LAUH DHATU

PROF. MEGHNA VAIDYA

DEPARTMENT OF RASA SHASTRA AND BHAISHAJYA KALPANA

COURSE OBJECTIVES WITH MATCHED PROGRAM OBJECTIVES

SR1 CO No	A1 Course learning Outcomes (CO) AyUG-RB At the end of the course AyUG-RB, the students should be able to-	B1 Course learning Outcomes matched with program learning outcomes.
CO1	Demonstrate application of principles of Ayurvediya Aushadhi Nirmana (Ayurvedic Pharmaceutics)	PO1,PO5,PO7
CO2	Demonstrate application of principles of Ayurvediya Aushadhi Prayoga Vigyana (Clinical Pharmacology)	PO1,PO5,PO7
CO3	Prepare Ayurvedic formulations in adherence to quality control parameters for raw materials, in-process and finished products	PO1,PO3,PO4,PO5, PO6,PO7,PO8
CO4	Justify rationality of selection and administration of Ayurvedic formulations	PO3,PO5,PO6,PO7, PO8,PO9
CO6	Appraise research in current and emerging trend in Ayurvedic pharmaceuticals and allied sciences.	PO7,PO9

DOMAIN AND LEVEL

- **CLASSIFICATION OF THE TOPIC**

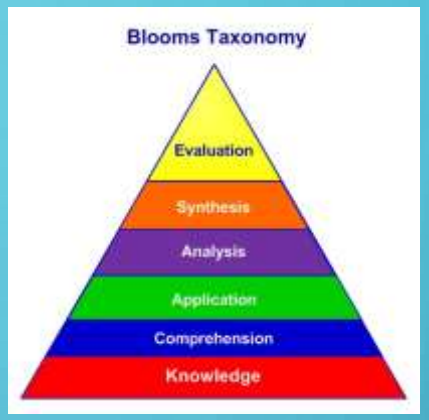
  MUST KNOW (MK)

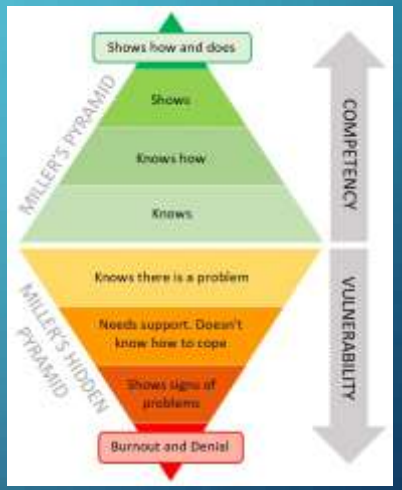
- **DOMAIN IN BLOOM'S TAXONOMY**

  COGNITIVE COMPREHENSION (CC)

- **LEVEL IN MILLER'S PYRAMID**

  KNOWS/ KNOWS HOW (K/KH)





PHYSICAL & CHEMICAL PROPERTIES

- Latin name: Ferrum
- Symbol: Fe
- Atomic number: 26
- Atomic mass: 55.85
- Specific gravity: 7.87
- Melting point: 1535°C
- Boiling point: 3000°C
- Conductivity: Relatively poor conductor of heat & electricity
- Atmospheric exposure: Reacts with O_2 to form iron oxide
- Chemical response: Forms salts with acids, unaffected by alkalis

SYNONYMS

- आयस
- तीक्ष्णक
- शस्त्रलोह
- आयस्कांत
- सकरलोह
- ककलकयस

TYPES OF LOHA

- मुण्ड लोह (Cast iron)
- तीक्ष्ण लोह (Wrought iron)
- कांत लोह (Magnetic iron)

ORES OF IRON

- Hematite – Fe_2O_3
- Magnetite – Fe_3O_4
- Iron pyrite – FeS_2
- Copper pyrite – $CuFeS_2$
- Siderite – $FeCO_3$
- Extraction: Chiefly from oxide ores in blast furnace

सप्त दोष OF LOHA (आ.प्र. 3/223)

- Guruta (Heaviness)
- Dridata (Body stiffness)
- Utkleda (Nausea)
- Kashmala (Tiredness)
- Daha (Burning sensation)
- Ashmari (Urinary calculi)
- Durgandha (Unpleasant body odour)

TESTS OF GENUINENESS (कान्त लोह)

- Water boiled in vessel has odour of हिंगु
- Oil drop on surface of water does not spread
- Milk boiled rises conically without spilling
- Hing paste loses odour when applied to vessel
- Nimba paste loses bitterness when applied

SHODHANA (PURIFICATION)

- Types:
- - Samanya Shodhana
- - Vishesha Shodhana

SAMANYA SHODHANA

- Heating red-hot and quenching in 5 liquid media (oil, buttermilk, cow's urine, sour gruel, kulattha decoction)
- Each 7 times → Total 35 quenchings

VISHESHA SHODHANA

- Decoction: Haritaki (16 parts) + Water (128 parts) → reduced to 1/4
- Iron heated red-hot and quenched 7 times in this decoction

MARANA (INCINERATION) – STEP 1

- भानुपाक: Shuddha Loha + Haritaki decoction
- Kept in sunlight till dried → repeated 7 times

MARANA – STEP 2

- स्थालीपाक: Heated intensely in Haritaki decoction till complete evaporation

MARANA – STEP 3

- पुटपाक: Chakrikas prepared with Haritaki decoction
- Dried, kept in Sharava Samputa
- Subjected to Gajaputa

GUNA KARMA (PROPERTIES & ACTIONS)

- Rasa: Tikta, Madhura, Kashaya
- Vipaka: Madhura
- Virya: Shita
- Guna: Ruksha, Guru
- Doshaghna: Kapha-Pitta shamaka
- Varna: Pakvajambu phala varna
- Rogaghna: Pandu, Kamala, Raktapitta, Kasa, Shwasa, Amlapitta, Mutrakrichra, Ekangavata, Kushta

MATRA (DOSE) & ANUPANA

- Dose: ½ to 2 Ratti
- Anupana: Triphala, Madhu

UPADRAVA (COMPLICATIONS & MANAGEMENT)

- Complications: Vomiting, abdominal pain, toxicity if improperly prepared
- Management:
- - Vidanga + Agastya swarasa with sunlight exposure
- - Vidanga + Shoolaghna dravya + Agastya patra swarasa
- - Virechana with Aragwadha phala majja

IMPORTANT YOGAS

- Loha Pippali
- Vayasthapana Loha
- Dhatri Loha
- Saptamrita Loha
- Arogyavardhini Rasa
- Chandraprabha Vati
- Lohasava

FORMATIVE ASSESSMENT

- Name important yogas of Lauh Bhasma.
- Explain Trividh Paka of Lauh Bhasma.
- Matra and Anupana of Lauh Bhasma?
- How to manage complications of pakva Lauh Bhasma?