SWARNA & RAJATA 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

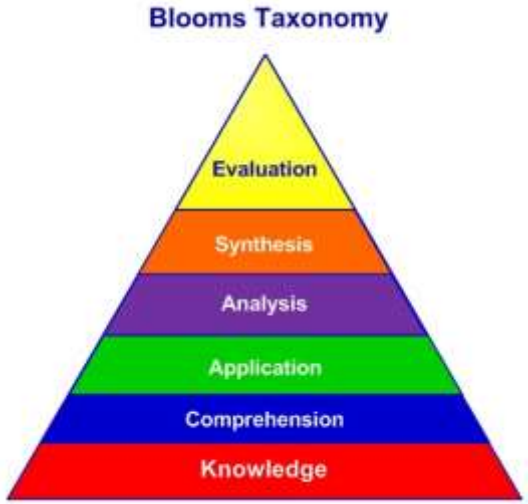
- **CLASSIFICATION OF THE TOPIC**

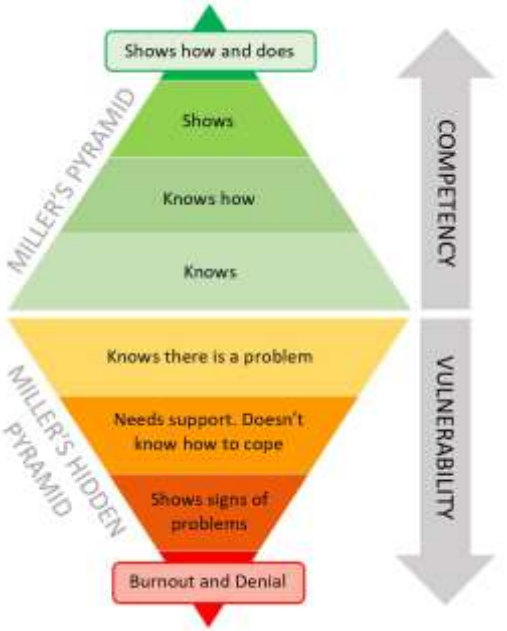
  MUST KNOW (MK)

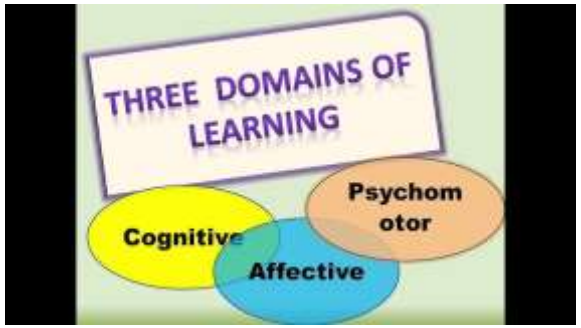
- **DOMAIN IN BLOOM'S TAXONOMY**

  COGNITIVE COMPREHENSION (CC)

- **LEVEL IN MILLER'S PYRAMID**







SWARNA

- DENSE,SOFT,LUSTROUS,MALLEABLE AND DUCTILE METAL
- • BRIGHT YELLOW IN COLOUR
- • DOES NOT OXIDISE IN AIR OR WATER
- • DISSOLVES IN AQUA REGIA(NITRO HYDROCHLORIC ACID) AND ALKALINE SOLUTION OF CYANIDE.
- • DISSOLVES IN HG FORMING AMALGAM ALLOYS
- • GOOD CONDUCTOR OF HEAT AND ELECTRICITY.
- • KNOWN TO POSSESS ANTI-INFLAMMATORY PROPERTIES.

CHEMICAL AND PHYSICAL PROPERTIES

- NAME Aurum
- SYMBOL Au
- ATOMIC NUMBER 79
- ATOMIC WEIGHT 197.2

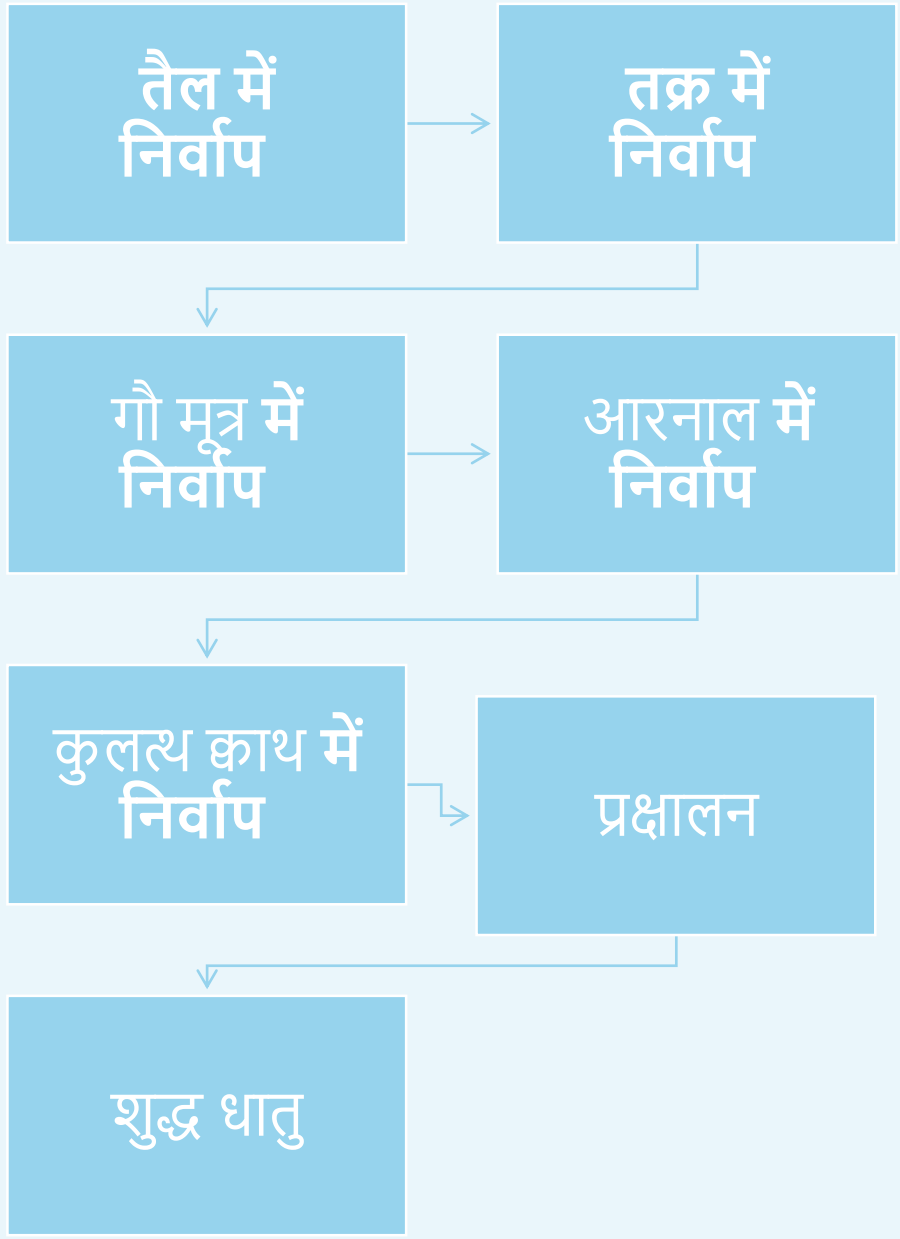
- HARDNESS 2.5 - 3 S
- PECIFIC GRAVITY 19.32
- DENSITY 19.3 g/cubic cm
- CONDUCTIVITY Good conductor of heat and electricity
- MELTING POINT 1064.43˚C
- BOILING POINT 2807℃

TYPES

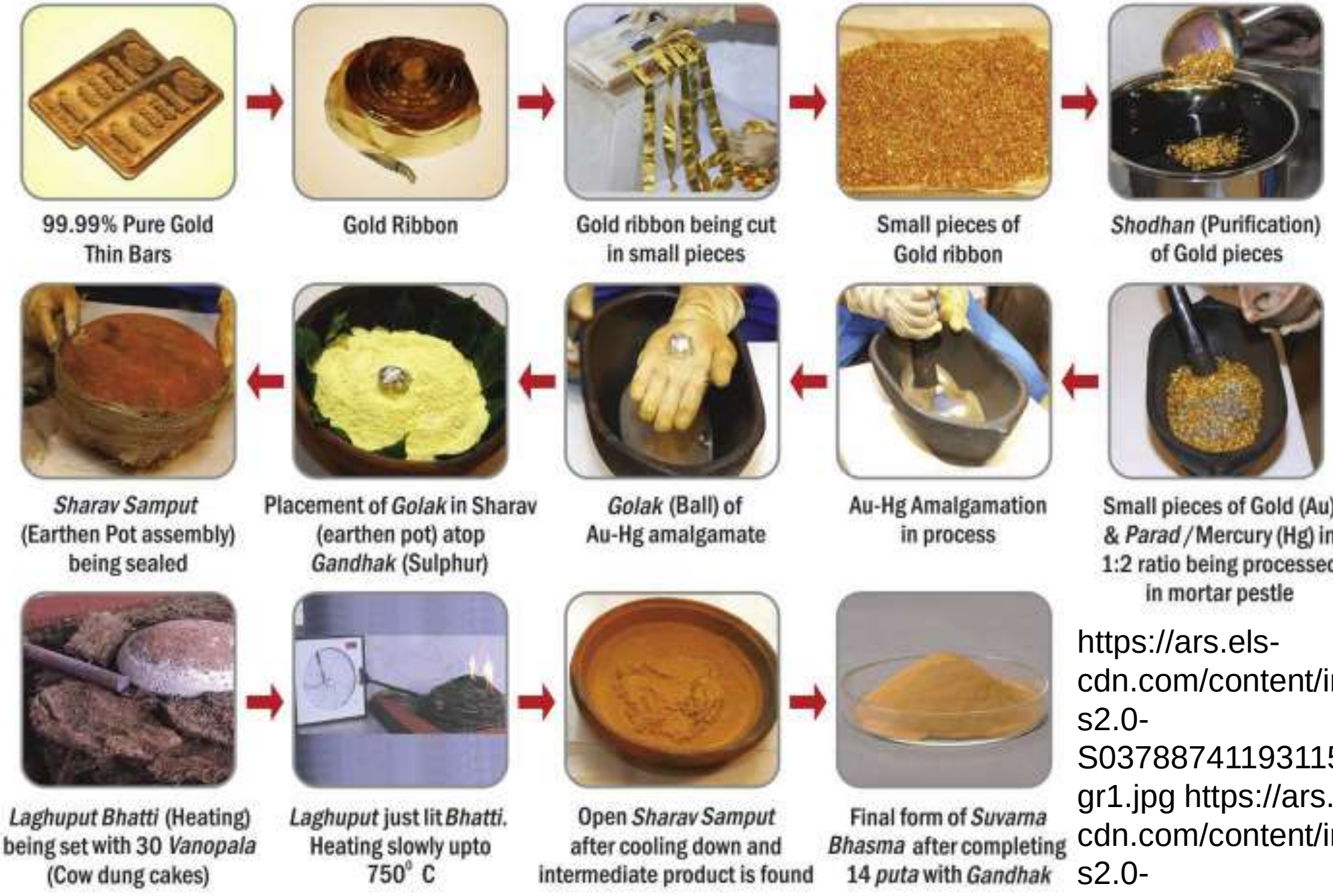
- 1)PRAKRTA SUVARNA
- 2)SAHAJA SUVARNA
- 3)AGNISAMBHAVA SUVARNA
- 4)KHANIJA SUVARNA - REEF GOLD - ALLUVIAL GOLD
- 5)RASENDRAVEDHAJA SUVARNA

SHODHANA

तैले तक्रे गवां मूत्रे हारनाले कुलत्थजे | क्रमानिषेचयेत्तप्तं द्रावे द्रावे तु सप्तधा ||
स्वर्णवदलोहपत्रारं शुद्धरेषा प्रशस्यते |



MARANA



https://ars.els-cdn.com/content/image/1-s2.0-S037887411931584-gr1.jpg https://ars.els-cdn.com/content/image/1-s2.0-S037887411931584-

RAJATA DHATU

PROPERTIES OF SILVER

Physical Properties	Chemical Properties
Appearance: Lustrous, white metal	Reactivity: Low; tarnishes in air due to reaction with sulfur compounds, forming silver sulfide
State at Room Temperature: Solid	Oxidation States: Commonly +1; less commonly +2 and +3
Melting Point: 961.78°C (1,763.2°F)	Affinity for Oxygen: Minimal; does not readily oxidize at room temperature
Boiling Point: 2,162°C (3,924°F)	Solubility: Insoluble in water; soluble in nitric acid and sulfuric acid
Density: 10.49 g/cm³	Corrosion Resistance: High; especially resistant to water and atmospheric oxygen
Conductivity: Excellent electrical and thermal conductor	Alloying Behavior: Readily forms alloys with copper, gold, and other metals
Malleability: High; can be beaten into extremely thin sheets	Catalytic Properties: Acts as a catalyst in oxidation reactions
Reflectivity: High; one of the best reflectors of visible light	Formation of Compounds: Forms compounds primarily with oxidation state +1, including silver oxide, silver nitrate, and silver chloride

SHODHANA

Rajat Quenching

in nimbu swarasa

Shudha rajat (purified silver)

MARANA

(Raw materials selected according to classical standards)

↓

Shodhana of Raw materials (*Rajat Patra*)

↓

Mixing *Rajat Patras* with *Parada Bhavana (trituration)* given with *Kumari Swarasa (aleo vera)*

↓

Chakrika Nirmana (pellet formation) is done and dried kept in *Sharava*

↓

Laghuputa (specific temp. 650 dgree celcius)

is given by 2.5kg cow-dung cake.

FORMATIVE ASSESSMENT

- MELTING POINT OF SWARNA?
- SAMANYA SHODHANA OF DHATU?
- COLOUR OF SWARNA BHASMA?
- COLOUR OF RAJAT BHASMA?
- SHODHAN DRAVYA OF SWARNA?
- DOSE AND ANUPANA OF SWARNA BHASMA?

THANK YOU