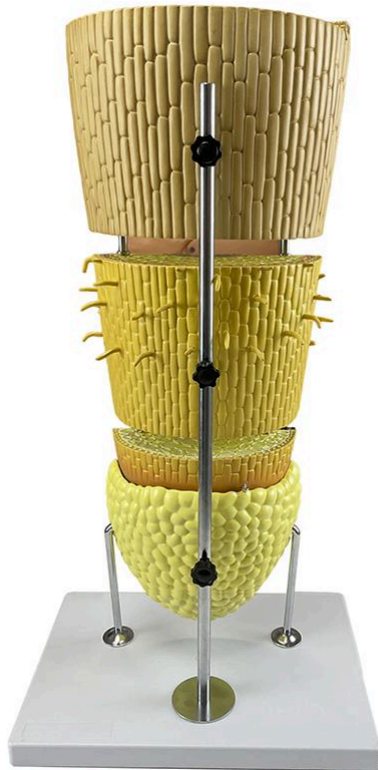


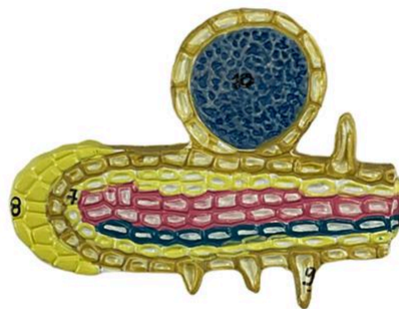


**MG17221 | SIDE SECTION DICOTILEDONEA
ROOT, ENLARGED 400 TIMES**









Meticulously depicting the morphology of the root cap, primary structural zone, and meristematic zone. The model is divided into four parts, illustrating the root tip with root cap, the meristematic zone, the elongation zone, and the maturation zone. Hand-painted and numbered, with colors to facilitate the identification of different structures.

Applications:

Biological education in schools and universities; auxiliary tool for teaching and research; display and learning of plant anatomy.

Technical Characteristics:

Detailed representation of root morphology; didactic colors; manual numbering for structure identification; precise molding; manufactured from resistant synthetic material; faithful replicas of the original; resin approved in toxicological tests; includes an information card with related structures; model mounted on a polymer base with support.

3D Technology and Augmented Reality:



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

Technical Specifications:

Scale: 400 times natural size; Material: Resin; Hand-painted; Includes information card.

Main Structures:

Root Cap: Protective structure covering the root tip, protecting the apical meristem during growth in the soil.

Meristematic Zone: Region of intense mitotic activity, responsible for the primary growth of the root.

Elongation Zone: Region where newly formed cells elongate, contributing to the root's length growth.

Maturation Zone: Region where cells differentiate into mature tissues, such as the endodermis, cortex, and xylem.

Protoxylem: Part of the xylem that differentiates first, usually with narrower tracheary elements.

Protophloem: Part of the phloem that differentiates first, usually with thinner sieve elements.

Plerome: Central region of the vascular cylinder, which will give rise to the xylem and phloem.

Pericycle: Region surrounding the plerome, originating the pericycle.

Rhizodermis: Root epidermal tissue, with cells specialized in the absorption of water and nutrients.

Cortex: Region of the cortical cylinder, between the endodermis and epidermis, composed of parenchyma cells.

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 for teaching and research. They present the main morphological characteristics with a good cost-benefit ratio, adequate resistance, manual painting, and numbering for structure identification.

List of all visible structures:

- tracheids with wide lumen
- woody exchange
- tube filtering
- companion cells
- water points in permeation
- pericycle cells
- endodermis
- cortex
- tracheids with narrow lumen
- xylem parenchyma
- radial hairs
- meristematic dome
- cap
- bacteroid root nodule
- exodermis
- endodermis
- pericycle cell
- cortex
- tracheids with wide lumen
- tracheids with narrow lumen
- tube filtering
- tracheids with wide lumen
- tracheids with narrow lumen
- protoxylem
- protophloem
- plerome
- periblem
- quiescent cells of promeristem
- initial cells of medullary parenchyma
- dermatogen
- initial cells of the columella cap
- initial cells of the epidermis
- cap cells with satellite



- rhizodermis
- initial cells of the endodermis