

REF

5/6.001.5(07)
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สถาบันวิจัยวิทยาศาสตร์ประยุกต์แห่งประเทศไทย

บันทึกข้อความ

เรื่อง การแจกจ่ายระเบียบการปฏิบัติงาน (เพื่อพลง)

เรียน ผู้อำนวยการวิจัย, ผู้อำนวยการศูนย์, ผู้อำนวยการกลุ่ม, และหัวหน้าหน่วย

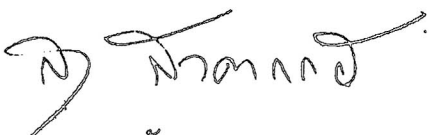
จาก ผู้อำนวยการฝ่ายฯ

วันที่

3 ตุลาคม 2515

1. เนื่องจากมีพนักงานของสถาบันฯ จำนวนมากไม่ทราบระเบียบการปฏิบัติงานการวิจัย จึงได้แจกจ่ายระเบียบการปฏิบัติงานวิจัยต่าง ๆ มาให้แก่ผู้อำนวยการวิจัย, ผู้อำนวยการกลุ่ม, ผู้อำนวยการศูนย์ฯ และหัวหน้าหน่วย ซึ่งจะต้องชี้แจงให้นักวิจัยและนักทดลอง ได้บังคับบัญชาได้ทราบและควบคุมให้ปฏิบัติตามระเบียบนี้
2. ระเบียบการปฏิบัติงานวิจัยนี้ ถือว่าเป็นเพื่อพลง ซึ่งหมายความว่ามีความยืดหยุ่นและสามารถเปลี่ยนแปลงได้ ตามเหตุการณ์ เวลา และความชำนาญ
3. ระเบียบการปฏิบัติงานวิจัยนี้ ได้ถูกนำมาใช้อยู่จนกระทั่งปัจจุบัน แต่ก็ก่อให้เกิดอุปสรรคในการดำเนินงานตามระเบียบนี้อยู่ ในกรณีเช่นนี้ขอให้พนักงานที่เกี่ยวข้องเสนอข้อแก้ไขหรือขอเสนอแนะเพื่อดำเนินการแก้ไขให้เหมาะสมและคล่องตัวในการปฏิบัติงานวิจัย
4. ระเบียบการปฏิบัติงานวิจัยฉบับที่มอบให้ นี้ จะยังยึดถือเป็นแนวทางปฏิบัติต่อไปตามปกติ จนกว่าจะมีการแก้ไข, ยกเลิกหรือเปลี่ยนแปลง
5. หากพนักงานผู้ใดประสงค์จะเสนอแนะเกี่ยวกับการเปลี่ยนแปลงแก้ไขขอให้ติดต่อกับผู้อำนวยการฝ่ายบริการงานวิทยาศาสตร์และงานบริหาร
6. ให้เป็นที่เข้าใจว่า ระเบียบการปฏิบัติงานวิจัยฉบับนี้ อาจจะมีการแก้ไขเพิ่มเติมบ้างในโอกาสต่อไป เพื่อให้เหมาะสมกับการปฏิบัติงานวิจัย ซึ่งจะได้ออกมาให้ทราบเพิ่มเติมเป็นระยะไป

นาวาอากาศเอก


(สร สาทราบัญ)

APPLIED SCIENTIFIC RESEARCH CORPORATION OF THAILAND

MEMORANDUM

To: All Programme Coordinators and Others concerned

Subject: Data Sheets and Outlines of Research Programmes and Projects

24 June 1969

1. Reference is made to Laboratory Instruction 09/4 giving details of reporting procedures for Research Programmes and Projects.
2. Paragraph 4 of that instruction makes it the responsibility of the Programme Coordinator to revise the Outline of his Research Programme whenever substantial changes have occurred which make the existing Outline out-of-date.
3. Paragraph 6 indicates that before experimental work is started on any Research Project a Tentative Outline will be prepared indicating the research tasks to be done (or sufficient of them say the first year of work) and the steps constituting the tasks which are to be worked on in the near future. This should be examined by the Programme Steering Committee and approved.
4. All Programme Coordinators are asked immediately to examine relevant Outlines of Research Programmes and Projects and the corresponding Data Sheets, and to act accordingly. Drafts should be submitted to me as soon as possible.
5. Date of approval should be indicated in the corresponding Data sheet and the designation TENTATIVE will be dropped.
6. When revising Outlines, special attention should be given to Programme/Project titles. These should be as explicit on the subject coverage as possible, but should be chosen to be wide in scope rather than too narrow, and should be concise. In every case the Project title should stand on its own without needing to be read in conjunction with the Programme title.

Frank G. Nicholls

APPLIED SCIENTIFIC RESEARCH CORPORATION OF THAILAND

Laboratory Instruction No. 12/1

To : Research Director - Generals,
Research Directors and Directors,
Research and Experimental Staff.

From : Frank G. Nicholls

Subject : Reports in "Green Series"

Date : 14 January 1969

The Scientific Editor has already specified in Editorial Notice No. 11/1 the general format to be followed in preparing technical reports on the results arising in the course of research projects. The present memorandum is issued to remind authors of other requirements in report preparation.

Be brief

All reports should be as concise as possible. The work reported on will be judged on its technical merit, not on the length of the report. "Padding" should be avoided. Do not give details of information which can be found elsewhere; a brief statement with a reference to the source in which previous work, methods of analyses, special techniques, etc. can be found will suffice.

Do not include lengthy descriptions of preliminary work or negative evidence. In many cases the statement "preliminary experiments indicated that" coupled with the conclusions reached is an adequate preamble to the finally adopted methodology. There is no need to trace through all false starts you made or the side issues that consumed time before you found the correct route. Save the time of the reader and get straight to the point. Your report will then have much better impact value.

Do not include long tables of all the data collected. Be selective and use only the material needed to support your conclusions or to show the range of results. Do not include both figures and tables displaying the

same data; decide which is better to convey the necessary information and use that method only.

Do not include original charts from instruments except in very special situations. Choose the minimum of illustrative material and generalize it if you can. A well thought out diagram summarizing a group of traces is to be preferred to the inclusion of a series showing variations encountered in the course of experimentation.

Be careful

Scrutinize results carefully and be sure that your conclusions are adequately supported by your data. Do not attempt to press more from your data than it can properly yield. Beware of over-sophisticated analyses which appear to provide conclusions from too few data.

Include references to the work of other researchers. Clearly distinguish prior knowledge from your own conjecture or conclusions.

Foreword

It is desirable to include a foreword giving information on cooperative research arrangements, reference to any special reasons for report preparation, or unusual circumstances relating to the topic reported. Be careful to give credit to other components of cooperative research teams.

Summary

The summary should be informative and adequately cover the material dealt with in the report. It should be as brief as possible but contain enough information to comprise a useful abstract.

Introduction

The introduction should introduce the subject of the report. Reference should be made to the importance of the work and why it is being undertaken. Earlier work should be referred to briefly.

Frank G. Nicholls
Special Governor

APPLIED SCIENTIFIC RESEARCH CORPORATION OF THAILAND

Laboratory Instruction No. 11/5

14. February 1968

Subject : Technical Data Files

To : Research Director-Generals,
Research Directors and Directors,
Research and Experimental Staff.

1. It has been agreed that Technical Data Files will be maintained on topics of specific interest in relation to existing or potential research programmes. These will contain library material, cuttings, extracts, ephemeral material, contact notes, information obtained by correspondence and working notes relating to the topic concerned. In most cases they will consist of a box file containing the material in question in random browsing order.
2. All Data Files are regarded as being under the control of TNDC. However, individual Data Files will be assigned to the custody of research personnel working on any specific topic.
3. TNDC will maintain a register of all Data Files and will from time to time circulate a consolidated list of Data Files and their location.
4. Any member of the research staff can, through his Research Director, request, TNDC to create a Data File and for that File to be assigned to his custody.
5. Whenever a Data File becomes inactive or no longer of current interest to the person to whom it has been assigned, it should be returned to TNDC.
6. Appropriate use should be made of copying facilities to avoid unnecessary retention in Data Files of multi-subject publications in which the topic in question forms only a small part of the whole, and to permit inclusion of information from correspondence etc.

7. In appropriate cases specific numbers from files of serial publications will be included in active Data Files. In such cases a piece of card with bibliographic data should replace the publication in the serial files. When a Data File becomes inactive, or when frequency of use in other contexts demands an unbroken serial file, the substitute card should be transferred to the Data File and the publication should be kept in the serial file.
8. All staff members are asked to look through material currently kept by them as personal accumulations and to arrange for as much of this material as possible to be included in Data Files. This action will enable valuable material to be brought into the ASRCT Technical Records system and so made available for use by all staff members.
9. TWDC is the official custodian of all technical data including maps, photographs, instrument charts and records, completed laboratory notebooks, punched cards and other material. Whenever staff members have completed their work on such material, arrangements should be made for it to be transferred to TWDC for filing.

Frank G. Nicholls

APPLIED SCIENTIFIC RESEARCH CORPORATION OF THAILAND

Laboratory Instruction 11/4

16 January 1968

To : All Programme Co-ordinators and others concerned

Subject : Outlines of Research Programmes and Research Projects.

1. Reference is made to Laboratory Instruction 09/4 giving details of reporting procedures for Research Programmes and Research Projects.
2. Paragraph 4 of that instruction makes it the responsibility of the Programme Coordinator to revise the Outline of his Research Programme whenever substantial changes have occurred which make the existing Outline out-of-date.
3. All programme Coordinators are asked immediately to examine relevant Outlines of Research Programmes and Research Projects and the corresponding Data Sheets, and to revise them to take account of any changes that may have occurred. Revised drafts should be submitted to me for approval prior to retyping on or before 31 January 1968.
4. The revised Outlines should indicate the progress made with the Programme/Project to date and should include details of relevant Reports and Appraisal Reports. They should also include a time table specifying proposed activity during 1968.
5. When revising Outlines, special attention should be given to Programme/Project titles. These should be as explicit on the subject coverage as possible, but should be chosen to be wide in scope rather than too narrow, and should be concise. In every case the Project title should stand on its own without needing to be read in conjunction with the Programme title.

Frank G. Nicholls

APPLIED SCIENTIFIC RESEARCH CORPORATION OF THAILAND

Laboratory Instruction No. 11/3

To : All Concerned

From : Chemical and Equipment Committee

Subject : ASRCT Equipment

Date : 3 January 1968

In order to obtain a clear view of the equipment situation within ASRCT and also to facilitate the repair and maintenance of this equipment, the Chemical and Equipment Committee is intending to establish in collaboration with the IRCC a new card system for all major pieces of equipment.

The assistance of the research staff of all groups is required to complete the attached cards to provide the necessary information.

To avoid complications, the information as filled in on the cards should be relevant for the situation on Friday, January 12, 1968. The Chemical and Equipment Committee will collect all cards at the end of that day from the Research Directors. Changes in responsibility or location etc. of equipment occurring after that date must be notified to the storekeeper in the TNDC or TRI building. Until the storekeeper in the TRI building is installed, one of the members of the C & E committee shall be informed instead. This action will enable the storekeeper to make the appropriate corrections in the card system.

The card system will be located in the IRCC and in the storeroom of the TRI building and will be available for general use.

The equipment cards will be distributed by the Research Director of each Group.

If any problem arises in filling in the cards, please contact either the Research Director of your Group or one of the members of the C & E Committee.

Thanking you in advance for your assistance,

The Chemical and Equipment Committee

Mrs. Ubolari Cheosakul

Mrs. Piwan Varangoon

Mr. Wilhelmus C.J. Hermans

Directions for Completion of the Equipment Cards.

1. One card shall be filled in for every piece of equipment carrying a RC number, except Furniture.
2. The Inventory Number on the card refers to the RC number as marked on nearly all instruments. If a instrument does not have a RC number and you feel that it should be included in the equipment card system, mark this space with an X.
3. Name or Designation should give the full name of the piece of equipment concerned.
4. Complete Description should give all details of the instrument, e.g. its brand, type, model, capacity, working range, voltage, special connections etc.

Information on the availability of the instruction manual should be mentioned here. State if manual is or is not available in the laboratory with the instrument. When the laboratory copy of the manual is located other than at the instrument, state where it is.

5. Location of the instrument means the place where the instrument is normally located but reference should be made also to the staff member who is actually taking care of the instrument. Give his or her name and the Unit and Group to which he or she belongs.
6. Tel should give the telephone number of the staff member who takes care of the instrument.
7. Do not fill in the number of same items. These data will be filled in by the C & E Committee.

Example

pH - meter

RC - 2138

Name or Designation

Inventory Number

Brand: Beckman

Supplier: Karl Kolb

Type: Expandomatic

Purchase year: 1965

Voltage: 220 V

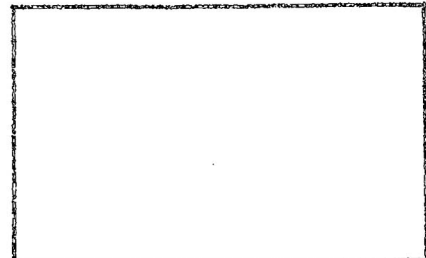
Price: \$ 100

Working range: 0 - 14

Instruction manual: available with instrument

Complete Description

....., Analytical Unit	
Industrial Chemistry Group	59
Room 211, VRI Building	



Location

Tel.

Number of Same Items.

APPLIED SCIENTIFIC RESEARCH CORPORATION OF THAILAND

Laboratory Instruction No. 11/2

To : All concerned
From : Frank G. Nicholls
Subject : Implementation of laboratory Instruction 10/2
Date : 2 January 1968

A major problem in implementing the decisions set out in Laboratory Instruction 10/2 is the failure of many attempts to recruit a Stores and Safety Officer. It is proposed that until such a person is appointed Mrs. Pivan and Mr. Hermans be asked to act jointly to carry out the functions of that post (acting under the Manager of Technical Services for this purpose).

The most urgent task is the setting up and bringing into proper functioning of the several stores in the new building:

1. Chemicals Store.
2. Glassware and Chemical Auxiliaries Store.
3. Instrument and Equipment Store.

Other matter requiring early attention are the setting up of the improved Acid and Dangerous Chemical Store and the up-dating of records in the main store.

The two persons acting as above should also consult with the Chemicals and Equipment Committee and make recommendations for new procedures etc. as appropriate.

Frank G. Nicholls.

APPLIED SCIENTIFIC RESEARCH CORPORATION OF THAILAND

Laboratory Instruction No. 11/1

To : All concerned
From : Frank G. Nicholls
Subject : Functions of Chemicals and Equipment Committee
Date : 2 January 1968

The above committee was appointed on 25 April 1967 as a temporary committee to make recommendations on the following topics:

1. Suitable procedures for with-drawal of chemicals from the store in specified quantities.
2. Return of equipment to store when not needed in the laboratory.
3. Storage of samples.
4. Other ways of reducing the clutter in the laboratory.

Following meetings it made a series of recommendations set out in a memorandum dated 15 May 1967. A meeting was held to discuss these matters and as a consequence various decisions were taken. These were set out in Laboratory Instruction 10/2 of 19 June 1967.

That Instruction authorized the Chemicals and Equipment Committee to stay in existence, and authorized it (within the above terms of reference) to

- a. Assist in planning and execution of the transfer to the new building.
- b. Assist in bringing into effect of the decisions set out in Laboratory Instruction 10/2.

The Committee recently asked (memo. of 13 December 1967) for some clarification of its functions. These are set out above. The Committee should make its recommendations to Dr. Predieth, Dr. Wrenshall and me for decision.

Frank G. Nicholls.

APPLIED SCIENTIFIC RESEARCH CORPORATION OF THAILAND

Laboratory Instruction No. 10/3

To : All concerned
From : Lars Johansson
Subject: Maintenance of instruments
Date : 23 June 1967

It has been found that some laboratory instruments are not in good condition. To avoid incorrect results from measurements and to avoid and early again of the instrument the following instructions must be kept in mind.

1. There shall be on the instrument a legible sign showing the name of the person in charge both in Thai and English. Responsibility the person in charge.
2. On every working day the person responsible for the instrument must have a glance of the instrument and make sure that everything is in order. A regular checking should be made by him (her) and if something seems to be wrong or is missing he is responsible for arranging with the IRCC for the immediate repairing or purchasing of any replacement part (a).
3. The instrument shall, as a rule, always be covered in some way when not in use to protect against dust and damage. If for example, the original plastic cover is lost, it is a good investment to buy a new one for a few baht and save perhaps 100,000. Dust particles on an aluminium mirror or on a grating can be serious and are always difficult to remove. Responsibility: the person in charge.
4. Next to the instrument or close to it shall an "Operation Manual" always be located. Responsibility : the person in charge.
5. Even the best instrument needs calibration, not only when installed but also regularly according to rule 2. When a calibration curve is used, it should be fastened to the instrument. Responsibility : the person in charge.

6. Nobody shall be allowed to use the instrument before a careful study of the "Operation Manual". The person in charge of the instrument shall always give his permission when a new operator want to use it.
Responsibility: every operator.

7. When you have used the instrument don't forget to clean it. Leave it in the same or better condition than it was when you took it over.
Responsibility : every operator.

8. An accident can always happen, even if you observe all the rules, nobody will blame you for that, if you immediately report it to the person in charge. Don't hide smashed cells, broken thermometers, etc. The aim is to have the instrument working: Responsibility : every operator.

Dr. Lars Johansson.

APPLIED SCIENTIFIC RESEARCH CORPORATION OF THAILAND

Laboratory Instructions 10/2

To : All concerned

From : Special Governor

Subject : 1. Move the new laboratory building
2. Proposed new arrangements for store
3. Safety measures

Date : 19 June 1967

Change-over

1. It is not yet certain when the new laboratory building will be ready for occupation but it is hoped that most sections will be finished during July 1967. Consideration is now being given to planning the change from the present temporary laboratory to the new building.
2. During the change-over the opportunity will be taken to return to store all items of equipment and supplies not immediately required for current work. All concerned are asked to examine the possibility of returning such material to the Store at an early date.

Stores

3. Action is in hand to recruit a Stores and Safety Officer to work under Manager of Technical Services. The new post calls for a professional officer who will oversee the operations of the Stores and be responsible for maintaining appropriate stocks of materials, and who will also be responsible for safety throughout ASRCT.
4. In the new building, a Chemicals Store will be established on the second floor with facilities for dispensing chemicals in the quantities needed to meet day-to-day laboratory requirements. It will be operated by a technician qualified to dispense chemicals. Orders will be dispensed and issued in appropriate containers provided by the Store. To avoid the possibility of contamination, surplus chemicals will not be accepted by the Store.

1. This Store will dispense all fine and crude chemicals, including solvents and dangerous materials such as fuming acids, with the exception of AB grade chemicals needed for analytical use.
2. Chemicals for analytical use will be issued by the store in the original, sealed containers to the Analytical Unit. Opened bottles of such chemicals will be kept in cupboards in the Analytical Unit. The Storeman will retain an inventory of these materials and will direct orders from other units to the Analytical Unit which will dispense chemicals to fill the orders.
7. Supplies of solvents will be housed in an air-conditioned Solvent Store isolated from the main building. An adjacent room with draft hood will be used for dispensing solvents, and this room will also be used as an Acid and Dangerous Chemicals Store.
8. Solvents will normally be issued in containers of up to 2½ litre capacity. Larger quantities of solvent should not be kept in any laboratory without express permission of the Research Director-General. The Laboratory Monitor and the Safety Officer will be charged with policing this rule and reporting violations.
9. Staff should take care to exercise economy in the use of solvents and to use the lowest grade possible in each case. The highest grade of solvent should be used in large quantities only when the Research Director-General has given permission.
10. Rare chemicals will be issued by the store on personal charge to research staff only. The store will keep an inventory of all such material issued. Any material no longer required must be returned to the Store. The Storeman is required to check on issued material every month.
11. A Glassware and Chemical Auxiliaries Store will be established on the second floor of the new building, adjacent to the Chemicals Store.
12. An Instrument and Equipment Store will be established on the first floor of the new building.
13. The existing stores will remain in service. The present main store will be retained as a receiving and bulk store.

Analytical Services

14. As far as possible, chemical analyses will continue to be carried out by the Analytical Unit using existing procedures for requests for service.
15. Through consultation with the Head of the Analytical Unit, staff from units may use analytical facilities to carry out regular analyses needed as a routine in specific research projects.
16. Other units should not start on programmes of analytical work using their own facilities unless specifically authorized by the Research Director-General in respect of each particular case.

Safety

17. Attention of all staff members is drawn to the need for adopting safe working procedures, and obeying all safety rules. It will be the duty of the Laboratory Monitor and the Safety Officer to advise on appropriate safety precautions and to report all violations of safety rules.
18. Appropriate containers will be placed in laboratories using solvents for disposal of waste solvents. Such materials should not be emptied in sinks as they may damage the waste lines and can constitute a fire hazard. These containers will be emptied each day at the incinerator site and the waste solvent will be burnt.
19. A Safety Committee is hereby constituted to prepare safety rules.
It consists of :-

Dr. Sman Vardhanabhuti
F/L Prabhaj Keonil
Mrs. Piwan Warangul
Mr. Siri Nantasri
The Safety Officer (as executive member)

The following are appointed as advisers:-

Dr. C. Lewis Wrenshall
Dr. Kasem Balajiva
Mr. Milan Pajevic

Dr. Sivilongee Noon-long

Dr. Prasert Chavani jaya

G/C Sorn Satrabhaya

SECRET

11. The existing Chemicals and Equipment Committee (Mr. Wilhelmus C. J. Hermans, Mrs. Ubolard Cheosakul, and Mrs. Piwan Waznagul) will continue to operate and will assist in the planning and execution of the transfer to the new building, and the bringing into effect of the above decisions.

Frank G. Nicholls

APPLIED SCIENTIFIC RESEARCH CORPORATION OF THAILAND

Laboratory Instructions 10/1

To : All Concerned
From : Special Governor
Subject: Series of Seminars on organic chemistry
Date : 19 June 1967

1. To provide an opportunity for staff members to revise their knowledge of organic chemistry, both theoretical and practical, and to become familiar with new developments in this field, a series of Seminars on organic chemistry will be held at ASRCT. Research and experimental staff of the Industrial Chemistry Group, TRI, will be expected to attend these Seminars unless excused by the Research Director of their Group. Research and experimental staff from other Groups may attend if the Research Director of their Group approves.
2. The Seminars will be held in the Seminar Room from 1.30 to 2.30 p.m. on Tuesday of each week until further notice. The first Seminar will be on Tuesday, 20 June, 1967.
3. The initial Seminars of the series will be conducted by Dr. Pradisth Cheosakul.

Frank G. Nicholls.
Special Governor.

APPLIED SCIENTIFIC RESEARCH CORPORATION OF THAILAND

Laboratory Instructions 09/7

(Supersedes Laboratory Instruction 08/1)

To : All Concerned

From : Research Director-General, TRI

Subject : Laboratory Record Books

Date : 30 November 1966

1. Because of our serious concern for the proper recording of all experimental data, the Laboratory Instructions regarding Laboratory Record Books are hereby revised and reissued.
2. The Laboratory Record book is the prime record of all experimental work. All numerical data and other pertinent observations will be recorded in ink directly in the Laboratory Record book. The practice of making notes on loose paper for subsequent entry in the Laboratory Record will not be tolerated.
3. A numbered Laboratory Record book will be issued to each member of the scientific staff. It is the personal responsibility of the individual to whom it is issued to keep it properly and maintain up to date records.
4. The pages of each Laboratory Record book are numbered. No page or part thereof shall ever be removed. No erasures are permitted. If a mistake is made, cross it out with a single stroke and immediately enter the correct information. All calculations must be entered. The Laboratory Record must contain the complete record of all experimental observations and data derived therefrom.
5. The numbered pages of the Laboratory Record book should be filled consecutively and the entries dated. If for any reason a significant space is left open it should be crossed out. However, to avoid confusion, a section of the book may be set aside for a specific project. Alternatively a separate book may be kept for each programme or project if the

amount of data to be recorded warrants it.

6. Laboratory Record book and page numbers should be cited in preparing formal reports on projects and programmes. This is most important, as it may be necessary to refer to the original data long after the report is written. In writing formal reports, please do not omit Laboratory Record citations.

7. Your Laboratory Record Book is valuable property belonging to ASRCT. It must eventually be returned to the Registry for permanent filing. Thus, when a notebook has been filled and it is no longer needed for current reference, it should be turned in. It is particularly important that staff members who are terminating their employment turn in their Laboratory Record Books.

Dr. Wrenshall

TNDC Services to Scientific Staff of the

ASRCT and the NRC

The object of this note is to inform members of the research staff of the ASRCT and the NRC of the services that are offered to them by the TNDC, and to help them to get the best use out of those services.

Broad functions of the TNDC

The TNDC has three major responsibilities:

- (1) To provide scientific documentation services on the national level to anyone working in scientific or technical subject field in Thailand.
- (2) To establish and operate a national scientific library for Thailand for the use of science and industry.
- (3) To provide full library and information services to the scientific staff of the research institutes and technological centres of the ASRCT.

The functions (1) and (2) above are described in the booklet on the TNDC published (in English and in Thai) when the Centre was opened in 1964, and in TNDC Information Notes Nos. 1 and 2, all of which were written primarily to describe the TNDC services available to "outside" users, i.e. to users other than ASRCT staff. The services mentioned in (3) above, which are available only to "internal" users, are fuller than these, since the institutes and centres of the ASRCT will not, like "outside" organisations, have separate special libraries of their own, but will rely on the TNDC for all library and information services. These services as at present available will now be described. Any suggestions for their improvement will be welcome.

APPLIED SCIENTIFIC RESEARCH CORPORATION OF THAILAND

Laboratory Instruction 09/6

To : All Concern
To : Research Director-General, TRI
Subject : TNDC Services to Scientific Staff
Date : 30 November 1966

1. One of the most important functions of the Thai National Documentation Centre is to provide library and information services to the scientific staff of the research institutes and technological centres of the ASRC.
2. To inform staff members of the services available TNDC has prepared the attached note giving full information and procedural instructions. It will be noted that no effort has been spared to provide an outstanding library service.
3. Staff members are expected to make full and proper use of TNDC facilities and services.

C.L. Wrenshall

Library services

Acquisition policy

The TNDC library acquires scientific publications that are considered necessary for providing national services, and also acquires any specific publications needed by the ASRCT research staff. Recommendations from internal users for the acquisition of particular publications (books, reports or journals) are especially welcome, whether these publications are recommended for the individuals own use or for wider use. This help from specialised scientists is particularly valuable during the present formative state of the Library.

Use of catalogues and indexes

The main book holdings of the library are recorded in card catalogues using UDC classification. Scientific reports and pamphlets are recorded in (alphabetical) subject and author indexes. Journals are recorded in Kardex visible index.

The Library is open access, and scientists may either find items for themselves or ask the Library staff to find them. Searches for information on a subject, however, as distinct from locating a specified publication, are made by the staff of the Responsive Services unit of the TNDC, and not by the Library staff. Scientists who wish to have a search made for all the information in the Library on a particular subject should therefore ask the Librarian to arrange for this to be done by Responsive Services.

Reference and reading

The library and reading room are fully available to scientists for reference or reading. Current issues of about three hundred of the journals are put on display in the reading room for one week, normally before they are given any routine circulation or other action; the Librarian will always be glad to have suggestions from scientists regarding titles that they would like to see displayed.

LOAN POLICY

With the exception of certain books that are designated as "reference works", all items (books, reports, journals) in the library stock are available on "indefinite" loan to internal users, i.e. there is no specified period within which the item must be returned. With this system, it is particularly important that scientists do not take items out of the library without having the loan recorded, and that they do not pass loaned items on to colleagues, even temporarily, without informing the library.

"Reference works", i.e. encyclopedias, bibliographies, data books, etc., are not normally issued on loan. When necessary, however, the Librarian can authorize the loan of a reference book for an agreed period estimated by the scientist as necessary; the book should be returned within this period unless extensions are arranged.

No signature is required for publications issued on loan, although the loan must, of course, be properly recorded. They can be borrowed by visiting the library or by messenger or by telephone. Non-professional staff can borrow publications only if suitably sponsored.

Where the loan of a particular book or journal is in any way difficult, the Librarian can often meet the scientist's needs by arranging for a micro-film copy or photocopy to be supplied instead of lending the original. This method is useful when a short-term loan is not sufficient and the item required is not too lengthy (e.g. a particular article from a volume of "Thorpe", or a paper from a current issue of a journal).

Notification of new receipts

The TMDC is anxious to ensure that individual internal users are kept informed, as fully as possible, of all new books, reports or papers received in the library that relate to their field of work. The methods of doing this are:-

- (1) Journal circulation. Scientists are asked to notify the Librarian of the titles of any journals of which they would like to have all current issues sent to them. Journals that are displayed in the reading room are circulated after display.

Display is normally for one week.

- (2) Lists of accessions. Lists of new accessions to the Library are distributed periodically to the research staff.
- (3) Personal notification. The TNDC will endeavour to mark out to every individual any newly-received item of possible interest to him. Scientists are asked to help the TNDC in this rather difficult task by attaching a suitable marking to any item they may come across in the course of their current reading which they think may be of interest to a colleague.

Documentation services

The TNDC provides a number of documentation services that are given in response to individual requests, and which are available to any scientist working in Thailand. These services (mainly of bibliography compilation, document procurement, and translation) as available for "outside" users are described in TNDC Information Leaflets No. 1 and 2.

All of the responsive services are available for use by internal staff, and are free from some of the restrictions that are applicable to outside users, as follows:-

Payment. The "stopping charges" made to restrict possible unnecessary requests from outside users are not applied to internal users. Scientists are reminded that all documentation services cost money, and are asked to limit requests to what is in fact required. The Corporation and the Council will make any necessary administrative arrangements to ensure that unnecessary amounts are not made on the TNDC services.

Procedure. Internal users need not use TNDC order forms when requesting document procurement or translation services. All requests for responsive services, including requests for copying documents provided by the user, must be made to the head of the Responsive Services unit of the TNDC.

Priorities. To enable the TNDC to balance their work load, taking into account both internal and external users' requirements, scientists are asked to classify their requests as follows:-

"Urgent" for services required by a fixed early date in connection with current work or an approaching meeting

"Normal", for the bulk of requests in connection with current programmes.

"Long range", for requests relating to future work or programmes.

As a guide to users in deciding on the priority rating to give to their requests, it may be mentioned that bibliographies may take from one week upwards to compile; document procurement requests that can be met from holdings of Bangkok Libraries stand an even chance of being completed in one week, or in one month if procurement from abroad is necessary. In urgent cases the TNDC can check immediately whether the item is available locally or not. Translations are normally completed within one month of the date on which they are put in hand.

Time, labour and money can be saved if scientists will examine the microfilm copies of papers procured from abroad before having them enlarged to photocopy size, since the scientist can sometimes see at a glance that the paper does not in fact contain the information that he expected from its title or abstract. A microfilm reader is available for use in the TNDC (Room 233). In the case of papers procured locally, the scientist may, if he wishes, glance at the original paper before confirming that a photocopy is required. When there is any doubt about the value of any paper requested, the scientist should ask Responsive Services to inform him when the original or microfilm is available for checking.

Document copying. Scientists having documents that they wish to be copied (photocopy or microfilm) should first contact the head of Responsive Services for the work to be accepted and registered, and not place any requests direct with the Document Reproduction unit.

Portable typewriters. Two portable typewriters supplied by Unesco to the TNDC are available for short-term loan to visiting scientists, or to scientific staff when working away from the Corporation's premises. Applications should be made to the Supply Branch of the Corporation.

APPLIED SCIENTIFIC RESEARCH CORPORATION OF THAILAND

Laboratory Instructions 09/5

To : All Concerned

From : Research Director - General, TRI

Subject: Procurement of Precision Instruments

Date: 8 November 1966

1. The Research Corporation has established the Instrument Repair and Calibration Centre (IRCC) to enable proper acquisition and use of precision instruments, electrical and electronic equipment, as well as to provide for their maintenance and calibration.
2. To make full use of IRCC, please send all purchase requisitions for precision instruments of all kinds to IRCC for screening before placing purchase orders. IRCC's screening will include a) review of instruments in house to eliminate unnecessary duplication and b) study of the applicability of the equipment to the project.
3. Upon receipt of the equipment by Stores, IRCC personnel will attend the unpacking and perform the incoming inspection.
4. Upon acceptance, IRCC will provide operational assistance to the user(s). IRCC will also arrange with Accounting for the preparation of an Instrument History Card which will record the instrument's history from purchase to scrapping.
5. Cooperation of all concerned is requested.

C. Lewis Wrenshall

APPLIED SCIENTIFIC RESEARCH CORPORATION OF THAILAND

Laboratory Instruction 09/4

To : All concerned

From : Special Governor

Subject : Research Programmes and Reports.

September 1966

1. Before experimental work is started on any topic it is necessary to prepare and have approved:-

- (1) An Outline of a Research Programme, or
- (2) An Outline of a Miscellaneous Investigation.

Outline of Research Programmes

2. Research Programmes will be broadly conceived and the Outline should cover all aspects of the proposed topic. Research Programmes will be numbered serially in one series for the whole of ASRCT. The Programme should be sub-divided into Research Projects each conceived as a well-defined separate research interest. The Projects will frequently be divided into a series of Tasks and steps within those Tasks.
3. The initial draft of the Outline of a Research Programme will be marked Tentative Outline, Issue 1. Subsequent revisions will be marked Issue 2, Issue 3 and so on in sequence. After the Programme has been approved by the Board the designation Tentative will be omitted.
4. It will be the responsibility of the Programme Coordinator to revise the Outline of his Research Programme from time to time whenever substantial changes have occurred which make the existing Outline out-of-date.
5. The Tentative Outline of a Research Programme should indicate which Research Project will be worked on in the early stages and subsequent issues of the Outline should indicate the current status of the various Research Projects.

Outlines of Research Projects

6. Before experimental work is started on any Research Project a Tentative Outline will be prepared indicating the research Tasks to be done (or sufficient of them for say the first year of work) and the Steps constituting the Tasks which are to be worked on in the near future. This should be examined by the Programme Steering Committee and approved. The designation Tentative can then be dropped. The successive versions will be marked Issue 1, Issue 2 and so on. Changes are to be approved by the Steering Committee.

Progress Reports

7. At the end of each quarter a Progress Report will be prepared by the Programme Coordinator for each active Research Programme. Progress Reports deal with progress made in carrying out the Research Programme and should not be used for recording technical details of the work. They should indicate staff changes, equipment and other deficiencies and any desirable changes in the plan of work.
8. A similar Progress Report will be prepared each quarter by the research leader responsible for each active Research Project. These will be appended to the Progress Report for the Research Programme. Reference to these attachments will eliminate the need to repeat the information they contain in the Progress Report on the Research Programme.

Reports

9. Whenever it is considered desirable to report on technical phases of a Research Project, a Report will be prepared. The first Report relating to any particular Research Project No. X will be designated Report No. 1 on Research Project No X, and subsequent Reports on that Project will be numbered serially. A Report will always be prepared when a Project is to be discontinued recording all work not previously included in Reports on that Project.

Scientific Papers

10. Papers for scientific publication, whether in ASR/CT's own printed series or in outside journals, should be prepared and issued as Reports before being submitted for approval to publish. Reports are marked "Not for

Publication' and do not constitute publication as generally understood in technical circles.

Appraisal Reports

11. Frequently before preparing a Tentative Outline of a Research Programme it will be desirable to make a literature search and to assemble information on the proposed research topic. This should be incorporated in an Appraisal Report which should also contain conclusions about the desirability or feasibility of starting a Research Programme. Appraisal Reports are numbered serially in one series for the whole of ASRCT.
12. Appraisal Reports may also be written from time to time to review a specific Research Programme (or part thereof) or a series of Programmes.

Miscellaneous Investigations

13. From time to time small assignments will be accepted by ASRCT which do not fall within an existing Research Programme and which are not considered to be of sufficient complexity or likely duration to warrant the establishment of a Research Programme. In such cases an Outline of a Miscellaneous Investigation will be prepared indicating the scope of the proposed work. Any such Tentative Outline shall be approved by the Research Director of the appropriate Institute before experimental work is started. These Miscellaneous Investigations are numbered serially in one series for the whole of ASRCT.
14. Whenever it is considered desirable to report on technical phases of a Miscellaneous Investigation, a Report will be prepared. The first Report on any particular Miscellaneous Investigation No. X will be designated Report No. 1 on Miscellaneous Investigation No. X, and subsequent Reports on that Miscellaneous Investigation will be numbered serially.
15. Progress Reports will be prepared quarterly on any current Miscellaneous Investigations and numbered in similar fashion.
16. In special circumstances approval may be given for preliminary experimental work to ascertain the feasibility of embarking on a Research Programme being undertaken as a Miscellaneous Investigation.

Editorial Responsibility

17. All Abstracts, Progress Reports, Reports and Appraisal Reports are to be edited by the Scientific Editor before being typed for reproduction. Numbers will be assigned by the Technical Records Unit in consultation with the Scientific Editor. Technical Records will hold all copies and will be responsible for circulation and distribution.
18. The approval of the appropriate Research Director-General should be obtained before the drafts of any of the above documents are passed to the Scientific Editor for editing and reproduction. The approval of the Governor or Special Governor should also be obtained for Reports and Appraisal Reports or any papers for publication.

Frank G. Nicholls
Special Governor.

APPLIED SCIENTIFIC RESEARCH CORPORATION OF THAILAND

Laboratory Instruction 09/3

To : All concerned

From : Special Governor

Subject : Laboratory Monitor

1. After careful review of the staffing situation and the work load it has been decided to free Mrs. Yok-Nang Sombatpanit from the task of Laboratory Monitor to permit her to concentrate on the work of the Analytical Unit.
2. Mrs. Pivan Varangul is now to be Laboratory Monitor. Her duties will include overseeing the observance of safety precautions and laboratory rules, and the allocation of work for laboratory assistants and laboratory technicians not specifically assigned.
3. All requisitions for equipment or laboratory supplies are to be channelled through Mrs. Pivan who will check existing stocks and orders already placed but not filled before passing the requisition to the Accountant.

Frank G. Nicholls

Special Governor.

APPLIED SCIENTIFIC RESEARCH CORPORATION OF THAILAND

Laboratory Instruction 09/2

To : All concerned

From : Special Governor

Subject : Request for Analyses of Tests.

1. With the growth of the staff and the increasing volume of work it is necessary to introduce a system for control of analytical and testing work.
2. A new form (R.C. 70) has been prepared for use in making requests for analyses and tests and this will replace the present temporary analysis request form. The forms should be completed in triplicate, two copies being submitted to the Group which will undertake the tests and the other copy being retained by the person originating the request.
3. When making requests for analytical work please indicate the elements or radicals which are to be determined and the expected proportions (when known).
4. In each case the form is to be passed to the head of the Group controlling the testing work. At present this means the Industrial Chemistry Group which covers analytical work and miscellaneous tests such as refractive index. However, these forms will also apply to mechanical tests, X-ray diffraction analyses, etc., when the necessary facilities become available.
5. So that the necessary priorities can be established please consult with the Analytical Unit about samples already submitted. New forms should be prepared for all outstanding work.

Frank G. Nicholls
Special Governor.

APPLIED SCIENTIFIC RESEARCH CORPORATION OF THAILAND

Laboratory Instructions 09/1

To : All concerned

From : Research Director-General, TRI.

Subject : Sample Numbering System.

1. For orderly records, clear identification, and subsequent retrieval of data and samples, a system of numbering the samples admitted to the laboratories is essential.
2. Most samples will be related to one or the Research Programmes. To designate these samples, use first the Research Programme number, followed by a slant, followed by the serial number of the sample. For example, the samples in Research Programme No. 25 shall be designated 25/1 (2,3,4....., etc.).
3. A sample not related to one of the Research Programmes will be related to a Miscellaneous Investigation. In these cases the number shall be the number of the Miscellaneous Investigation prefixed by the letter, M, followed by a slant, followed by the serial number of the sample. For example, the samples in Miscellaneous Investigation No. 5 shall be designated M5/1 (2,3....., etc.).
4. It shall be the responsibility of a Programme Coordinator to see that the samples in his programme are appropriately numbered. He may, however, delegate the actual numbering and record keeping to a member of the programme staff. Similarly, in the case of a Miscellaneous Investigation, the responsible investigator shall arrange for appropriate labelling and record keeping.
5. If for some reason not now foreseen a sample that does not fall into either of the above categories is admitted to the laboratories, it shall be designated with the prefix letter X, followed by a slant, followed by its serial number in the X series. The person admitting such a sample

... responsible for assigning the appropriate number.

... assigned sample numbers with appropriate identification ... shall be kept in the laboratory notebook containing other ... of the Research Programme or Miscellaneous Investigation.

... number of pages may be set aside for this purpose.

... where the number of samples in a Research Programme ... expected to be large, an entire notebook may be designated for the sample records.

G. Lewis Wrenshall

APPLIED SCIENTIFIC RESEARCH CORPORATION OF THAILAND

Laboratory instructions 08/5

To : All concerned

From : Research Director-General, S.A.R.C.

Subject : Laboratory Monitor assignment.

1. The functions and assignment of Laboratory Monitors are dealt with in Laboratory Instruction 08/4.
2. During the absence of Mrs. Yuk-Hang Somhatpanit, Mr. Pimol Pititay has been asked to assume the duties of Laboratory Monitor in the mainbuilding.
3. All laboratory staff are asked to give Mr. Pimol their full cooperation in handling this temporary assignment.

C.L. Wrenshall
Research Director-General

Laboratory Instructions OB/L

To : All Concerned
From : Research Director-General
Subject : Laboratory Monitors

In each laboratory area a staff member will be asked to act as Laboratory Monitor (in addition to normal duties) to carry out the following functions:-

- (1) To supervise the cleaning and maintenance of the laboratory facilities.
- (2) To ensure that the general instructions as to tidiness, correct operation of laboratory services, and custody of issued materials and supplies are observed.
- (3) To ensure that safety instructions and precautions are observed.

The Laboratory Monitor will report to the Research Director-General of the Technological Research Institute on all matters relating to the above functions.

The Laboratory Monitor will exercise general control of Laboratory Attendants in his laboratory area and will assign specific tasks to them.

All staff members are asked to cooperate with Laboratory Monitors in the carrying out of the above functions. If the Specific Services of a Laboratory Attendant are required the request should be made to the Laboratory Attendant to perform specified routine tasks can be arranged with the Laboratory Monitor.

Mr. Yuk-Heng Sombatpanit has been asked to act as Laboratory Monitor in the main building and Mr. Poontun Mahaveen in the Heavy Duty Laboratory

APPLIED SCIENTIFIC RESEARCH CORPORATION OF THAILAND

Laboratory Instructions 08/3

To : All Concerned

From : Research Director General
Technological Research Institute

Subject : Instrument Operating Instructions

1. The Operating Instructions for scientific instruments and other major pieces of equipment will be kept in the store room by the storeroomman.
2. Laboratory personnel are required to study and understand the pertinent Operating Instructions before proceeding to operate valuable apparatus.
3. To ensure personal responsibility, laboratory personnel are asked to sign for needed Operating Instructions and to return them to the storeroomman when they are no longer needed.

In loose leaf note-books.

Test Procedure Number:

Name (Purpose) of tests:

Apparatus required:

Calibration or Standardization:

Special Precautions or Conditions:

Test Procedure:

Calculation of results:

APPLIED SCIENTIFIC RESEARCH CORPORATION OF THAILAND

Laboratory Instructions 08/2

August 1963

To : All Concerned

From : Research Director General
Technological Research Institute

Subject : Test Procedure Manual

1. Whenever a repetitive test procedure is adopted or developed for use in the Research Corporation's laboratories, it is to be given a consecutive number (eg. Test Procedure No. 1, 2, 3, etc.), written up in full detail, and entered in the Test Procedure Manual.
2. The above regulation will apply regardless of the nature of the test, i.e. physical, chemical or biological. However, for convenience, the Test Procedure Manual may be divided into volumes according to the type of test.
3. This regulation will apply equally to so-called standard procedures, such as ASTM methods. Placing such test procedures in the Manual will obviate the necessity of carrying valuable text-books into the laboratories.
4. When for any reason a test procedure is to be changed, even if only in some procedural detail, the new procedure will be given the same number, followed by "Revision No. 1, 2," etc., and the new procedure will replace the previous one in the manual.
5. The Registry will maintain an up-to-date, indexed Test Procedure Manual and will assign numbers to all procedure as they are adopted.
6. The test procedures adopted will be written up in conformity with the following outline, typed or reproduced in sufficient number, and placed

Laboratory Instructions 08/1

August 1965

To : All Concerned

From : Research Director General

Subject:

1. The Laboratory Record book is the prime record of all experimental work. All numerical data and other pertinent observations will be recorded in ink directly in the Laboratory Record book. The practices of making notes on loose paper for subsequent entry in the Laboratory Record will not be tolerated.
2. A numbered Laboratory Record book will be issued to each member of the scientific staff. It is the personal responsibility of the individual to whom it is issued to keep it properly and maintain up to date records.
3. The pages of each Laboratory Record book are numbered. No page or part thereof shall ever be removed. No erasures are permitted. If a mistake is made, cross it out with a single stroke and immediately enter the correct information. All calculations must be entered. The Laboratory Record must contain the complete record of all experimental observations and data derived therefrom.
4. The numbered pages of the Laboratory Record book should be filled consecutively and the entries dated. If for any reason a significant space is left open it should be crossed out.
5. Laboratory Record book and page numbers should be cited in preparing formal reports on projects and programmes.

APPLIED SCIENTIFIC RESEARCH CORPORATION OF THAILAND

Editorial Notice No. 10/1

To: All report writers
From: Scientific Editor
Subject: Citation of references
Date: 30 June 1967

1. There are several acceptable ways of citing references in technical reports, programme and project outlines, etc., and each writer has his own pet system of citation. In an organization such as ours, however, uniformity is desired, and, to achieve that end, the system described below has been adopted. It is requested that all writers use it, if only to get their papers edited more quickly.

2. References are to be cited in the text by the author's name and year of the publication, e.g.

Sternstein (1962) examined...

or

Northern Australia exhibits similar variability (Slatyer 1960).

or

Various workers (Kilgus 1950; Suttaphan 1955; Tiewhong 1957) studied...

Note that no comma is used between the author's name and the year of the publication, and a semicolon is inserted between references to different authors, the earliest work being reported first.

3. Where two or more papers have the same author and date, they are differentiated by the letters a, b, c, ... after the date, e.g.

Scott (1964a, 1964b) showed that...

Note that a comma is inserted between dates of the two papers.

4. Reference to any work or document cited, but not personally consulted by the writer, should be indicated by "cited after..." or "quoted from..." and the name of the source of the reference inserted thus:
Lewis et al. (1954, cited after Rao 1959) worked out...

5. The list of references should be arranged alphabetically and cited thus:

AMERICAN PHARMACEUTICAL ASSOCIATION (1965).--"The National Formulary." 12th ed. p.345. (Mack Publishing Company: Easton, Pa.)

DATTA, S.C., and VIRMANI, O.P. (1964).--Rauwolfia serpentina. Bull. natn.bot.Gdns Lucknow No. 107. p.3,11.

KERWIN, J.F., BALANT, C.P., and ULLYOT, E.E. (1960).--Hypotensive drugs. In; Burger, A., ed. "Medicinal Chemistry." 2nd ed. p.561. (Interscience Publishers, Inc.: New York.)

KITISIN, Trakul (1950).--การศึกษาสมุนไพร ๓. บันทึกเรื่องรากระยองกับการเจริญอาหาร (Medicinal plant studies.3. Notes on rauwolfia root and its appetizing effects.) สารศิริราช (Siriraj Hosp.Gaz.) 2: 447-449.

KREIG, Margaret B. (1964).--"Green Medicine." p.320,329. (Rand McNally & Company: Chicago, New York, San Francisco.)

MARTIN, E.W., COOK, E.B., LEUALLEN, E.E., OSOL, A., TICE, L.F., and VAN METER, C.T., eds. (1961).--"Remington's Practice of Pharmacy." p.675. (Mack Publishing Company: Easton, Pa.)

SCOTT, K.J. (1962).--The development of an improved method for the biological retting of kenaf ribbons. S.Afr.J.agric.Sci. 5: 133-144.

SCOTT, K.J. (1964).--An experimental study of factors affecting the retting of kenaf (Hibiscus cannabinus) ribbons. S.Afr.J.agric.Sci. 7: 43-56.

TIEWTHONG, Chamnong (1957).--The blood pressure reducing property of Rauwolfia serpentina L. collected from various parts of Thailand. M.Sc. Thesis, University of Medical Sciences.

Note that:

- (1) A comma is not used to separate the journal title and the volume.

- (2) Where two or more papers by the same authors are listed, the author's name is repeated.
- (3) Where two consecutive references are from the same periodical, the title of the periodical is repeated.
- (4) The family name and initials of the author are given; in the cases of feminine and Thai authors, however, the given name of the author is given as well.
- (5) Titles of papers are included, but if this is not done, titles of all other papers shall be omitted. Capitals are not used in such titles except where particular words require capitalization.
- (6) Titles of books are enclosed in quotation marks using a capital letter for the first letter of the main words.
- (7) Titles of regularly appearing periodicals only are underlined. Titles of casual or irregularly appearing publications, including numbered bulletins and pamphlets, are not underlined. Abbreviations of titles are to conform to those used in "A World List of Scientific Periodicals" (latest edition).
- (8) In the case of works authorized or issued by a Society, Institute, Government Department or other organization without mention of an individual author, the organization shall be regarded as the author.

6. A paper that has not been accepted for publication shall not be included in the list of references, but shall be indicated in the text thus:

There are about 20 areas where R. serpentina is available in Thailand (Chirawongse, unpublished data)...

Likewise, personal communications shall not be listed as references, but shall be indicated in the text thus:

It has been found (Greenhill, personal communication)...

7. Where a patent is cited as reference, the name of the patentee is to be given, followed by the year of acceptance in bracket, the name of the national office of origin, and the number of the patent, e.g.

MILLIGAN, L.H. (1922).--U.S. Patent 1, 403, 183.

8. The list of references is to be placed under the heading "REFERENCES" at the end of the report, but before the appendices should these be included in the report. Where there is only one reference, however, the reference is to be inserted as a footnote on the appropriate page.

M.R. Sukshom Kashemsanta

Distribution:

Special Governor
Dr. Pradisth Cheosakul
Research Director-General, TRI
Research Directors
Directors and Deputy Directors
Managers
Research Officers
Research Associates
Experimental Officers

APPLIED SCIENTIFIC RESEARCH CORPORATION OF THAILAND

MEMORANDUM

Subject: Approved formats for reports, etc.

Attachments: Sample forms for:-

- (1) Research Programme Data Sheet and Outline
- (2) Research Project Data Sheet and Outline
- (3) Progress Report on a Research Programme
- (4) Progress Report on a Research Project
- (5) Technical Report on a Research Project
- (6) Miscellaneous Investigation Technical Report

Formats for reports, etc., as listed above have been revised and approved by the Special Governor, the Research Director-General of TRI and the Scientific Editor.

Research Service, TRI

15 October 1968

APPLIED SCIENTIFIC RESEARCH CORPORATION OF THAILAND

RESEARCH PROGRAMME DATA SHEET

RESEARCH PROGRAMME NO. . . .

(Issue . . . , month 19 . . .)

Title of Programme:
.

Cooperating bodies:
. ;
.

ASRCT responsibility: (Name of Group, TRI)
.

Programme Coordinator:

Adviser (s):
. ;
.

Other Programme personnel:
.

Programme originated by:

Date approved:

(TENTATIVE) OUTLINE OF RESEARCH PROGRAMME NO.

(Issue.....month 19..)

TITLE OF PROGRAMME

.....
.....

AIM(S)

.....
.....

(or)

1.
.....

2.

BACKGROUND

.....
.....

JUSTIFICATION

.....
.....

SUBDIVISION

Research Project No./1.
.....

Research Project No./2.

PROJECT DETAILS

Research Project No./1.
.....

Aim(s)

.....
.....

Intended approach

(1)
.....

(2)
.....
.....

Research Project No. /2.

Aim (s)

(1)

(2)

Intended approach

(1)

(2)

SPECIAL ASPECTS

1.
.....

2.

STAFF AND FACILITIES

1.

2.

APPLIED SCIENTIFIC RESEARCH CORPORATION OF THAILAND

RESEARCH PROJECT DATA SHEET

RESEARCH PROJECT NO. /

(Issue..., month 19..)

Title of Project:

Cooperating bodies:

ASRCT responsibility: (Name of Group, TRI)

Project Leader:

Adviser (s):

Other Project personnel:

Project originated by:

Date approved:

(TENTATIVE) OUTLINE OF RESEARCH PROJECT NO. /

(Issue.....month.....19..)

TITLE OF PROJECT

.....
.....

AIM (S)

.....
.....

(or)

1.
.....
2.

PROJECT STAGES

- Task 1.
(1)
- Task 2.
(2)
- (3)

SPECIAL ASPECTS

1.
.....
2.

STAFF AND FACILITIES

1.
2.

PROGRESS REPORT NO. . . ON RESEARCH PROGRAMME NO. . .

Research Programme title:
.....

Prepared by: (name)
..... (Name of Group)

Technological Research Institute

Date: (month 19..)
.....

(General) *

1.
.....

2.

Research Project No. . . /1

3.

4.

Research Project No. . . /2

5.

etc.

* No heading required.

PROGRESS REPORT NO. . . ON RESEARCH PROJECT NO. . ./.

Research Project title:
.....

Prepared by: (name)
..... (Name of Group)
Technological Research Institute

Date: (month 19..)

1.
.....
.....
2.
.....
.....

etc.

(COOPERATING BODIES (IF ANY))
.....

APPLIED SCIENTIFIC RESEARCH CORPORATION OF THAILAND

(COOPERATIVE) RESEARCH PROGRAMME NO. ..

(TITLE OF PROGRAMME)
.....

RESEARCH PROJECT NO. ./.

(TITLE OF PROJECT)
.....

REPORT NO. ...

(TITLE OF REPORT)
.....

BY

(AUTHOR A)
.....

(AUTHOR B)
.....

(NAME OF GROUP)
.....

TECHNOLOGICAL RESEARCH INSTITUTE

ASRCT, BANGKOK 19..

not for publication

FOREWORD (OPTIONAL)

SUMMARY

.....
.....

INTRODUCTION

.....
.....

MATERIALS AND METHODS

(Sub-heading, if any)

.....
.....

RESULTS AND DISCUSSION

(Sub-heading, if any)

.....
.....

CONCLUSION (IF ANY)

.....
.....

ACKNOWLEDGEMENT (S)

.....
.....

REFERENCES

.....
.....
.....

(Photographs, diagrams, etc.)

MISCELLANEOUS INVESTIGATION NO. ..

(TITLE OF INVESTIGATION)
.....

REPORT NO. ..

(TITLE OF REPORT)
.....

BY

(AUTHOR A)
.....

(AUTHOR B)
.....

(NAME OF GROUP)
.....

TECHNOLOGICAL RESEARCH INSTITUTE

ASRCT, BANGKOK 19..

not for publication

SUMMARY

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INTRODUCTION

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.. (APPROPRIATE HEADING) ..

(Sub-heading, if any)

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RECOMMENDATIONS

(Sub-heading, if any)

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ACKNOWLEDGEMENT (S)

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REFERENCES

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* .. (Name of Group) .., Technological Research Institute, ASRCT.

REF

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Laboratory instruction