Studies on some date variety and its products

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<The present work was performed to cover the following points:• Studying the chemical composition of Samani and Zaghloulvarieties khalal, rutab and dry stages. These measurementsincluded, maisture, acidity, sugars, protein, fat, ash, phenols,minerals, fiber contents and pH values.• Occupying the waste of date peels as a source of yellow andred natural pigments and applicated in some products to bemore pigment fortification.• A new product from the date peels of yellow and red khalaldates was processed to be used similarly to date syrup.• A new ways for preservation of peeled and unpeeled Samaniand Zaghloul dates in khalal stage to produce new productsable for storage more than 9 months in a sugar solution ascompote products.• Production of new dried products as dry slices able forconsumering for long periods or as a new intermediate forfood processing.• Studying the way for changing of Samani and Zaghloulkhalal dates to rutab stage by freezing at -18°C to be moreapplicable for shorter time than ripening on the tree, also tostore for different times at -18°C until marketing, Production of high fructose syrup from dry dates (Samaniand Zaghloul).The chemical analysis of two date varieties were carriedout in khalal, ruitab and dried stages.Results of Samani dates appeared a high total solids inkhalal (32.65%) increased to 43.9% in rutab then increased to75.35% and 88.36% in dried dates.Also results appeared a decreasement in acidity, protein,fat, phenols, fiber and ash from khalal stage to rutab stage anddried stage. Reducing sugar in khlalal stage were increasedduring rutab and dried stages. Dates were content a high levelof minerals such as potassium. But amino acid content werelow.The data indicated that the decrease or increase trend inZaghloul date were similar in the Samani dates.Two date seeds (Samani and Zaghloul) were analyzed.The obtained data showed that Zaghloul seeds contain thehighest amount of crude proten (8.30%). with respect to crudefiber Neutral Detergent Fiber (NDF) and Acid Detergent Fiber(ADF), data indicated that two types contain almost the samevalues, also revealed the low content of ligning. Glutanic acidis the predimonant amino acid. The two types of seeds havecontained all essential amino acids except arganine. Also, dateseeds have definition in sulphur amino acids (Methionine).129The values give possibility of using these materials as animalfooder. The fraction of fatty acid were ranked into threecategories i.e. trace «1%) minor (1-8%) and major (>8%)compounds. Oleic acid (C18:1) and linoleic acid (C20:2) werethe major fatty acids in both Samani and Zaghloul oil seeds.Separation of yellow pigments from Samani peels hasbeen performed and indentified by spectrophotometric analysisat 400-520 mm. These pigments have been proved to becarotenoids, its content in Samani date peels was 2.99 mg/lOOgm dry weight basis. Separation and identification of redpigments from Zaghloul peels have been carried out at 470-560. This forementioned pigments was anthocyanin.The yellow and red natural pigments were applicated insome food products.The obtained results for Samani and Zaghloul date peelsyrup could be summarized in little decrement in total solublesolids (T.S.S.). Acidity was increased, meanwhile there weredecrements in pH values. fibers and total phenols. It wasobserved that browning were increased by storage.Samani and Zaghloul dates peeled and unpeeled wereimmerged in sucrose solution (30%) with different treatmentswith ascorbic acid, ascorbic acid + lemon juice, sodiummetabisulphate, sodium metablisulphate + lemon juice. Thedates treatments were canned, and sterilized at 100°C for 30130mints, then cans were stored for 9 months at room temperature(25°C).It was observed that acidity was decreased and pH valueswere increased in some treatments little decrement was notiesin fibers. The browning degrees were increased in all treatmentfor all completed dates, peeled dates and their solutions.Concerning the different amino

acid and the requirement asrecommended by FAO/WHO it is clear that different datestages are very poor in essential amino acids.Rehydration percentage of Samani and Zaghloul drieddates were concluded, these aforementioned were and173% for Sam ani and Zaghloul dried dates respectively.The results of storage of rutab Samani and Zaghloul datesat -18°C for 9 months appeared decrements in moisturecontent, total sugars pH values, fibers and total phenols,meanwhile there were increments in acidity and browningdegrees. It was observed that all sucrose were inverted toglucose and fractose during storage at -18C