## PHYTOCHEMICAL RESEACH OF KHELLA

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Khella (Ammi visnaga or Visnaga daucoides) originates from the Nile delta and was used therapeutically by the ancient Egyptians, as is documented in Eber's papyrus. The plant was used in Egyptian folk medicine to treat urinary calculi and bladder stones which was common as a result of widespread bilharzia. The plant's dried umbels are still sold today in markets in the Middle East and the Far East.

*The aim* of our study was phytochemical research of fruits and herb of Ammi visnaga of Lebanon origin.

Herbal drug – fruits and herb were collected in Lebanon from July to September. The fruits are harvested shortly before they are fully ripe, after which they are dried in proper condition.

Preliminary analysis of chemical composition was carried out using thin layer chromatography in different system of solvents compared with reference solution of some phenolic derivatives. Reagents for identification were potassium permanganate solution, solution of potassium hydroxide, Wagner's reagent, tannic acid solution.

As a result were identified the following compounds: furanochromones: visnagin, khellol, khellenin and additionaly 3 furanochromones derivatives, pyranocoumarins: visnadin, samidin and dihydrosamidin, flavonoids represented by quercetin and isoramnetin derivatives.

For isolation of khellin was proposed the next scheme:

1. The seeds and herb are dried, powdered, sieved and extracted in Soxhlet apparatus with solvent ether for several hours.

2. The ethereal extract is concentrated in a rotary thin-film evaporator and stored in a refrigerator for a few days.

3. The cold ethereal extract eventually comprise of three distinct layers: an upper green oily layer; a middle cream coloured fatty layer; and a lower green crystalline layer. The upper green oil is removed by filtration with gentle suction, the middle cream coloured fatty layer is removed by the help of petroleum ether, and the remaining lower solid residue is duly purified by repeated crystallization from methanol to obtain pure khellin.

Preliminary assay about concentration of khellin showed that the in fruits it's slightly more khelin than in herb.