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HISTOCHEMICAL TESTS IN *Calendula officials* LEAF

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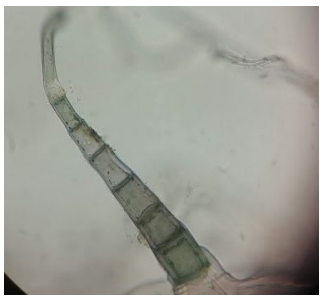
Introduction: The phytochemical compounds of *Calendula officinalis* leaf are the subject of various histochemical tests. The scientific literature describes the presence of several compounds of interest.

Objectives: Identify groups of compounds from secondary metabolism with histochemical staining techniques of *Calendula officinalis* leaf.

Methods: Histochemical staining techniques following pre-established protocols for detection of lipids in general (Sudans), Fatty Acids (Copper Acetate / Rubric Acid), Terpenoids (Nadi), Proteins in general, Phenols (Iron Trichloride), Alkaloids (Dittmar), carbohydrates (Periodic Acid / Schiff Reagent -PASR) and tannins (Hydrochloric Vanillin). and observation and identification by optical microscope.

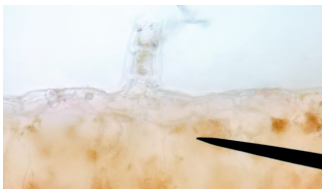
Results: In the trichomes and in the parenchyma are some lipids detected. Free fatty acids are detected at the parenchyma. Terpenoids are exclusively detected at the trichomes. Phenols are detected at the parenchyma. A few amounts of alkaloids are detected at the trichomas. There is no detection of proteins by Sakaguchi reaction for arginine. The presents of carbohydrates is not strongly confirmed. The present of tannins is in general confirmed.

Detection of lipids by Sudan black B



Detection of Alkaloids by Reagent of Dittmar

Detection of Terpenoids by NADI



Detection of Tannins by Vanillin Chloride

Detection of Carbon Hydrates by PASR

Optical microscope magnification 400x

Conclusion: The performed tests shown that the leaves of the *Calendula officinalis* plant contain several types of compounds of secondary metabolism, which could be of interest for further investigation, in particular because the plant is easily be grown in large quantities and in a large distribution area.

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