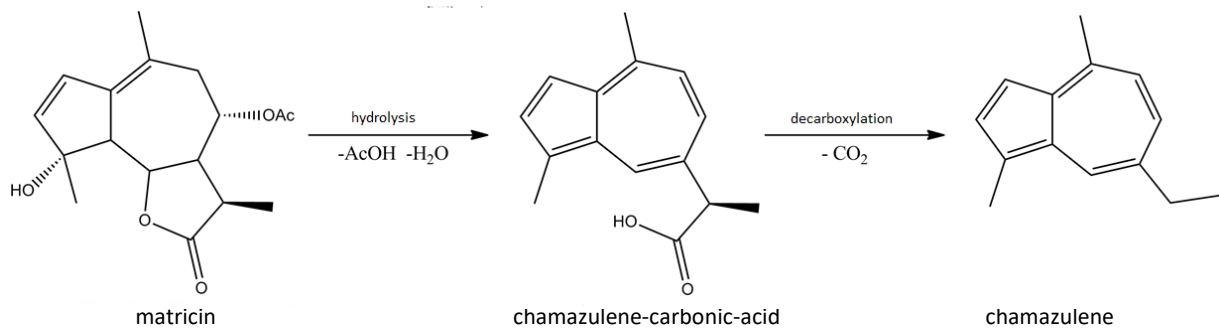


## Introduction

### 1. Histochemical detection of proazulenes in *Matricariae flos*

Put 1 g  $\text{KMnO}_4$  in a 25 ml beaker, add 5 ml cc. HCl:water 1:3 under hood, in a glass container. Keep powdered *Matricariae flos* in the tank for some time. Investigate under stereomicroscope: glandular trichomes containing essential oil become blue by the formation of chamazulene.

*Explanation:  $\text{KMnO}_4$  and cc. HCl give  $\text{Cl}_2$  gas, which is a strong oxidizing agent. Matricin (a proazulene) present in Matricaria flower is oxidized, blue-colored chamazulene (azulene) is formed, which paint the glandular trichomes dark.*



### 2. Powdered preparations

Put a little amount of powdered drug on the slide, on a few drops of chloral-hydrate and cover with coverslip. Examine under microscope.

Drug powders to investigate:

*Frangulae cortex* – fibers with parenchymatous sheath containing prism crystals of Ca-oxalate

*Cannabis indicae folium* – retorta hairs, cystolyte crystals

*Matricariae flos* – tubular and ligulate florets

*Menthae piperitae folium* – glandular trichomes

*Rhei radix* – tracheas, cluster crystals