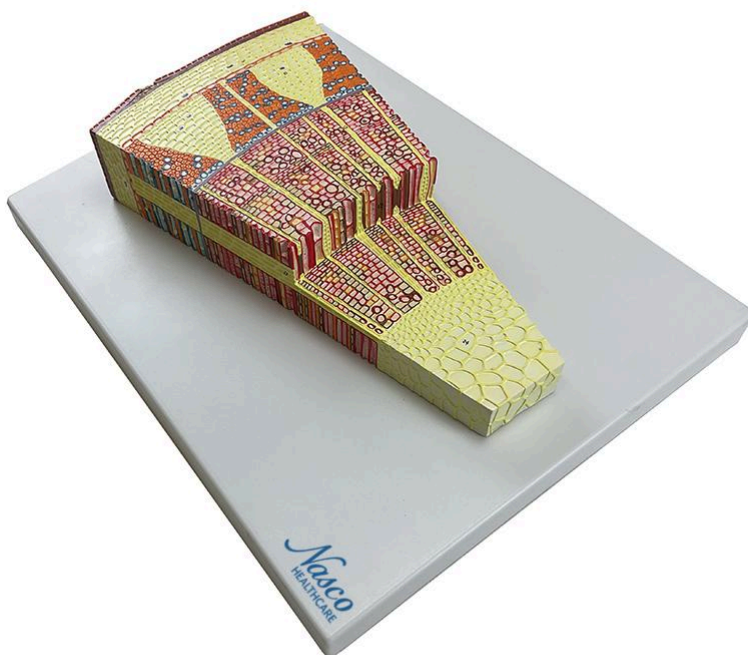
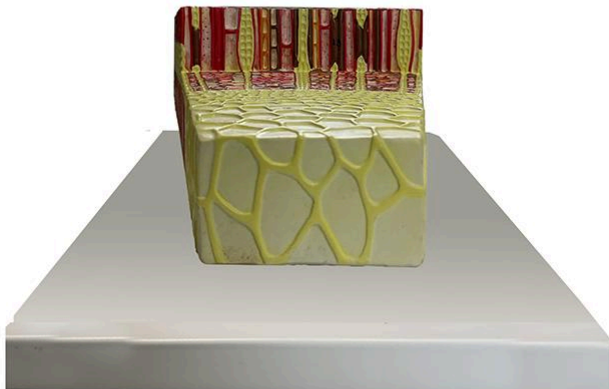


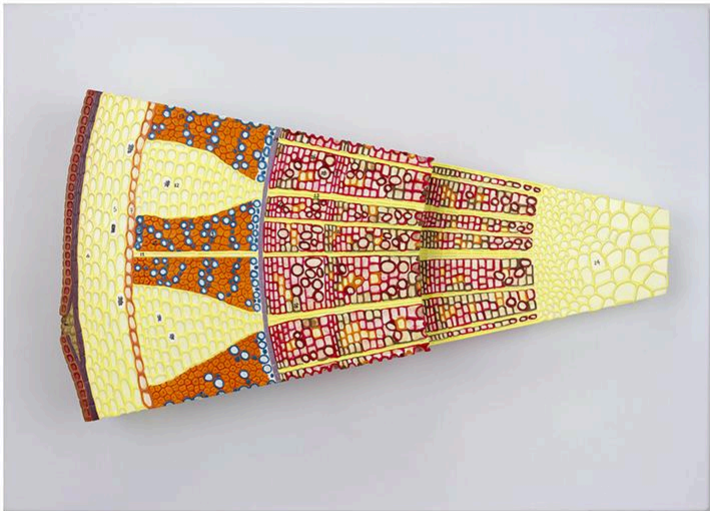


MG17217 | ARBOREO DICOTILEDONEAL STEM SECTION (TILIA)









This model represents, at a 300x magnification, the structure of a woody dicotyledonous stem of the *Tilia* species. Sectioned longitudinally and transversely, it shows the main elements of the cortex and central vascular cylinder, with all structures displayed in different colors and mounted on a base.

Applications:

Ideal for the study and teaching of plant anatomy, especially for understanding the structure of dicotyledonous stems. Indicated for students of biology, botany and related fields, as well as for training and demonstrations in educational and research institutions.

Technical Features:

- * High-precision natural molding;
- * Manufactured from stable synthetic material and resin with toxicological test approval;
- * Detailed replicas;
- * Numbered and hand-painted;
- * Includes an information card with the related structures.



3D Technology and Augmented Reality:

Our anatomical models offer a visual complement through information cards that allow visualization of 3D models in augmented reality (AR). This interactive platform aids learning, allowing comparative analysis of anatomical structures and offering resources for education in anatomy, physiology and pathophysiology.

Technical Specifications:

- * Scale: 300x natural size
- * Material: Synthetic resin
- * Interactive 3D model with augmented reality included

Main Structures:

Medullary parenchyma: Fundamental tissue located in the center of the stem, composed of parenchyma cells that perform functions of storing nutrients and support.

Few sclerenchymatic fibers in summer with small vessels: Indicates the presence of a smaller quantity of support cells (sclerenchymatic fibers) in the xylem formed during the summer, possibly due to environmental conditions favorable to faster and less rigid growth. The small vessels reflect a lower demand for water and nutrient transport at this time.

Primary xylem: Formed during the primary growth of the stem, this vascular tissue is responsible for transporting water and mineral salts from the roots to the leaves. It is composed of tracheids and vessel elements.

Axial, apotracheal parenchyma: A type of parenchyma that accompanies the vascular elements of the xylem, forming a system of living cells that participate in the storage of substances and the metabolism of the xylem. Apotracheal indicates that the parenchyma cells are not in direct contact with the xylem vessels.

Growth ring of III, II, I year: The growth rings represent the secondary growth of the stem, with each ring corresponding to a year of growth. The width of the rings indicates the environmental conditions of each year.

Tracheas: Conducting elements of the xylem, elongated dead cells that form continuous tubes for water transport.

Axial parenchyma: Parenchyma tissue that extends vertically in the stem, parallel to the



longitudinal axis.

Transversal parenchyma: Parenchyma tissue that extends horizontally in the stem, perpendicular to the longitudinal axis.

Tracheids: Elongated and dead cells of the xylem, with tapered ends, that contribute to water transport and structural support.

Several sclerenchymatic fibers of the xylem: Elongated, dead, and lignified cells that provide mechanical support to the xylem.

Other structures can be verified directly on the physical piece or on the interactive 3D model.

About the Anatomical Models:

They are developed with resin replication technology, offering an alternative to natural anatomical models for teaching and research. They present the main morphological characteristics with a good cost-benefit ratio, adequate resistance, manual painting and numbering for precise identification of structures.

List of all visible structures:

- Medulla parenchyma
- Few sclerenchyma fibers in summer with small vessels
- Primary xylem
- Axial parenchyma
- apotracheal
- Growth ring of III
- II
- I year
- Tracheids
- Axial parenchyma
- Transverse parenchyma
- Tracheids
- Several sclerenchyma fibers of the xylem
- Axial parenchyma
- Companion cells
- Sieve plate
- Transverse parenchyma
- Endodermis
- Sieve tubes
- Phelloderm



- Reserve parenchyma of the cortex