

On the basis of these data it is concluded that the interpretation for the thermogravimetrically observed lack of the nuclear portion of the nephrolith in water of hydration is to be found in its comparatively higher phosphate content. From this it follows that the content of the nucleus in oxalate is certainly lower than that of the surface layers.

Additional data on similar lines are now being obtained with the purpose of gaining an insight into the formation mechanism of nephroliths.

Résumé. On examine la possibilité d'emploi de la thermogravimétrie à l'étude des calculs rénaux. On pré-

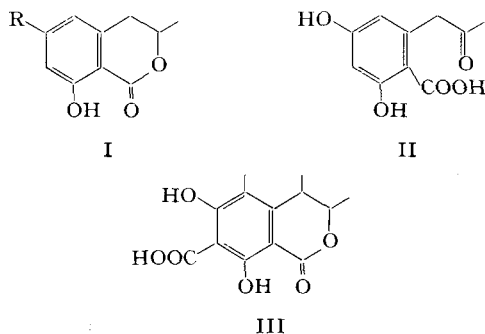
sente des données – radiographiques, thermogravimétriques et spectrophotométriques – pour un calcul composé principalement d'oxalate de calcium. Les résultats spectrophotométriques et thermogravimétriques indiquent que le noyau de ce calcul contient plus de phosphate contenant du carbonate que la surface.

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Production of 6-Methoxy-Mellein by *Sporormia bipartitis* Cain

6-Methoxy-mellein (3-methyl-6-methoxy-8-hydroxy-3,4-dihydroisocoumarin)¹ has been isolated from bitter (stored) carrots^{2,3} and in higher yields from carrot root tissue^{4,5} inoculated with *Ceratocystis fimbriata*, *Ceratocystis ulmi*, *Helminthosporium carbonum* or *Fusarium oxysporum f. lycopersici*. The conclusion was drawn⁶ that 'the production of the isocoumarins results from an alteration in the normal metabolism of the carrot root tissue induced either by the presence of fungi, chemicals or environmental conditions'. We have now isolated 6-methoxy-mellein I (R = OCH₃)⁶ from submerged cultures of *Sporormia bipartitis* Cain. This fungus was grown at 27°C on a medium consisting of 14 g Difco casamino acids, 24 g glucose, 2.7 g KH₂PO₄, 1.2 g MgSO₄ · 7H₂O, 28 mg FeSO₄, 3 mg ZnSO₄ and demineralized water up to 1000 ml.



6-Methoxy-mellein is one of the numerous fungal isocoumarins related to C-acetyl-o-orsellinic acid⁷ C₁₀H₁₀O₅ (II), which is believed to be biosynthesized by head-to-tail condensation of 1 acetate and 4 malonate units. To the group of isocoumarins with a C₁₀-backbone belong 3-methyl-8-hydroxy-isocoumarin⁸ from *Marasmius ramealis*, reticulol⁹ (3-methyl-6,8-dihydroxy-7-methoxy-isocoumarin) from *Streptomyces rubrivireticuli*, mellein¹⁰ (= ochracin) I (R = H) from *Aspergillus melleus*, resp. *A. ochraceus*, 3-methyl-6,8-dihydroxy-3,4-dihydroisocoumarin¹¹ I (R = OH) from a mutant of *Aspergillus terreus* and ramulosin¹² (3-methyl-8-hydroxy-3,4,5,10,6,7-hexahydro-isocoumarin) from *Pestalotia ramulosa*. Introduction of additional C₁ units widens the circle of related

isocoumarins¹³ to include the ochratoxins¹⁴ from *Aspergillus ochraceus*, oospolactone¹⁵, oosponol¹⁶, oospoglycol¹⁷ from *Oospora astringenes*, 4-acetyl-5-methyl-6,8-dihydroxy-isocoumarin¹³ from *Aspergillus viridinutans* and dihydrocitrinon¹⁸ (III) from a mutant of *Aspergillus terreus* with three additional C₁ units.

Zusammenfassung. Die Isolierung von 6-Methoxy-mellein I (R = OCH₃) aus Submerskulturen von *Sporormia bipartitis* Cain wird beschrieben.

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