THE AYURVEDIC PHARMACOPOEIA OF INDIA

PART- I

VOLUME – II

GOVERNMENT OF INDIA

MINISTRY OF HEALTH AND FAMILY WELFARE

DEPARTMENT OF AYUSH

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Note: This e-Book contains Computer Database generated Monographs which are reproduced from official publication. The order of contents under the sections of *Synonyms, Rasa, Guna, Virya, Vipaka, Karma, Formulations, Therapeutic uses* may be shuffled, but the contents are same from the original source. However, in case of doubt, the user is advised to refer the official book.

56. Nimba (Lf.)

NIMBA (Leaf)

Nimba (Leaf) consists of dried leaf of *Azadirachta indica A*. Juss Syn. *Melia azadirachta* Linn. (Fam. Meliaceae); a moderate sized to fairly large evergreen tree, attaining a height of 12-15 m with stout trunk and spreading branches, occurring throughout the country up to an elevation of 900 m.

SYNONYMS

Sanskrit	:	Arişţa, Picumarda
Assamese	:	Mahanim
Bengali	:	Nim, Nimgach
English	:	Margosa Tree
Gujrati	:	Limba, Limbado, Limado, Kohumba
Hindi	:	Nim, Nimba
Kannada	:	Nimba, Bevu, Oilevevu, Kahibevu, Bevinama
Kashmiri	:	--
Malayalam	:	Veppu, Aryaveppu, Nimbam, Veppa
Marathi	:	Balantanimba, Limba, Bakayan, Nim, Kadunimb
Oriya	:	Nimba
Punjabi	:	Nimba, Bakan, Nim
Tamil	:	Vemmu, Veppu, Arulundi, Veppan
Telugu	:	Vemu, Vepa
Urdu	:	Neem

DESCRIPTION

a) Macroscopic

Leaves - Compound, alternate, rachis 15-25 cm long, 0.1 cm thick; leaflets with oblique base, opposite, exstipulate, lanceolate, acute, serrate, 7-8.5 cm long and 1.0-1.7 cm wide, slightly yellowish-green; odour, indistinct; taste, bitter

b) Microscopic

Leaf-

Midrib -leaflet through midrib shows a biconvex outline; epidermis on either side covered externally with thick cuticle; below epidermis 4-5 layered collenchyma present; stele composed of one crescent-shaped vascular bundle towards lower and two to three smaller bundle towards upper surface; rest of tissues composed of thin-walled, parenchymatous cells having secretory cells and rosette crystals of calcium oxalate; phloem surrounded by non-lignified fibre strand; crystals also present in phloem region.

Lamina - shows dorsiventral structure; epidermis on either surface, composed of thin walled, tangentially elongated cells, covered externally with thick cuticle; anomocytic stomata present on lower surface only; palisade single layered; spongy parenchyma composed of 5-6 layered, thin-walled cells, traversed by a number of veins; rosette crystals of calcium oxalate present in a few cells; palisade ratio 3.0-4.5; stomatal index 13.0-14.5 on lower surface and 8.0-11.5 on upper surface.

Powder - Green; shows vessels, fibres, rosette crystals of calcium oxalate, fragments of spongy and palisade parenchyma.

IDENTITY, PURITY AND STRENGTH

Foreign matter	Not more than	2	per cent, Appendix	2.2.2.
Total Ash	Not more than	10	per cent, Appendix	2.2.3.
Acid-insoluble ash	Not more than	1	per cent, Appendix	2.2.4.
Alcohol-soluble extractive	Not less than	13	per cent, Appendix	2.2.6.
Water-soluble extractive	Not less than	19	per cent, Appendix	2.2.7.

CONSTITUENTS - Triterpenoids and Sterols.

PROPERTIES AND ACTION

Rasa : Tikta
Guna : Rukṣa
Virya : Śīta
Vipaka : Kaṭu
Karma : Grāhī, Vātalā, Pittanāśaka

IMPORTANT FORMULATIONS - Kāsīsādi Ghṛta, Jātyādi Ghṛta, Ārogyavardhinī Guṭikā, Nimbapatrādiupanāha, Paṇcaguṇa Taila

THERAPEUTIC USES - Jvara, Kṛmiroga, Kuṣṭha, Netraroga, Prameha, Vrana, Āmaśotha, Viṣarogas

DOSE - 1-3 g. of the drug in powder form.
10-20 ml of the drug for decoction.

57. Nimba (St.Bk)

NIMBA (Stem Bark)

Nimba (stem bark) consists of stem bark of *Azadirachta indica A.* Juss. Syn. *Melia azadirachta* Linn. (Fam. Meliaceae); a moderate sized to fairly large, evergreen tree, attaining a height of 12-15 m with stout trunk and spreading branches, occurring throughout the country upto an elevation of 900 m.

SYNONYMS

Sanskrit	:	Arişţa, Picumarda
Assamese	:	Mahanim
Bengali	:	Nim, Nimgacha
English	:	Margosa Trees
Gujrati	:	Kadvo Limbdo
Hindi	:	Nim, Nimb
Kannada	:	Bevu, Kahibevu, Nimba, Oilevevu
Kashmiri	:	--
Malayalam	:	Veppu, Aruveppu
Marathi	:	Balantanimba, Kadunimb, Limba
Oriya	:	Nimba
Punjabi	:	Nim, Nimba, Bakam
Tamil	:	Veppai, Vembu
Telugu	:	Vemu, Vepa
Urdu	:	Neem

DESCRIPTION

a) Macroscopic

Bark varies much in thickness according to age and parts of tree from where it is taken; extemal surface rough, fissured and rusty-grey; laminated inner surface yellowish and foliaceous, fracture, fibrous; odour, characteristic; taste, bitter

b) Microscopic

Stem Bark -Shows outer exfoliating pieces hard, woody, considerably thick in older barks; almost entirely dead elements of secondary phloem, alternating with discontinuous tangential bands of compressed cork tissue, former composed of several layers of stone cells occurring in regularly arranged groups together with collapsed phloem elements filled with brown contents; in between the successive zones of cork tissue 3-5 layers of fibre groups with intervening thin-walled and often collapsed phloem elements present; each zone of cork tissue consists of several layers of regular, thin-walled cells occasionally with a few compressed rows of thick-walled cells towards

outer surface; within exfoliating portion a number of layers of newly formed cork composed of thin walled, rectangular cells and one or two layers of cork cambium, below which a wide zone of secondary phloem present; secondary cortex absent in most cases; secondary phloem commonly composed of well-developed fibre bundles traversed by 2-4 seriate phloem rays and transversely separated by bands of parenchymatous tissue of phloem; phloem elements of outer bark mostly collapsed; a few fairly large secretory cavities also occur in phloem; most of phloem parenchyma contain starch grains and prismatic crystals of calcium oxalate; starch grains, simple, round with central hilum,measuring 2.75-5 μ structure of bark varies considerably according to gradual formation of secondary cork bands.

Powder - Reddish-brown; shows numerous prismatic crystals of calcium oxalate, phloem fibres with narrow lumen and pointed ends; cork cells, stone cells mostly in groups, lignified rectangular to polygonal, having wide lumen and distinct striations, simple starch grains, measuring 2.75-5 μ in diameter.

IDENTITY, PURITY AND STRENGTH

Foreign matter	Not more than	2	per cent, Appendix	2.2.2.
Total Ash	Not more than	7	per cent, Appendix	2.2.3.
Acid-insoluble ash	Not more than	1.5	per cent, Appendix	2.2.4.
Alcohol-soluble extractive	Not less than	6	per cent, Appendix	2.2.6.
Water-soluble extractive	Not less than	5	per cent, Appendix	2.2.7.

T.L.C.

T.L.C. of alcoholic extract of the drug on Silica gel 'G' plate using Chloroform : Ethylacetate; Formic acid (5:4: I:) shows under U.V. (366nm) three fluorescent zones at Rf. 0.72 (blue), 0.86 (blue), and 0.90 (green). On spraying with 5% Methanolic Phosphomolybdic acid reagent and heating the plate for about ten minutes at 105°C four spots appear at Rf. 0.20, 0.45, 0.63 and 0.90 (all blue).

CONSTITUENTS - Bitter principles Nimbin and Nimbiol

PROPERTIES AND ACTION

Rasa	:	Tikta
Guna	:	Laghu, Rukṣa
Virya	:	Śīta
Vipaka	:	Kaṭu
Karma	:	Kaṇḍughna, Kaphahara, Pittahara, Viṣaghna, Vraṇaśodhanakara, Hṛdayavidāhaśāntikara

IMPORTANT FORMULATIONS - Sudarśana Cūrṇa., Nimbādi Kvātha Cūrṇa, Nimbādi C ūrṇa, Pañcanimba Cūrṇa, Pañcatikta Guggulu Ghṛta, Pathyādi Kvātha (Ṣaḍanga) Cūrṇa

THERAPEUTIC USES - Dāha, Jvara, Kṛmiroga, Kaṇḍu, Kuṣṭha, Prameha, Rakta Pitta, Vraṇa

DOSE - 2-4 g. of the drug in powder form.
Decoction should be used externally.