

# Islamic Golden Age: Chemistry and Nature

History Of Chemistry · Practice Test · 20 Questions

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**1. Which scholar of the Islamic Golden Age is famous for classifying substances into mineral, vegetable, and animal categories in his work 'Kitab al-Asrar'?**

- A) Jabir ibn Hayyan
- B) Al-Razi
- C) Al-Jahiz
- D) Ibn al-Haytham

**2. Al-Razi famously experimented with the distillation of which substance derived from animal fats or vegetable oils to create soaps?**

- A) Glycerol
- B) Acetic acid
- C) Ammonia
- D) Petroleum

**3. Which polymath wrote 'Kitab al-Hayawan' (Book of Animals), contributing to the early understanding of organic biological classification?**

- A) Al-Farabi
- B) Al-Jahiz
- C) Avicenna
- D) Al-Biruni

**4. What natural organic substance did Islamic chemists extract from plants like madder to create red dyes for textiles?**

- A) Alizarin
- B) Indigo
- C) Curcumin
- D) Chlorophyll

**5. Ibn al-Baitar, a famous botanist, compiled a vast encyclopedia describing the chemical and medicinal properties of how many plants?**

- A) 50
- B) 1400
- C) 500
- D) 10000

**6. The process of essential oil extraction from flowers, such as roses, was perfected using which apparatus during the Islamic Golden Age?**

- A) Bunsen burner
- B) Alembic
- C) Centrifuge
- D) Vacuum chamber

**7. Jabir ibn Hayyan described the preparation of which organic acid by the destructive distillation of vinegar?**

- A) Acetic acid
- B) Citric acid
- C) Lactic acid
- D) Formic acid

**8. Which substance extracted from the glands of certain animals was used in the Islamic Golden Age to create early forms of musk perfume?**

- A) Civet
- B) Ambergris
- C) Castoreum
- D) Musk deer secretion

**9. Islamic chemists utilized gallnuts from oak trees, which are high in what organic compound, for the production of iron gall ink?**

- A) Tannins
- B) Cellulose
- C) Lignin
- D) Starch

**10. Which natural organic pigment was derived from the indigo plant and extensively used in the Islamic world for dyeing fabrics?**

- A) Indigotin
- B) Carotene
- C) Anthocyanin
- D) Betalain

**11. Al-Razi used the term 'naft' to describe crude oil; from which natural source did the Islamic world believe this substance originated?**

- A) Decomposition of organic matter
- B) Volcanic activity
- C) Salt deposits
- D) Atmospheric condensation

**12. What plant-based organic alkaloid was studied by Islamic physicians for its sedative and medicinal effects on animal nervous systems?**

- A) Opium (morphine)
- B) Caffeine
- C) Nicotine
- D) Quinine

**13. Which substance, extracted from the urine of animals or human waste, was used by Islamic chemists as a source of nitrogen for various chemical processes?**

- A) Ammonia
- B) Nitric acid
- C) Sulfuric acid
- D) Sodium carbonate

**14. Islamic pharmacists refined the use of beeswax in ointments; what is the primary organic chemical class of beeswax?**

- A) Esters
- B) Ketones
- C) Aldehydes
- D) Ethers

**15. The production of 'attar' (perfume) in the Islamic Golden Age involved the extraction of aromatic oils from which nature-derived source?**

- A) Flower petals
- B) Crushed rocks
- C) Sea salt
- D) Metallic ores

**16. Which organic material was commonly used in the Islamic world for water purification and filtration due to its adsorptive properties?**

- A) Activated charcoal
- B) Sandstone
- C) Limestone
- D) Clay

**17. Islamic scientists identified that certain organic substances, when heated, produced 'empyreumatic' oils; this is the early discovery of what process?**

- A) Pyrolysis
- B) Electrolysis
- C) Osmosis
- D) Crystallization

**18. Henna (*Lawsonia inermis*) contains a molecule called lawsone which binds to keratin; to which class of organic compounds does lawsone belong?**

- A) Naphthoquinone
- B) Carbohydrate
- C) Lipid
- D) Protein

**19. Which animal-derived substance was used by Islamic physicians as a source of collagen for early surgical sutures?**

- A) Sheep gut (Catgut)
- B) Spider silk
- C) Fish skin
- D) Horse hair

**20. In the context of Islamic alchemy, which substance was extracted from the ashes of marine plants to produce alkali for soap making?**

- A) Potash/Soda ash
- B) Mercury
- C) Sulfur
- D) Arsenic