Cytochemical Localization of Cellulase in Grandular Trichomes of Cannabis

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Cellulase reaction localized cytochemically product was at the ultrastructural level in the cell wall of the disc cells, the secretory cavity and in the subcuticular wall of the glands in Cannabis. Cellulase reaction product was evident in the less dense region of the disc cell wall prior to the sectretory cavity formation. Reactivity in this region was associated with separation of an outer zone, forming the subcuticular wall, from the inner wall zone adjacent to the plasma membrane of the disc cells. Reaction product was associated with the disc cell wall and fibrillar matrix extending from it into the secretory cavity. Reactivity remained evident over the subcuticular wall throughout enlargement of the secretory cavity. Reaction product also was present over the fibrillar matrix in the secretory cavity associated with both the inner wall and subcuticular wall. The distribution of the cellulase reaction product supports an interpretataion that cellulase is involved in the formation of the secretory cavity and subsequent redistribution of wall products to form the subcuticular wall during the development of the secretory cavity