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Isolation of ulceroprotective cucurbitane type triterpenoids from *Cucumis melo* seeds

Gurpreet Singh Bal and Naresh Singh Gill
Punjab Technical University, India

Medicinal plants are the richest bio-resources of drugs in traditional medicinal systems, modern medicines, folk medicines, intermediate and chemicals entitled for synthetic drugs. Plants provide a source of inspiration for novel drug development as they contain a vast array of substances that treat chronic diseases. *Cucumis melo* seeds have been traditionally used for treating various health ailments. The main aim of our current study is to isolate cucurbitane-type triterpenoids from *Cucumis melo* seed extract and conduct anti-ulcerogenic activity of the isolated compound. Phytochemical investigations of methanolic seed extract of *Cucumis melo* was carried out which showed the presence of various important phytoconstituents. The main active constituents of *Cucumis melo* have shown a number of potent pharmacological activities. The isolation of Cucurbitane-type triterpenoids was carried out by column chromatography using methanolic seed extract of *Cucumis melo*. Mobile phase hexane and hexane-ethyl acetate (98:2) was used to run the column. TLC profiling was done simultaneously in an appropriate solvent system (hexane: ethyl acetate, 97:3). Various fractions were collected. The fractions with similar R_f value were pooled together. Fractions giving single spot in the TLC were regarded as pure. The isolated compound showed positive result for Liebermann-Burchard test from which we can conclude that the isolated compound might be triterpenoid. The structure of the isolated compound was determined by IR, ^{1}HNMR, ^{13}CNMR techniques. The spectral analysis of the isolated compound showed following results: IR- it showed the peaks at 3383, 2976, 2814, 1721, 1465, 1123 cm-1 indicated the presence of alcoholic group.

gurry_preet@yahoo.com

Results on the determination of fatty acids in biological samples by applying gas chromatography

Ropota Mariana and Olteanu Margareta
IBNA Balotesti, Romania

Analytical method validation is the confirmation by examination and provision of objective evidence that certain specific requirements for intentional application are achieved. So validation of analytical quality assurance represents the first step in a laboratory. The fatty acids were determined by gas chromatography which involves the transformation of the fatty acids from the sample in methyl esters and separation of the components in the chromatographic column, their identification by comparison with the standard chromatograms. The method complies with standard SR CEN ISO/TS 17764 -2: 2008, used a Perkin Elmer-Clarus 500 chromatograph with capillary injection, high polarity stationary phase (BPX70: 60 mx0.25 mm inner diameter and 0.25 μm film thickness). The method was validated "in house", and used as methylated fatty acids standard solution Mix 37 Component FAME; 10 mg/mL, (CRM) soybean oil. We determined the following parameters: accuracy=98.72%, coefficient of variation of repeatability RSD=0.414%, detection limit LoD=0.002349 μg/mL, quantification limit LoQ=0.05683 μg/mL and recovery R=98.84%, according to SR EN ISO/CEI 17025: 2005, all values being within the admitted range: RSD: 80–120%, LoQ>LoD and 80<R>120%. The following concentrations of fatty acids were determined in samples of eggs, expressed per 100 g fat extracted from the yolk. Thus, α-linolenic acid has ranged between: 0.22±0.3 g (C) and 1.19±0.13 g/100 g fat, total omega-3 has values between: 1.37±0.09 g (C) 4.84±0.32 g (E1) and total omega-6 has values between: 24.61±1.38 g (C) and 20.91±1.08 g/100 g fat (E1).

m.ropota@yahoo.com