Physiology of spliting in pistachio nut

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Pistachio *(Pistacia vera* L.*)* in family *Anacardiaceae* with drup fruits and edible kernel is able to split at splitting area of shell. The shell of edible and wild cultivars was investigated according to its shape, splitting area and chemical change from fertilization time to ripening date.

Samples were prepared 2,4,8,16,20 weeks after fertilization and were fixed by FPA 50 or FAA, then were colored and studied under a bright field micriscopy using nomarski option.

Shell lignification was started from base close to vascular bundles entrance to the funicle and spread towards the top shell throughout cell sap and ventral shell grooves. Moreover unknown chemical structure was observed over the splitting angles particularly about 3-6 mm of top shell area from week 16 after pollination.

Shell splitting was under influence of the parental control as well as development of seed which is related to nutrient element, environmental factors and irrigation.

In this paper the physiology and some characteristics of splitting area in pistachio are expained.