

SHORT COMMUNICATION

EXPLORING THE DISTRIBUTION AND DEPOSITION OF UMBELLIFERONE IN RAT TISSUES BY HPTLC

ABSTRACT

Coumarins are dietary antioxidants found in plant-based foods, such as vegetables and fresh and dried fruits. Different degrees of coumarin toxicity have been reported, including cytotoxic effects, breathlessness, tremors, and sensitivity to sunlight. Plants contain diverse coumarins, and umbelliferone or 7-hydroxycoumarin is one of them, found in carrots, coriander, asafoetida, liquorice, bael fruit, cassia, olive oil, soy oil, peanut oil, and corn oil, among others. This compound is consumed by mankind in daily meals, fruits and juices. The current study was designed to evaluate its tissue distribution and its deposition in rats by the HPTLC method. The results showed that umbelliferone reached all organs, including the brain, heart, thymus, liver, spleen and kidney, where it was converted to a possible metabolite; only in the upper layer of the liver homogenate, it remains unchanged.