cover glass, ordinal; 18 x 18 mm, case with 100 pieces	50	50	25
116.	" ; 20 x 20 mm "	50	50	25
117.	" ; 24 x 36 mm "	30	30	10
118.	" ; 20 x 40 mm "	10	10	5
119.	" ; for blood cell counter chamber	100	10	5
120.	Slide glass; case with 50 pieces; ordinal	500	500	500
121.	" ; FA	10	10	10
122.	" ; FA, round mark	5	5	5
123.	" ; hole	50	50	25
124.	Slide glass box; 100 pcs. contents	30	20	10
125.	Reagent bottle with narrow mouth; 120 ml	10	10	5
126.	" ; 250 ml	10	10	5
127.	" ; 500 ml	10	10	5
128.	" ; 1,000 ml	30	30	15
129.	" ; 2,000 ml	10	10	5
130.	" ; Amber; 250 ml	10	10	5
131.	" ; " , 500 ml	10	10	5
132.	" ; " , 1,000 ml	10	10	5

	C	B	A
133. Reagent bottle with wide mouth; 250 ml	50	50	25
134. " " ; 500 ml	50	50	25
135. " " ; 1,000 ml	50	50	25
136. Polyethylene bottle; 100 ml	20	20	10
137. " ; 500 ml	20	10	5
138. " ; 1,000 ml	10	10	5
139. " ; 5,000 ml	5	5	3
140. " ; 5,000 ml with cock	5	5	3
141. " ; 10,000 ml with cock	5	5	3
142. Gas washing bottle; 500 ml	5	5	3
143. Filtering flask; 1,000 ml	3	3	3
144. " ; 2,000 ml	3	3	3
145. " ; 3,000 ml	2	2	2
146. Roller tube for tissue culture; 15 x 90 mm	1000	1000	500
147. Culture bottle; 40 x 55 x 100 mm	100	100	50
148. " ; 35 x 90 x 90 mm	100	100	50
149. Specimen bottle; 15 x 15 cm	5	5	5
150. " ; 18 x 21 cm	5	5	5
151. Agglutination tray	5	20	10
152. Metal stopper for test tube; (12 x 105 mm)	1500	1500	750
153. " ; (16.5 x 165 mm)	500	500	250
154. " ; (21 x 165 mm)	500	500	250
155. " ; (10 x 50 mm)	300	300	150
156. Silicon stopper for test tube; (16.5 x 165 mm)	500	300	150
157. " ; (25 x 200 mm)	300	300	150
158. " ; (21 x 165 mm)	500	300	150
159. Rubber stopper; No.0	500	500	250
160. " ; No.1	1000	1000	500

	C	B	A
161. Rubber stopper; No.2	200	200	100
162. " ; No.3	50	50	25
163. " ; No.4	50	50	25
164. " ; No.5	100	100	50
165. " ; No.6	100	100	50
166. " ; No.7	50	50	25
167. " ; No.8	50	50	25
168. " ; No.9	20	20	10
169. " ; No.10	20	20	10
170. " ; No.11	20	20	10
171. " ; No.12	20	20	10
172. " ; No.13	10	10	5
173. " ; No.14	10	10	5
174. " ; No.15	10	10	5
175. Glass syringe; 0.5 ml	100	50	25
176. " ; 1.0 ml	100	50	25
177. " ; 2.0 ml	100	50	25
178. " ; 5.0 ml (Luer)	100	50	25
179. " ; 10.0 ml (")	100	50	25
180. " ; 20.0 ml (")	50	50	25
181. " ; 50.0 ml (")	50	50	25
182. " ; 100.0 ml (")	20	20	10
183. " ; 0.5 ml (Tb)	50	50	25
184. " ; 1.0 ml (Tb)	50	50	25
185. " ; 2.0 ml (Tb)	50	50	25
186. Metal syringe; 10.0 ml	50	25	10
187. " ; 20.0 ml	50	25	10
188. " ; 50.0 ml	50	25	10
189. Continuity injector; 1.0 ml	5	5	2
190. Auto-pister; 1 ml	5	5	2
191. Needle, injection; SC 1/1	50	50	25
192. " ; SC 1/2	50	50	25
193. " ; SC 1/3	50	50	25
194. " ; SC 1/4	50	50	25
195. " ; SC 1/5	50	50	25
196. " ; IV 1/1	50	50	25
197. " ; IV 1/2	50	50	25

	C	B	A
198. Needle, injection; IV 1/3	50	50	25
199. " ; IV 1/4	50	50	25
200. " ; IV 1/5	50	50	25
201. " ; ID YAOI 1/3 (IP)	50	50	25
202. " ; " 1/4 (IC)	50	60	30
203. " , Bleeding ; 1.8 x 50 mm, Luer	50	60	30
204. " ; 1.5 x 40 mm, Luer	100	100	50
205. " ; 1.8 x 100 mm, Luer	100	100	50
206. " ; for buffalo	100	100	50
207. Silicon rubber tube; 8 mm.d., meter	100	100	50
208. " ; 9 mm.d., meter	50	50	25
209. " ; 10 mm.d., meter	50	50	25
210. " ; 12 mm.d., meter	50	50	25
211. Teflon tube; 3 mm.d. meter	50	50	25
212. " ; 5 mm.d. "	50	50	25
213. " ; 7 mm.d. "	50	50	25
214. " ; 9 mm.d. "	50	50	25
215. " ; 10 mm.d. "	50	50	25
216. " ; 12 mm.d. "	50	50	25
217. Rubber tube for gas; meter	50	50	25
218. " for tap water, meter	50	50	25
219. Pinch cock	50	50	5
220. Rubber band; No.16, box	30	30	15
221. Powder paper; sheet	50	50	
222. Vernir caliper	2	2	1
223. Rack for small size tube	20	20	10
224. " middle size tube	20	20	10
225. " large size tube	10	10	5
226. " cover glass	5	5	3
227. " slide glass, metal	5	5	3
228. Aspirator, polyethylene	5	5	3
229. Glass tube, meter, various sizes	each		10
230. Glass rod, meter	each		10
231. Asbest, various sizes	10	10	5
232. Metal mesh, 100 mesh, m2	2	1	1
233. " , 200 mesh, m2	2	1	1
234. Paraffin paper, pieces	100	100	50

	C	B	A
235. Gauze, meter	300	100	50
236. Absorbent cotton, 50 g	50	50	25
237. Roup with nicrome wire	10	10	5
238. Nicrome wire, meter	10	10	5
239. Lead band for sink, meter	2	2	10
240. Cornet	10	10	5
241. Staining jar	20	20	10
242. Alminium box (lunch box)	20	20	10
243. Polyethylene bucket	10	10	5
244. Slideglass tray	50	50	25
245. Parafilm, box	2	2	1
246. Glass pencil, dozen	2	1	1
247. Diamond pencil (glass cutter)	5	5	2
248. Vinyl tape; various colors	5	5	3
249. Vinyl bag; various sizes	300	300	150
250. Paper string, meter	20	20	10
251. Stainless steel nail for autopsy, various sizes	20	20	10
252. Specimen container; 100 ml, wide mouth with screw cap	1000	1000	200
253. " ; 300 ml "	1000	1000	200
254. Disposal swab; pieces	1000	1000	200
255. Disposal vacuum tube	1000	1000	200
256. Disposal syringe; 5 ml	1000	1000	200
257. " ; 10 ml	1000	1000	200
258. " ; 20 ml	1500	1000	200
259. Disposal needle; SC 1/1	1500	1500	1000
260. " ; IV 1/1	1500	1500	1000
261. Moist chamber	5	5	3
262. Corner, meter	5	5	2
263. Hamp yarn, meter	20	20	10
264. Squirt	100	100	50
265. Index, pieces	1000	1000	500
266. Cotton glove; pair	50	50	25
267. Rubber glove; pair, for operation, thin, various sizes	10	10	5
268. " ; pair, thick, various sizes	10	10	5
269. Talc powder; bag	5	5	3
270. White garmet; special size	10	10	5
271. " ; L size	10	10	5

	C	B	A
272. White garmet; M size	10	10	5
273. " ; S size	10	10	5
274. Rubber boot; special	5	5	3
275. " ; L size	5	5	3
276. " ; M size	5	5	3
277. " ; S size	5	5	3
278. Sandal. Wooden, pair	20	10	5
279. Ph test paper; 7 sorts, case	2	2	1
280. Ph standard color table; for 7 sorts	2	2	1
281. Thermometer for animal use	50	50	25
282. Bandage; various sizes	20	20	10
283. Alminium foil; case	30	30	15
284. Eye dropping bottle; 20 ml	5	5	3
285. Manicure	2	2	1
286. Oil, Ceder, bottle	5	5	3
287. " , Condensor, bottle	2	2	1
288. " , MINIPON, can	1	1	1
289. " , Ishida type balance, can	1	1	1
290. Glass wool for disinfectant vase, kg	1	1	1
291. Xylene; 500 ml	5	5	3
292. Double bottle	10	5	3
293. Metal file	20	20	3
294. Scissor, stainless steel, round, pair	20	20	10
295. " , " , sharp, pair	10	20	10
296. " , " , Ophthalmologic	20	10	5
297. Surgical knife, stainless steel, round		20	10
298. " , " , sharp	20	20	10
299. " , " , Ophthalmologic	10	10	5
300. Forcep, stainless steel, pointed, 130 mm	20	20	10
301. " , " , " , 110 mm	20	20	10
302. " , " , Mouse teeth, 130 mm	10	20	10
303. " , " , Pean	10	10	5
304. Paper cutter for autopsy		10	5
305. Filter paper for collecting whole blood, pieces	1000	1000	500
306. Safety pipetter; 25 ml & 50 ml	10	5	3
307. Spare parts; for dispenser-ball, spring, packing	10	10	5
308. " ; for microsyringe filter holder mesh	10	10	5
309. " ; for electrode of Ph meter	5	3	2

	C	B	A
310. Needle for sucking	10	10	5
311. Pencil; HB, dozen	10	10	5
312. " ; B, "	10	10	5
313. Color pencil, 12 colors, dozen	5	5	3
314. Magic pencil, oil, red & black	10	10	5
315. Report pad; B4, 100 sheets	50	50	25
316. Rabbit food; 20 kg bag	10	10	5
317. Mouse food; 20 kg bag	10	10	5
318. Frame of plastic sheet for overhead projector	100	100	50
319. Slide glass box; 5 pieces contents	500	500	250
320. Cassette for the recorder, 60 min.	30	30	15
321. Magnet button	50	5	5

	C	B	A
(Reagents and Chemicals)			
1. Eagle MEM media (1); 100 g	10	10	5
2. Hanks solution; 100 g	10	7	5
3. Earles solution; 100 g	10	18	5
4. 199 media; 100 g	5	5	5
5. PBS (-) powder; 100 g	30	30	15
6. Mg, Ca ions for PBS (+); 10 ml	10	10	5
7. Lactalbumin hydrolysate; 1 lb for tissue culture	2	2	1
8. Tryptose phosphate broth; 1 lb for tissue culture	2		
9. Yeast extract; 1/4 lb	2	2	1
10. Bovine albumin powder fraction V; 10 g	30	20	10
11. Trypsin (1:250); 25 g	20	18	10
12. NaCl; 500 g, JIS-gr	10	10	5
13. KCl; " , "	2	2	1
14. $\text{Na}_2\text{HPO}_4 \cdot 12\text{H}_2\text{O}$; 500 g, JIS-gr	2	2	1
15. $\text{Na}_2\text{HPO}_4 \cdot 2\text{H}_2\text{O}$; " "	2	2	1
16. $\text{Na}_2\text{HPO}_4 \cdot \text{H}_2\text{O}$; " "	2	2	1
17. NaH_2PO_4 ; " "	2	2	1
18. $\text{NaH}_2\text{PO}_4 \cdot \text{H}_2\text{O}$; " "	2	2	1
19. KH_2PO_4 ; " "	2	2	1
20. $\text{MgSO}_4 \cdot 7\text{H}_2\text{O}$; " "	2	2	1
21. $\text{MgCl}_2 \cdot 6\text{H}_2\text{O}$; " "	2	2	1
22. $\text{CaCl}_2 \cdot 2\text{H}_2\text{O}$; " "	2	2	1
23. NaHCO_3 ; " "	3	3	2
24. Glucose; " "	2	10	5
25. Citric acid; " "	2	2	1
26. Sodium citrate; " "	2	2	1
27. CaCl_2 for desiccation; 500 g	10	8	4
28. NaOH; 500 g, JIS-Gr. pellet	2	2	1
29. Na_2CO_3 ; " "	2	2	1
30. Tris (hydroxymethyl)-aminoethane; 100 g	2	2	1
31. HEPES (N-2-hydroxyethylpiperazine-N'-2ethane-sulfonic acid); 500 g		2	
32. Egg albumin soluble, Bacto; 100 g	3	3	2
33. Special agar noble; 1 lb.	2	2	1
34. l-glutamine; 25 g, JIS-Gr.	2		
35. l-glutamine; 0.3 g, JIS-Gr.	30	20	10

	C	B	A
36. Penicillin crystal; 1,000,000 units	30	20	10
37. Streptomycin crystal; 1 g unit	30	25	15
38. Kanamycin crystal; 1 g unit	30	25	15
39. Amphotericin B; 50 mg	10	5	3
40. EDTA disodium salt; 25 g	2	2	1
41. Phenol red; 25 g	2	2	1
42. Neutral red; 25 g	2	2	1
43. Crystal violet; 25 g	2	2	1
44. Methylene blue; 25 g	2	2	1
45. Giemsa solution; 100 ml	2	2	1
46. Nigrosin; 10 g	2	1	1
47. Barbitol; JIS-Gr. 25 g	2	1	1
48. Sodium barbitol; JIS-Gr. 25 g	2	2	1
49. Barbituric acid; " "	2	2	1
50. Gelatin Bacto; 1 lb	2	2	1
51. H ₃ BO ₃ ; JIS-Gr., 500 g	2	2	1
52. HCl; " 500 ml	5	5	3
53. HCl; JIS-ep, 500 ml	5	5	3
54. Silica-gel medium granular; Blue, 500 g	10	10	5
55. Acetone; JIS-gr, 500 g	10	10	5
56. Acetone; JIS-ep, 500 g	10	10	5
57. Acetone; JIS-ep, 18 l	2	1	1
58. Kaolin; Acid washed, 1 lb	2	2	1
59. RDE;	5	5	3
60. KIO ₄ ; JIS-gr, 25 g	2	2	1
61. Glycerin; JIS-gr, 500 g	5	5	3
62. 2-Mercapto ethanol; JIS-gr, 25 g	3	3	2
63. Ethyl ether; JIS-gr, 500 ml	10	10	5
64. Buffer solution, standard; pH 4.01, 500 ml	5	3	2
65. Buffer solution, standard; pH 6.86, 500 ml	5	3	2
66. Buffer solution, standard; pH 9.18, 500 ml	5	3	2
67. Methanol; JIS-gr, 500 g	20	20	10
68. Ethanol; " "	20	10	5
69. Ethanol for disinfection; 500 g	30	20	10
70. " ; 18 l	3	2	1
71. Phenol; JIS-gr, 500 g	10	10	5
72. Purelox (disinfectant); 18 l	10	5	3
73. Pacoma (disinfectant); 18 l	10	5	3

		C	B	A
74.	Cresol: 500g	5	5	3
75.	Cresol: 18ℓ	10	5	3
76.	Heart infusion agar: 100g	30	15	10
77.	Heart infusion broth: 100g	5	5	3
78.	Trypto-soy agar: 100g	15	5	3
79.	Trypto-soy broth: 100g	5	3	2
80.	Nutrient agar: 100g	30	15	10
81.	Nutrient broth: 100g	50	30	15
82.	YCC broth: 100g	10	5	3
83.	Cooked meat: 100g	5	3	2
84.	BTB: 100g	15	10	5
85.	PEA acide agar: 100g	2	2	1
86.	Hugh Leifson: 100g	2	2	1
87.	VP semisolid agar: 100g	3	3	2
88.	Glucose phosphate peptone: 100g	3	3	2
89.	SF agar: 100g	3	3	2
90.	XV disc: 100g	3	3	2
91.	XV disc: set	3	3	2
92.	Indol testing paper: 50pcs.	5	3	2
93.	Bacitracin disc: 50pcs.	2	2	1
94.	Cytochrome disc: 50pcs.	3	3	2
95.	Biotest set: 12 sorts	5		
96.	SS agar: 1,200g	2	2	1
97.	Mcdonkey agar: 100g	50	30	15
98.	DHL agar: 300g	3	3	2
99.	Brilliant green agar: 100g	10	5	2
100.	Urea broth: 5ml x 5 amp	2	2	1
101.	Selenite broth: 300g	5	5	2
102.	Desoxycholate agar: 300g	5	5	2
103.	Desoxycholate disc: 50pcs.	5		
104.	BGLB broth: 300g	2		
105.	Potato dextrose agar: 300g	3	2	1
106.	BS broth: 100g	3	3	2
107.	Mannitol salt agar: 300g	5	3	2

		C	B	A
108.	Staphylococcus 100 300g	5	5	3
109.	PP agar: 100g	5	3	2
110.	Rabbit plasma: 1ml x 5	5	5	3
111.	TGC: 300g	10	5	3
112.	TGC for clinical use: 300g	5	5	3
113.	Albumin: 20ml. x 6	1	1	1
114.	3% OGAWA agar: 10 tubes	50	30	15
115.	Candida GS agar: 300g	3	5	3
116.	Sabouraud dextrose agar: 300g	5	3	2
117.	Mycocel agar: 100g	3	3	2
118.	Tridiscs: 10 sorts	5	5	3
119.	Sensitivity disc media: 300g	5	5	3
120.	Sensitivity disc: 10 sorts	5	5	3
121.	Stamp agar: 10 pcs.	10		
122.	EMB: 300g	5	3	1
123.	EEM broth: 100g	5	3	1
124.	SP media: 100g	10	5	3
125.	Klingler media: 300g	5	5	3
126.	SM media: 100g	5	3	2
127.	Ugon media: 100g	5	3	2
128.	EC media: 100g	2	2	1
129.	NAC agar: 300g	3	3	2
130.	Gluconate media: 20amp.	3	3	2
131.	Peptone: 100g	5	5	3
132.	Anaerobe agar: 300g	5	5	3
133.	Anaerobe senisolid agar: 100g	3	3	2
134.	Hemoglobin: 100g	5		
135.	Brucella antigen for rapid agglutination test	10	10	5
136.	" for tube test	10	10	5
137.	" for CF test	10	10	5
138.	Bovine adeno-parainfluenza 3 HI test antigen	10	10	5
139.	Tuberculin for bovine	50	50	25
140.	HA antigen for toxoplasmosis:	10	10	5
141.	Intra-dermal antigen for toxoplasmosis	10	10	5
142.	HI test antigen for Newcastle disease	50	50	25
143.	Agglutination antigen for CRD.	20	20	10
144.	Pullolum antigen	10	10	5

			C	B	A
145. Fluorescent labelled sera:	IBR	0.5ml 40	40	40	20
	PI 3	0.5ml 40	40	40	20
	Hog cholera	0.5ml 40	40	40	20
	Newcastle disease	0.5ml 40	40	40	20
	IB for chicken	0.5ml 40	40	40	20
	Rabies	0.5ml 100	100	100	50
146. Penicilline, soluble:	2 mil units x 20ml		200	100	50
147. Penicilline, oil:	2 mil units		200	300	
148. Streptomycine:	1g unit		300		150
149. Kanamycine:	1g unit		200	250	200
150. Erythromycine			100	100	50
151. Sulfa drugs: various kinds			50		
152. Cardiac:	10 amp.		20	10	5
153. Vitamine B 12-Linger solution for injection:	500ml		100	20	10
154. Mechionine for injection:	20 ml		100	100	50
155. Laxatives or/and purgatives			24	12	6
156. Haemolyzin, sheep, dried			30	30	15
157. Complement, dried			30	20	10
158. Anti-diarrhea drugs			12	25	10
159. Distilled water for injection:	12ml		500	20	10
160. Anthelmintics: various kinds, kg			50	10	10

List of Equipment, Materials to be provided for Type B D I C

in Acch.

I. Parasitology.

1. Slide / dech glass	20 box
2. Bottle Immersion oil	5
3. Culture Dish petridish pyrex Brand	1
4. Bottle dropping	12
5. Tiebangun hewax	1
6. Stop clock	2
7. Scalpel handle	2
8. Scalpal blades	10 box
9. Crile's artery forceps	5
10. Mathieus Needle holder	3
11. Travo / Step down	1
12. Hand sprayer	1
13. Tissue paper	12 roll
14. Halborn Stethoscope	1
15. Testube Rack	5

II. Pathology

1. Embedding boxes	1
2. Flask, Canical Narrow mouth pyrex glass capacity 1000ml	1
3. Field box	2
4. Duplex staining Dish	2
5. Pressplast Embedding paraffin.....	1 pkg.
6. Sharpening Sjome oil	Pkg. 6710
7. Shears Fisher	2
8. Staining Tray	6
9. Microtone	1

III. Bacteriology

1. Analytical Balance	1
2. Anaerobic jar	3
3. Beaker glass : a) volume 50cc	15
b) " 250cc	15

c) Volume 500 cc	10
d) " 1000 cc	10
e) " 2000 cc	10
4. Blood collecting needles	
5. " diluting pipets :	
a) R.B.C.	6
b) W.B.C.	6
6. Bottle Narrow Mouth:	
a) volume 60 cc	3
b) " 125 cc	3
c) " 250 cc	6
d) " 500 cc	6
e) " 1000 cc	6
7. Bottle Dropping:	
a) volume 30 cc	24
b) " 60 cc	24
c) " 125 cc	24
8. Brush Test Tube	6
9. Bucket Utility	2
10. Box Petri Dishes	5
11. Centrifuge	1
12. " Tube 10 cc	240
13. Colony counter	1
14. Differential counter	1
15. Erlen meyer :	
a) volume 25 cc	6
b) " 50 cc	6
c) " 100 cc	6
d) " 150 cc	6
e) " 500 cc	6
f) " 1000 cc	3
g) " 2000 cc	3
16. Filter Adaptor	1

17. Galas ukur :		
	a) volume	10 cc 5
	b) "	25 cc 10
	c) "	50 cc 5
	d) "	100 cc 5
	e) "	500 cc 2
	f) "	1000 cc 2
18. Inculating loop		10
19. Lemari kaca tempat alat-alat yg steril		1
20. Magnetic stricker dengan batang magnet D.R.yan's besar s/d kecil		1
21. Martar porcelain		
	a) volume	1 cc 2
	b) "	5 cc 2
	c) "	7 cc 1
	d) "	12 cc 1
22. Oven Temp. 100°C		1
23. Pinset (stainless steel) 4 1/2 inch.		2
24. pH meter		1
25. Plates porcelain		1
26. Refracto meter		1
27. Slide box		5
28. " cabinet		1
29. Scalpal handles		3
30. Thermometer klinis		50
31. Tuberculine syringes :		
	a) volume	0.25 cc 2
	b) "	1 cc 3
32. Ultra violet Lamp		2
33. Tangs		5
34. Vacutainer sterile with anti.coagulant		1000
35. Incubator 37°C		1