

Republic of Yemen
University of Aden

ISSN
1606-8947

University of Aden Journal
of Natural and
Applied Sciences
A Refereed Scientific Research Journal

Vol. 22

No.2

August 2018

This Journal is indexed or abstracted by CABI and other leading indexing Abstracting Services.

The views expressed in this issue are those of the authors and do not necessarily reflect the views of the Editorial Board or the policy of the University of Aden

ISSN 1606-8947

National Library Aden, No. 6/1999

All rights are reserved to the University of Aden Journal of Natural And Applied Sciences. No part of the journal may be reproduced or transmitted in any form or by any means, electronic or mechanical including photocopy, recording or via any storage or retrieval system, without a prior written permission from the Editor – in – chief.

University of Aden

Journal of Natural and Applied Sciences

Editorial Board

Editor-in-Chief:

Prof. Dr. Saeed Abdulla Ba-Angood.

Editing Manager:

Prof. Dr. Mommmed Abdulla Hussein

Members:

Prof. Dr. Hussain Ahmed Bakathir.

Prof. Dr. Abdul-Rahman Alawi Bin Yahia.

Prof. Dr. Khaled Saeed Ali.

Prof. Dr. Abubaker Abdulrashid Ali Zumailan.

Associate Prof. Dr. Khalid Kaied Shafal Ali.

Secretary:

Eng. Iman Sallam Mohamed

All Correspondence Concerning this Journal should be addressed to:
Editor – in – chief – University of Aden Journal of Natural and Applied
Sciences – University of Aden, Khormaksar - P.O. Box. 6312 Aden
Republic of Yemen. Tel: 967-2-239774 Fax 967 – 2 – 239774
E-mail: uaj_nas@yahoo.com
Website: <https://uajnas.adenuniv.com>

Guidelines to Authors for Publication in the University of Aden Journal for Natural and Applied Sciences

- The University of Aden Journal of Natural and Applied Sciences is published three times per year (April, August and December).
- The Journal publishes basic and applied refereed research articles in the following fields of Natural and Applied Sciences:
 - Basic Sciences
 - Medical and Biological Sciences
 - Engineering and Technological Sciences
 - Agriculture and Environment Sciences
- It is essential that the article will never have been published or sent for publication elsewhere. The researcher shall send three copies including the original.
- Any manuscript submitted for publishing in the Journal will be subject to evaluation according to the established scientific rules by two highly qualified specialists in the subject matter of the research. A third one may be added to those two if necessary.
- The Editorial Board reserves all rights to make stylistic and/or grammatical changes.
- Although the referees decisions regarding suitability for publication are final, the Editorial Board reserves the right to accept or not to accept the paper for publication.
- Manuscripts will not be returned to the authors whether accepted or not.
- If the author chooses to withdraw his article after it has been assessed, he would reimburse the "Aden University Journal for Natural and Applied Sciences "the cost of reviewing the paper.
- All authors will be given one issue of the journal which their paper appeared in and 10 reprints of the published paper.
- To cover the above expenses in addition to mail expenses authors in Yemen outside the University of Aden are kindly requested to pay an amount of YR 15000 (fifteen thousand Yemeni Rials) to cover some of the expenses of publishing, reviewing and editorial charges. Authors outside Yemen are kindly requested to pay \$100 (One hundred US Dollars) to be sent to the “University of Aden Journal for Natural and Applied Sciences” AC. No. 556547, National Bank of Yemen – Aidroos Branch, Crater, Aden, Republic of Yemen.
- All manuscripts and the Journal – related correspondence should be sent to the following address:

Prof. Dr. Saeed Abdulla Ba-Angood (Editor – in – Chief)
University of Aden, Khormaksar, P.O. Box 6312
Aden – Republic of Yemen Tel: 967-2-239774 Fax. : +967 – 2 – 239774
E-mail: uaj_nas@yahoo.com
Website: <https://uajnas.adenuniv.com>

Rules Governing the Preparation of Manuscript for Publishing in the Journal

- 1- Each manuscript must be clearly written on a computer and in double space text on one face of the paper (size A4). A margin of 3 cm must be left on both sides of the page. The manuscript must not exceed 15 pages including the tables, diagrams, photographs and references.
- 2- The accepted paper should be submitted in its final form in a CD written in MS-WORD together with two copies of the manuscript.
- 3- The manuscript must be written in Arabic. Researchers, however, may send their work in English.
- 4- The manuscript must include :
 - a- An abstract in Arabic and English not more than 300 and 200 words, respectively. Followed by 3-5 keywords.
 - b- An Introduction.
 - c- Materials and methods of the research.
 - d- Results.
 - e- Discussion – Results and discussion could be pooled together in one section.
 - f- Acknowledgement, if necessary.
 - g- References.
- 5- The journal can also publish “ short communications ” Those, however, will not require the above classification. Such short communications do normally consist of 2-3 pages, and should be accompanied by an abstract in both languages of not more than 100 words. The journal has the right to publish the paper either as a research paper or a short communication.
- 6- Tables and diagrams must be numbered serially according to its place in the manuscript providing that each table be typed on a separate paper using the same serial number shown in the manuscript. The Table must include a plain title at the top, that interprets its contents. The contents should be written with a minimum font size 10. It is preferable that Table – related margins be appeared on the Table in the form of the upper letters starting with the letters (A) for every Table provided that the meaning of each letter be referred to at the bottom of the Table.
- 7- The diagrams, layouts and graphs must be drawn on transparent paper using black ink.
- 8- Diagram or figure explanations should be printed on separate papers. The size of each figure must range between 4x6 cm and 9x18 cm. They can also be drawn using Computer Software and placed in the text. The title of the figure or photo should be written at the bottom of each.
- 9- Only black and white photographs will be accepted. They should be clear, neat and printed on vernished shiny papers. The size of each photograph should not exceed 5x 8 cm. It is possible also to scan the photos directly in the text.
- 10- Scientific (Latin) names of the plants, animals, insects, micro-organisms ... etc must be written in italics, so as to distinguish them from the remaining of the text. The chemicals (insecticides, drugs, etc. should be given their common names and not their commercial ones.
- 11- The metric system must be used in all the measurements.
- 12- All references indicated in the manuscript must be referred to and written at the end of the manuscript in the original language in which they were written or published. All

references must be arranged alphabetically at the end of the paper and numbered. The references should be written as follows:

- References in the article must be referred to in the text as numbers and put in brackets according to their serial numbers in the reference list.
- Each reference should start with the family name of the author, and followed by forenames, or, only the initials of his first name or name of organization. Followed by the year of publication, the title of the article paper and the name of the Journal or place of publication, the volume and number of pages (16 – 20). Following given some examples of common references:

1. Articles in a Journal

AL- Hadrani, A.M., S.AL- Aulqi, and A.M.Qubati (2000). Breast cancer in Yemeni women. University of Aden Journal of Natural and Applied Sciences 4(1): 185-192.

2. Books

AL-Jaroo, Sh. and M.A. AL-Attas (1999). Manufacturing Technology. Textbook series No. (3).Aden University P&P House 211pp.

3. Chapters in a Book

Serjeant, R.B.(1974). The cultivation of cereal in mediaeval Yemen, pp 25–74 In: Arabian Studies. R.B. Serjeant and R.L. Bidwell (editors). Middle East Centre, University of Cambridge 182 pp.

4. Proceedings

Miller, A.G. and M. Ba-Zara'a (1999). The conservation status of the flora of Socotran Archipelago. pp. 92-122. In: Proceedings of the First International Scientific Symposium on Socotra Island: Present & Future 24-28 March 1996. Vol. 2. University of Aden, Aden, Yemen.

5. Theses

Salem, G.S.H. (1998). Patient satisfaction regarding medical care in public health institution, Aden Governorate. Msc. Thesis, Department of Social Medicine, Faculty of Medicine and Health Sciences, University of Aden, Aden, Yemen. 105pp.

University of Aden Journal for Natural and Applied Sciences
A Refereed Scientific Research Journal
Subscription Form

Please enter my subscription for one year------(3 issues) vol. -----.
Name: -----

Address: -----

Fax : ----- Tel :-----

Signature : ----- Date :-----

You can pay in cash or send a cheque payable in any bank in Yemen in the name of
“University of Aden Journal for Natural and Applied Sciences” AC. No. 556547 ,
National Bank of Yemen – Aidroos Branch, Crater Aden, Republic of Yemen.

- Annual Subscription (outside Yemen) :

Organizations : US \$ 50

Individuals : US \$ 25

- Local Annual Subscription

Organizations : RY 1500

Individuals : RY 800

Send the Subscription form and payment to:

Prof. Dr. Saeed Ba-Angood

Editor –in-Chief

University of Aden

Republic of Yemen –Aden

Khormaksar – P.O. Box: 6312

Tel : + 967 2 239774

Fax: + 967 2 239774

E-mail: uaj_nas@yahoo.com

Website: <https://uajnas.adenuniv.com>

TABLE OF CONTENTS

ENGLISH TITLES

AGRICULTURE SCIENCES

- Effect of Pre-soaking by distilled water on seeds germination of black seeds (Nigella sativa L.) under salinity stress** 383
E. J. AL-Sanabani; F. A. Alhadi; K. N. Al-Amary and M. A. Hussain

ANIMAL PRODUCTION

- A comparative study of reproductive performance of Ross 308 and Marshall R Plus Broiler Breeder females strain stocks during production period** 395
Mohammed Alzawqari, Hani Al-Baadani, Abdullah Alsobayel and Saddam Al-Baadani

CHEMISTRY

- Chemical composition, total phenol contents, antioxidant and antimicrobial activities of propolis produced by honeybee Apis mellifera jemenitica from Ficus palmata Forssk in Al-Baha, Saudi Arabia.** 409
Noofal I. M. Bayaqoob, Ahmed I. Rushdi and Ahmad A. Al-Ghamdi

MARINE SCIENCES

- Surface architecture of the mouth cavity in a carnivorous fish Scomber japonicus (Houttuyn, 1782) (Scombridae)** 427
Kamal Ahmed Baaom, Abdulla Ahmed Basmidi and Manal Haj Obbed

MATHEMATICS

- Study in Ph — Birecurrent Finsler space** 439
Fahmi Yaseen Abdo Qasem and Amani Mohammed Abdullah Hanballa
- Analysis for Cartan's fourth curvature Tensor in Finsler space** 447
Fahmi Yaseen Abdo Qasem and Kamal Salem Naji Nasr

MEDICINE

- Analysis requests for sonography examination made by emergency residents in Algamhuria Modern General Hospital- Aden -Yemen** 457
Al-Ass Abdulmajed Alawi and Salem H. Alshabahi
- Prevalence of diabetes mellitus among Non-Hodgkin's lymphoma patients admitted in Al-Sadqa Teaching Hospital during 2017** 463
Reema Khaled A.Al-Horaibi

PHYSICS

- Calculation of potential energy of molecules and kinetic energy of electrons on Slater functions basis** 471
Tawfik Mahmood Mohammed Ali

SHORT COMMUNICATION

MEDICINE

- Methemoglobinemia (Case report)** 481
AL Kubati AK Sallam

ARABIC TITLES

AGRICULTURE SCIENCES

- A survey of weeds in some farms at AL- Qatten Directorate Hadramout Governorate** 237
Mahroos Abdulla Bahawireth and Yaser Saeed Bahurmuz
- Effect of Licorice (Glycyrrhiza glabra L.) extract and powder on growth of onion (Allium cepa L. cv. Bafatiem).** 249
Nora Mohammed Al-Saqaf, Mohammed Abdullah Hussein and Othman Saad Al-Hawshabi
- Evaluation of some maize cultivars in different planting dates** 259
Ziad Othman Salem, Ali El-Sayed Hamed and Ameen Mohammed Ali
- Response of the vegetative growth of tomato plants (Lycopersicon esculuntun Mill) with the foliar spraying with zinc element** 273
Esam Ali Sadaqa and Malak Mohamed Yussef Bagash
- The effect of different phosphors fertilizer levels on productivity and characteristics of Alfalfa forage (Medicago sativa L.)** 285
Al-Nomir A A, Alhadi A. M, Marwan Manea . Alsaadi. M M. Hadi. A. M

ENVIRONMENT

- Estimation of heavy metals concentration in water, soil and some plants in Al-Haswah preserve - Aden -Yemen** 297
Abdul-hakim Al-Alawi , Arafat Thabit Amer and Abdul-Rahman Alawi Bin Yahia
- Quality of drinking water of Al-Ain town and its surroundings in Lewder- Baya Governorate, Yemen** 309
Ali Salem Omer and Fadel Ahmed Am-Dhally
- Ethno- medicinal plants in Dhala District- Al-Dhala Governorate- Yemen** 321
Ahmed Mohammed Moqubel, Abdul-Nasser A.Al-Gifri and Mohammed Abdullah Hussein

GEOLOGY

- Applications of GIS for morphometric and hydrologic analysis of drainage basins of Hidibu Plan – Socotra Island** 337
Abdulmohsen Alamry and Aydroos Qatan

PHYSICS

- Strength tensile improvement of the Al alloy by reinforcing with steel fibers** 353
Mahmoud Alasaad, Almohanad Makki and Wardan Wahhod
- Effect of adding Aluminium powder on the bending resistance properties and fire retardant for unsaturated polyester.** 367
Ahmed J. Mohammed, Abdullah A. Hussein and Ibrahim K. Ibrahim