

SRI A.S.N.M. GOVERNMENT COLLEGE (A)

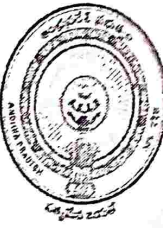
PALAKOL, WEST GODAVARI DISTRICT

**CERTIFICATE AND
REPORT ON
GREEN AUDIT**



Sri A.S.N.M. GOVERNMENT COLLEGE (AUTONOMOUS)

(NAAC Re-accredited by 'B' Grade with 2.61 C.G.P.A)
Palakol, West Godavari District – 534 260.



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Date: 20.02.2023

To,
The Environmental Engineer,
AP Pollution Control Board,
ELURU.

Sir,

Sub: Sri A.S.N.M. Govt. College (A), Palakol, W.G.Dist. - Issue of Green Audit Certificate – Request – Regarding.

Respected Sir,

As our college is going to Re-accreditation by the National Assessment and Accreditation (NAAC) in February 2023, we need to submit the Green Audit Certificate to the concerned authorities. In this connection, we submit that we have taken many steps for promotion of greenery in the campus by planting various plants including medicinal plants which make the campus a nature-friendly place.

In the light of the above, I request you to issue the Green Audit certificate to our college for which I am thankful to you.

Thanking you,

yours faithfully,

[Signature]
22/2/2023

PRINCIPAL

Sri A.S.N.M. GOVT. COLLEGE (A)
PALAKOL-534 260, W.G.DIST.

Received
[Signature]
23/02/2023



ANDHRA PRADESH POLLUTION CONTROL BOARD
REGIONAL OFFICE: ELURU

D.No.22B-3-2, Kaanukolanivaari Street, Powerpet Railway Station Road,
Powerpet, Eluru-534002

K. Venkateswara Rao
ENVIRONMENTAL ENGINEER

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APPCB/RO/ELR/Gen-Tech/ 2023-

Dt: 23.02.2023

GREEN AUDIT CERTIFICATE

This is to certify that Sri A.S.N.M.GOVERNMENT COLLEGE, Palakol, West Godavari District, Andhra Pradesh has rich bio-diversity of 100 plant species are available in the campus and some of them are rare and least concern category of IUCN data list. The list of plant species in Sri A.S.N.M.GOVERNMENT COLLEGE, Palakol, West Godavari District is attached here with.


ENVIRONMENTAL ENGINEER
APPCB, Regional Office, Eluru.

ENVIRONMENTAL ENGINEER
ANDHRA PRADESH POLLUTION CONTROL BOARD
REGIONAL OFFICE, ELURU.

To
PRINCIPAL
Sri A.S.N.M Govt College (A)
Palakol-534 260
West Godavari District.

MEMBERS OF GREEN AUDIT COMMITTEE

1. Dr. T. RAJA RAJESWARI Principal & Chairman
2. Sri G.SRINIVASA RAO Vice Principal
3. Dr Y. VIJAYAKUMAR Co-Ordinator
4. Dr. M.RAMA KRISHNA Member
5. Dr. V. YAMINI Member
6. Sri T. KRISHNA Member
7. Dr. B. SUBBALAKSHMI Member
8. Dr. K. BHADRACHALEM Member
9. Dr. CH. USHA RANI Member



PRINCIPAL
Sri A.S.N.M. GOVT. COLLEGE (A)
PALAKOL-534 260, W.G.DIST.



ENVIRONMENTAL ENGINEER
ANDHRA PRADESH POLLUTION CONTROL BOARD
REGIONAL OFFICE, ELURU.

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GREEN AUDIT REPORT

1.INTRODUCTION:

The term “Green” means Eco-friendly or not damaging the Environment. This can acronymically is called as “Global Readiness in Ensuring Ecological Neutrality” (GREEN). Green accounting can be defined as systematic identification, quantification, recording, reporting and analysis of components of ecological diversity and expressing

the same in financial or social terms. "Green Auditing", an umbrella term, is known by another name "Environmental Auditing". There is a provision of green audit in college campus. As per the suggestions made by IQAC, Botany Department taken the responsibility to do Green Audit with cooperation of Principal. A report on green audit has been prepared by the Department of Botany, Sri A.S.N.M GOVERNMENT COLLEGE (AUTONOMOUS), PALAKOL. This college was established in 1968 and Credited with Grade "B" by NAAC. Total area of the college campus is 9 acres, of which 30 percent is covered by herbs, shrubs and trees, including valuable medicinal flora. The plants have been systematically identified by the Dept. of Botany. There are more than 100 plant species were audited. Extra efforts have been taken by the college to create environment consciousness amongst students. One major step in this regard is the extensive plantation program organized by NSS, U.G students of Botany Department. Plantation is encouraged by the Principal and all Departments Faculty members to increase greenery and reduce carbon dioxide emission effects. Renovation of the garden at the entrance was done. Existing gardens are also maintained by the Dept. of Botany of this college. Extension programs also organized to create environment awareness and conservation of Biodiversity amongst the students and public. In this regard extension program was organized.

2. Activities organized to create greenery and its conservation at college campus is as follows:

1. Plantation of diversified species
2. Vegetative propagation
3. Uses of Medicinal plants
4. Identification of Plant species

2.1 Plantation of diversified species:

To create green cover, Eco-friendly atmosphere, pure oxygen at the college campus, plantation program is organized every year with involving all Students, Principal and all faculty members of various Departments. In this session VanamManam, Janmabhoomi, VanaMahotsav and Neeru-chettu programs were organized and about 30 Ornamental, Avenue, Medicinal plants with rare and exotic beautiful trees were planted in Botanical garden and other parts of college campus. To keep the greeneries in the campus, we regularly maintain the gardens which are looked after by students under the guidance of Department of Botany and NSS. Moreover, every year we try to plant new Plants.

2.2 Vegetative propagation:

To learn how to propagate vegetative garden, training program is organized for students every year. Students learned various propagation techniques like cutting, grafting, etc.

2.3 Uses of Medicinal plants:

There are many Medicinal plants in the Botanical garden which have Medicinal value. However the students are unaware of their use and they can't identify the particular plants. Therefore faculty of Botany department helps the students in identifying different medicinal plants with their scientific names and also their Medicinal use.

2.4 Identification of Plant species:

There are so many plant species present in the college campus. The faculty of Botany department audited and identified various plant species with the help of flora.

3. General Steps:

1. Systematic and comprehensive data collection.
2. Documentation with physical evidences.
3. Independent periodic evaluation with regulatory requirements and appropriate standards.
4. Systematic and comprehensive improvement and management of existing system

4. Procedure followed:

The students were divided into three groups and under the guidance of the teaching staff of the Department of Botany, each group collected data on the assigned topics. The assigned topics were as follows.

1. Identification of Plant species and Bio-diversity.
2. Analysis of Water quality and usage.
3. Analysis of Energy consumption and costs.
4. Analysis of waste generation and disposal all the data were united and based on these, a report was formulated.

5. Report :

Identification of Plant species and Bio-diversity in the college campus, based on our data collected, there are 106 plants in the college campus. In this 29 are trees, 15 are shrubs, 51 are herbs in our college contribute to the Oxygen supply that we utilize. Being situated in the urban area, our college is exposed to various atmospheric pollutants from vehicles as well as by other external means. Based on our calculation, the different sources of carbon-dioxide emitted to our college are:

1. Vehicles
2. Refrigerators
3. Air conditioners

4. RO water Plants

5. Mobiles etc.

1. Vehicles on the days of data collection, there were 3 cars, 70 bikes and 20 scooties in our campus, which in turn proves us that these vehicles may contribute to high carbon-dioxide emission. There are 6 refrigerators, 9 air conditioners in our campus. The students, teaching and non-teaching staff and the visitors also contribute to carbon-dioxide emission.

2. The Vermi-compost unit near the Cycle shed, recently established by the dept. of zoology and Botany. All the fallen leaves and food waste are collected from the Botanical garden and hostels are used as compost. Plastic wastes, plastic papers and bottles are collected by the students and stored at Vermi-compost compound wall for the purpose of recycling.

3. Analysis of water quality and usage of the college campus possesses many water outlets. Our students have counted the total number of taps, rain water harvesting pits. We have found that in total, there are 35 taps, 1 RO water Plant.

4. Analysis of Energy consumption and costs the college is well equipped with electricity supply. Each department possess computers, printers, fans, plug points, tube lights, bulbs etc. As part of "**Green Campus**" initiation, we shifted from conventional energy to renewable energy, to reduce electricity bill and increase the usage of renewable energy, installed a solar grid with capacity of **11 KW** on the roof of the academic buildings which is useful for our campus and giving remaining generated power to the electricity board.

6. In addition to these equipment, our college also has

- Spectrophotometer
- A distillation unit
- Digital calorimeter
- 2 Autoclaves;
- An exhaust fan
- A laminar air flow
- A hot plate
- An incubator
- A table fan
- A hot air oven
- 2 centrifuges
- 2 telephones

- LCD Projectors
- Hand mikes
- A bell

5. Analysis of waste generation and disposal wastes cannot be avoided in any environment. Wastes can be classified as biodegradable and non-biodegradable wastes. Biodegradable wastes include food wastes; which can be easily decomposed by the bacteria in soil. But non-biodegradable wastes are those which cannot be degraded by any organism and remain as such for many years.

Library: The most generated waste is paper waste. It is taken for recycling.

Office: Paper waste generated are recycled and reused.

Garden: Plastic and paper waste is comparatively less. Fallen leaves are collected and used in vermi-compost unit

Auditorium: The wastes are collected after each programed and dumbered it.

Bathroom: The wastes are collected and burned in an incinerator behind the convent.

Classrooms: Paper wastes are collected in the waste basket and recycled.

Laboratory: The broken glass wastes and the useless instruments are disposed for recycling after thorough washing.

College Premises: Plastic waste generated is usually less. But paper waste is generated in a larger amount.

7.Observations:

1. There are sufficient water outlets for the students, staff and all the departments. But it is essential to check whether all these are working or not and whether the taps are leaking or not.
2. Energy consumption is yet another component that is to be taken from the solar panel system.
3. Fortunately, the students, Teaching and Non-Teaching staff of the college is available to clean the college campus.

List of the Audited Plants

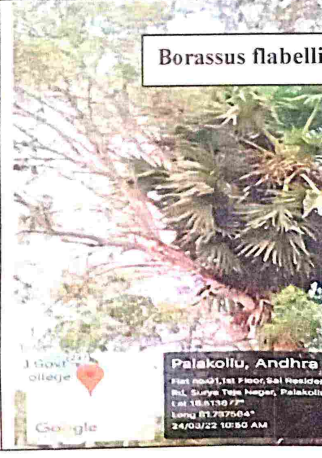
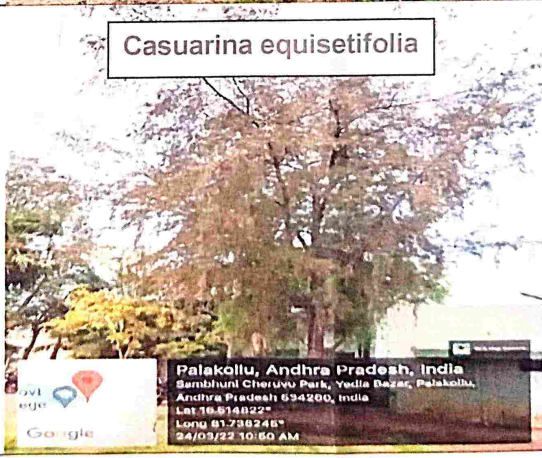
S.NO	Scientific Name of Plant	Herb/Shrub/Tree	Local Name	Family	Uses
1	<i>Acalypha indica</i>	Herb	Muripindi	Euphorbiaceae	Anti Venomous & Anti Diabetic properties
2	<i>Achyranthus aspera</i>	Herb	Uttereni	Amaranthaceae	To treat cough, bronchitis, Malaria, Fever
3	<i>Aerva lanata</i>	Herb	Mountain knot grass	Amaranthaceae	To treat lithiasis, Asthma & Antidote for rat pois
4	<i>Agave americana</i>	Herb	American aloe	Asparagaceae	To treat Burns, Injuries and Skin irritation
5	<i>Ageratum conyzoides</i>	Herb	Goat weed	Asteraceae	To treat pneumonia, to cure wounds & burns
6	<i>Allamanda blanchetii</i>	Tree	Purple allamanda	Apocynaceae	To treat malaria, jaundice, constipation.
7	<i>Alstonia scholaris</i>	Tree	Indian pulai	Apocynaceae	To treat chest pain, headache, gastric problems
8	<i>Andrographis paniculata</i> (Burm.f.) NEAS	Herb	Bitter weed	Acanthaceae	To treat cancer, Ulcers, Leprosy
9	<i>Asystasia gangetica</i>	Herb	Coromandel	Acanthaceae	To treat hypertension, asthma, diabetes
11	<i>Azadiricta indica</i>	Herb	Neem	Meliaceae	Natural medicine and pesticides
12	<i>Bambusa multiplex</i>	Herb	Hedge baaboo	Poaceae	weaving, paper making
13	<i>Borassia flabellifera</i>	Herb	Toddy palm	Aracaceae	Mats, baskets, fans
14	<i>Calotropis gigantea</i>	Sherb	Crown flower	Apocynaceae	treating skin, digestive
15	<i>Campsis radicans</i>	Herb	Coe witch	Bignoniaceae	Healing of wounds
16	<i>Capparis spinosa</i>	Herb	Flinders rose	Capparaceae	treatment of gout, arthritis
17	<i>Carica papaya</i>	Herb	Papaya	Caricaceae	infections, constipation
18	<i>Chenopodium murale</i>	Herb	Salt green	Amaranthaceae	Illness, anxiety
19	<i>Chloris barbata sw.</i>	Sherb	Purple top chloris	Poaceae	skin disorders
20	<i>Chlorophytum comosum</i>	Herb	Spider plant	Asparagus	weakness, arthritis
21	CITRUS AURANTIIFOLIA	Tree	Citrus	Rubaceae	anti cancer, antidiabetic
22	<i>Cleome viscosa</i>	Herb	Spiderflower	Clomaceae	traditional medicine, indian medicine

23	<i>Clitoria ternata</i>	Shurb	Asianpigeon wings,bluebellvine	Fabaceae	memoryenhancer ,nootropic
24	<i>Cocos nucifera</i>	Tree	Cocunut palm	Arecaceae	food fuel,cosmetics,folk medicine
25	<i>Cordyline furulicosa</i>	Herb	Bio plant	Asparagaceae	treatment of diarrhoea ,headache
26	<i>Creton banplandianum</i>	Herb	Bontulshi	Euphorbiaceae	treat liver disorders,skin diseases
27	<i>Cyanthiluum cinereum (l)</i>	Herb	Little iron weed	Asteraceae	asthama,cancer,choler,night blindness
28	<i>Cycas revoluta thumb</i>	Herb	Sagopalm	Cycad	tonic high blood pressure,headaches,bonepain
29	<i>Cynodon dacctylon (l) pers</i>	Herb	Bermudagrass	Poaceae	colant,laxative,brain and heart tonic
30	<i>Dalbergia sissoo dc</i>	Tree	Indian rose wood	Legom	obesity, vitiligo, fever, tooth brush
31	<i>Diefferbachia seguine</i>	Hose plant	Cane	Araceae	anti dote, snake bites, rheumatism
32	<i>Duranta erecta l.</i>	Tree	Golden dew	Verbenaceae	mosquitoacidil cyto toxic, anti viral, anti fungal
33	<i>Dypsis lulescens (h. Wendi) bennge</i>	Herb	Yellow butter flypilm	Arecacea	improve a air humidity help in decreasing stress
34	<i>Elaeis guineensis</i>	Tree	Oil plam	Arecacea	headaches, pains, rheumatism
35	<i>Emilia FOSBERG/ NICOLSON</i>	Herb	Florida tasselflower	Asteraceae	tree unspecified medicinal disorders
36	<i>Erigeron bonariensis</i>	Tree	Asthma weed	Asteraceae	treatment of bleeding hemorrhoids
37	<i>Euphorbia prostrata aiton</i>	Shrub	Prostrate spurge	Euphorbiaceae	tree, improve bio markers for inflammation but
38	<i>Euphorbia tithymaloides l.</i>	Shurb	Seashell devil's backbone	Euphorbiaceae	ringworm ,skin cancer,toothache,insect stings
39	<i>Euterpe oleracea mart</i>	Tree	Acai plam	Arecaceae	annti oxidant, diabetes,hypertension,inflamma
40	<i>Ficus hispida</i>	Tree	Hairy fig	Moraceae	purgation and emesis to remove exess pitta d
41	<i>Ficus religiosa</i>	Tree	Pepal tree	Moraceae	astham diarrhea,diabetes,sexual disorders
42	<i>Ficus species</i>	Tree	Fig trees	Mulberry family	treat vrious ailments such as gastric problem
43	<i>Gardenia jasminoides</i>	Herbs	Cape jasmines	Rubiaceae	disorders,diabetes,and other conditions

44	<i>Glechoma hederacea</i>	Herb	Ground ivy	Lamaiceae	treat inflimations of the eyes
45	<i>Gomphrena celosioides</i> mart	Shurb	Bachelor's button	Amaranthaceae	Skin infections, respiratory problems, ect...
46	<i>Gomphrena celosisioides</i> mart	Shrub	Prostrate Globe-amaranth	Amaranthaceae	Skin infections, respiratory problems, ect...
47	<i>Hibiscus rosa</i>	Tree / chinese hibiscus		Mallows	shoe polish ,women black hair dry
48	<i>Hyptis suaveolens</i>	Herb	Mesosphaerum suaveolens	Lamaiceae	gastric ulcer, infections, and inflamations
49	<i>Indigofera tinctoria</i>	Herb	True indigo	Fabaceae	fever, liver, grey hairs, spleen disorders ETC....
50	<i>Ixora chinensis</i> lan	Herb	Viru	Rubiaceae	Treat dysentery and tuberculosis
51	<i>Juniperus virginiana</i>	Plant	Eastern red cedar	Cupressaceae	cough and cold
52	<i>Kalanchoe ceratophylla</i>	Shrub	Chrismastree plant	Crassulac	cure injuries, pain, fever
53	<i>Kalmia latifolia</i>	Plant	Mountain laurel	Ericales	joints pain
54	<i>Lantana camara</i>	Plant	West Indian lantana	Verbenaceae	cancer, skin itches
55	<i>Lantana viburnodes</i>	Both shrub and plant	Star flower	Verbenaceae	asthma, ulcers, high blood pressure
56	<i>Ligustrum japonicum</i> thumud	Shrub	Ching kundo	Oleaceae	digestive problems
57	<i>Liriodendron foetidissima</i> l.	Plant	Roast beef plant	Liriodendraceae	antispasmodic and cathartic
58	<i>Melia azedarach</i>	Plant	Chinaberry	Meliaceae	ayurvedic medicine
59	<i>Millingtonia hirtensis</i> -kada mali	Tree	Indian cork tree	Bignoniaceae	antipyretic , sinusitis
60	<i>Moringa olifera</i>	Plant	Drumstick tree	Moringaceae	increase sex drive, prevent pregnancy
61	<i>Momordica charantia</i>	Herb	Bitter gourd	Cucurbitaceae	used in folk medicine for treatment of diabetes
62	<i>Morinda tinctoria</i>	Shrub	Indian mulberry	Rubiaceae	wound healing
63	<i>Muntingia calabura</i>	Shrub or tree	Capulin	Muntingiaceae	antiseptic and to treat abnormal cramps and s
64	<i>Murraya koenigii</i>	Herb	Citrus leaf tree	Rutaceae	treating piles, inflammation edema

65	<i>Musa accuminata colla</i>	Herb	Blood bananas	Musaceae	treatment of various disease such as fever, colic
67	<i>Ocimum tenuiflorum</i>	Herb	Holy basil	Lamiaceae	used in ayurveda, tradition of hinduism
68	<i>Ocimum tenuiflorum</i>	Shurb	Tulasi, holibasil	Lamiaceae	fever, eye disease, aiding cough
69	<i>Pandanus tectorius</i>	Herb	Pandanaceae	Pandanaceae	To make baskets, hats, mats
70	<i>Parietaria judaica</i>	Herb	Spreading pellitory	Urticaceae	an efficacious remedy for kidney and bladder stones
71	<i>Parthenium hysterophorus</i>	Shurb	Carrot grass	Asteraceae	insects controlled
72	<i>Passiflora ciliata</i> Aiton	Herb	Fringed passionflower	Passifloraceae	used for food
73	<i>Passiflora foetida</i>	Shurb	Love in a mist	Passifloraceae	help with stress, sleep
74	<i>Peltophorum plerocarpum</i>	Herb	Yellow flame	Fabaceae	required petroleum
75	<i>Peltophorum pterocarpum</i>	Herb	Yellow flame.	Fabaceae	required petroleum
76	<i>Phoenix reclinata</i>	Tree	Date palm	Areceae	urinary infections
77	<i>Phoenix theophrasti</i> greuter	Herb	Date palm	Arecaceae	food for oil
78	<i>Phyllanthus amarus</i> schumacher	Herb	Child pick A-back	Phyllanthaceae	treat ulcer
79	<i>Phyllanthus tenellus</i> roxb	Herb	Mascarene island leave	Phyllanthaceae	liver disease
80	<i>Phyllanthus urinaria</i>	Shurb	Chamber bitter	Phyllanthaceae	jundice, daibets
81	<i>Plectranthus anboinicus</i>	Herb	Indian boarge	Mexian mint	skin infection, digestive
82	<i>Plumeria rubra</i>	Tree	Fraunga pani	Apocynaceae	anti-fertility -anti inflammatory
83	<i>Polyscias fruticosa</i> (L) harms	Tree	Umbrella tree	Ariliceae	anti-toxin, anti-bacterial onitment
84	<i>Pongamia pinnata</i>	Tree	Poungam	Fabaceae	treatment of fumors piles and skin disease
85	<i>Prunus armeniaca</i> (L)	Tree	Siberian aprricot	Roseaceae	asthama, cough and bleeding
86	<i>Psidium guajava</i> (L)	Tree	Jama	Myrtaceae	diabetes, fever

87	<i>Punica granatum (l)</i>	Tree	Pomegranate	Lythraceae	urinary infections
88	<i>Rhapis excelsa</i>	Tree	Bamboo palm	Arecaceae	removing air bone toxin
89	<i>Ruellia simplex</i>	Herb	Desert penuta	Acanthaceae	treatment of flu asthma
90	<i>Ruellia tuberosa (l) - medicinal plant</i>	Herb	Meadow weed	Acanthaceae	anti-pyretic bladder diseases
91	<i>Sabal minor</i>	Tree	Dwarf palmetto	Arecaceae	providing food, medicines for local people
92	<i>Sida acuta burm. F</i>	Herb	Wire weed	Mallows	sore mouth, cough, wheezing, common cold etc
93	<i>Smilax rotundifolia</i>	Shrub	Common greenbrier	Smilacaceae	irritant to relieve pain, muscle cramps and twitches
94	<i>Solanum chenopodioides</i>	Herb	Whitetip nightshades	Solanaceae	pneumonia, wing worms, pain, fever etc...
95	<i>Solanum paniculatum</i>	Tree	Jurubebas	Nightshade	treatment of gastritis, bronchitis and fever
96	<i>Solanum torum</i>	Herb	Turkey berry	Solanaceae	fever, wound, hypertension etc...
97	<i>Sterculia foetida</i>	Tree	Java olive tree	Malvaceae	stamina booster, cure diarrhea, anti cancer
98	<i>Syndrella nodiflora</i>	Herb	Cindrella weed	Asteraceae	inflammatory diseases, asthma, liver problems
99	<i>Syzygium jambos</i>	Tree	Rose apple	Myrtaceae	digestive and tooth ailments
100	<i>Tamarindus indica</i>	Tree	Tamarind	Fabaceae	fever, malaria, diarrhea wound healing
101	<i>Tectona grandis</i>	Tree	Teak	Lamiaceae	laxative, cooling, wood is astringent, dysentery
102	<i>Tephrosia purpuria</i>	Herbs	Vempali	Legumes	liver, spleen, heart and blood
103	<i>Terminalia catappa</i>	Tree	Indian almond	Combretaceae	treatment of scabies, leprosy, wounds and other skin
104	<i>Tridax procumbens (l)</i>	Herbs	Coatbuttons	Asteraceae	anticoagulant, antifungal and insect repellent
105	<i>Urena lobata</i>	Herb	Congo jute	Malvaceae	treating fractures, wounds, mastitis and snake bite
106	<i>Ziziphus mauritiana</i>	Tree	Chinese apple	Rhamnaceae	muscular strength and weight, stress ulcers



Principal
22/3/2023
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