



# Potential of Innovative Product from Omani Date Syrup

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# Date Syrup (Dips)

## ► Methods to produce date syrup

- Traditional
  - Stacked date fruit bag
  - Subjecting to hot water (Thermal extraction)
- Commercial → Industrial scale

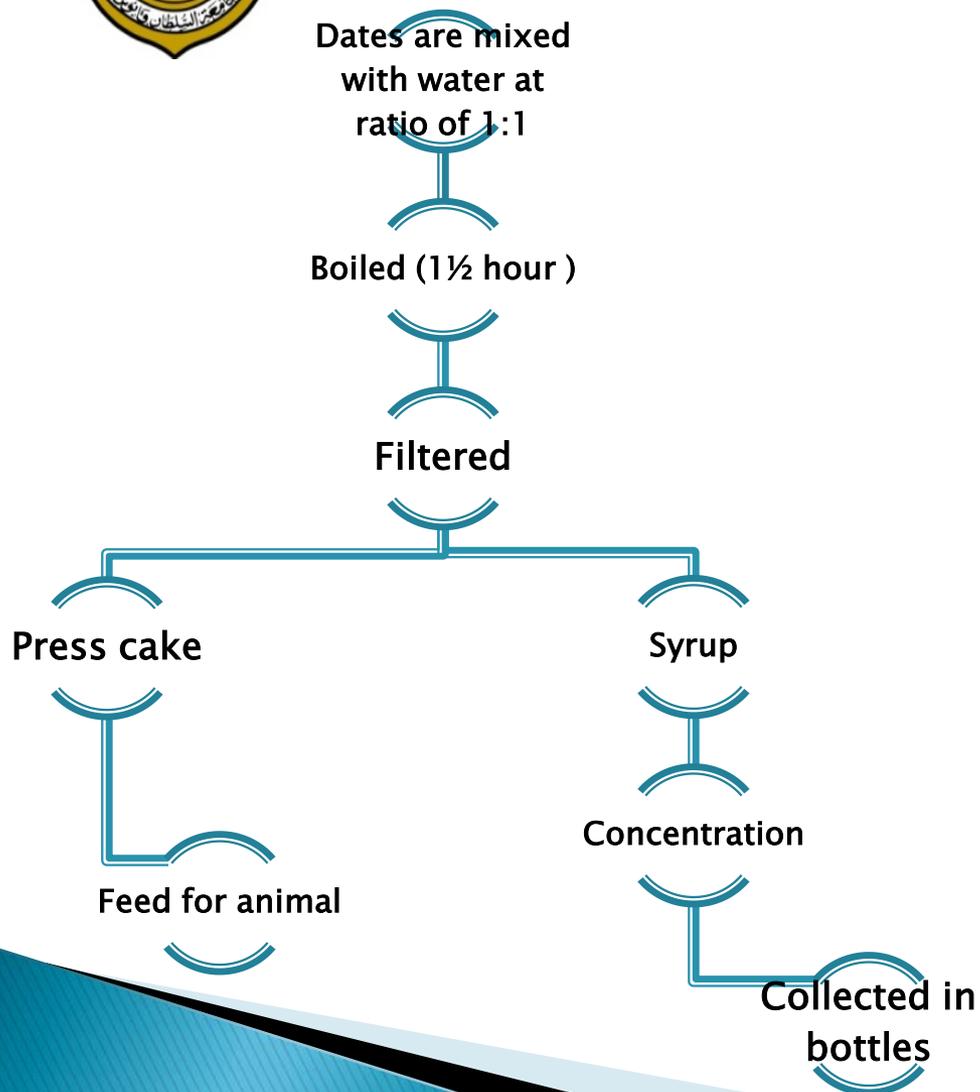


# Traditional





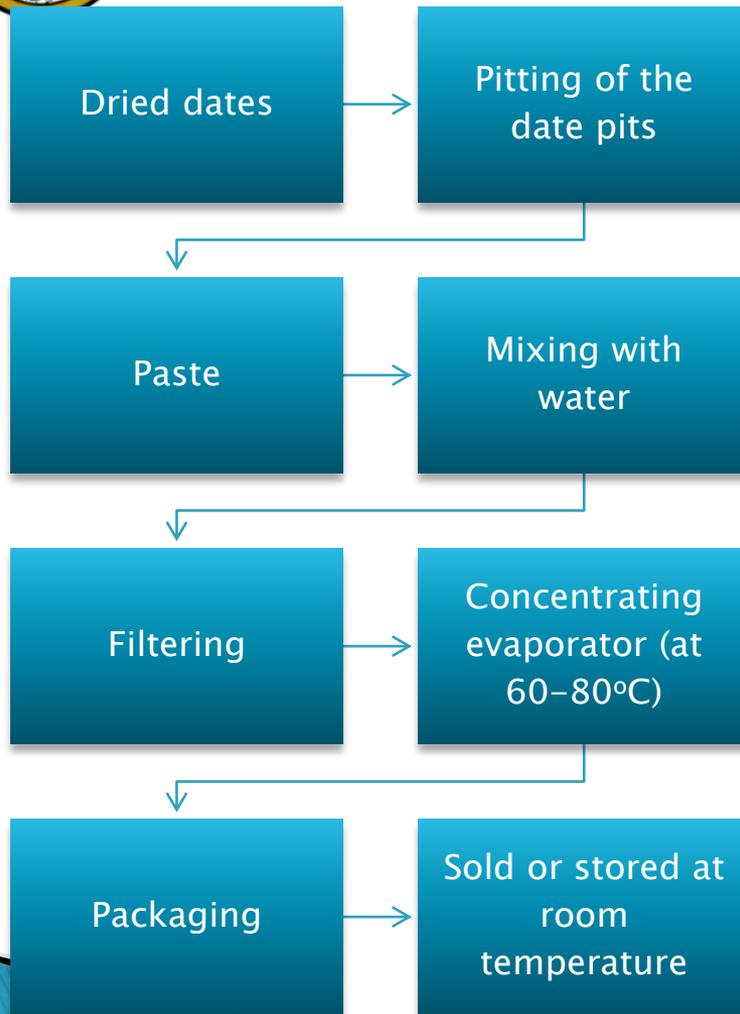
# Traditional



[www.feedspot.com](http://www.feedspot.com)



# Industrial Scale









Physicochemical Characteristics (g/100g)	Date fruit syrup	Date set syrup
Water content	17.31±0.72	18.5±0.7
Glucose	35.6±1.1	35.6±1.0
Fructose	35.6±0.4	35.4±1.0
Carbohydrate	71.2±1.4	71.0±0.7
Ash	1.9±0.1	1.72±0.1
Pectin	0.77±0.6	0.77±0.08
Minerals (Mg, Ca, NA, P, K)	508 ± 40 mg/L	471 ± 46 mg/L



# Main innovation and potentials

Innovation consists of

- New product date-set-syrup
  - very appealing in terms of color, texture and spread-ability
- Processing conditions
  - Optimum temperature of sugar crystallization, developing seeds, seed-syrup mass ratio, mixing methods and crystallization time



# Main innovation and potentials

- The new innovative processing method could be used
  - By the date-processing industry to produce a new product as Date-Set-Syrup.
- Will have high market value as compare to the syrup.
- Could diversify the product lines of the date fruits and will be economic beneficial to the date fruit industry.



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(54) **METHOD OF MAKING SET-DATE SYRUP**

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**C13B 30/02** (2011.01)

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(2016.08); **A23V 2002/00** (2013.01)

(58) **Field of Classification Search**  
CPC ..... C13K 11/00  
See application file for complete search history.

(56) **References Cited**

**U.S. PATENT DOCUMENTS**

4,428,969 A 1/1984 Muller et al.  
8,647,674 B2 2/2014 Alanazi et al.

**FOREIGN PATENT DOCUMENTS**

CN	102940122 A	2/2013
CN	103610050 A	3/2014
FR	2 937 222	4/2010
KR	10-2011-0017151	2/2011

**OTHER PUBLICATIONS**

P. Vijayanand et al, Processing of Dates into Value-Added Products,  
Dates, 2012, pp. 255-264.\*

"How to make raw date syrup," <http://www.ohladycakes.com/2012/03/how-to-make-date-syrup.html> (Last Accessed on Apr. 26, 2018,  
12 pgs.

\* cited by examiner

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(57) **ABSTRACT**

A method of making set-date syrup can transform unprocessed (uncrystallized) date syrup into a set-date syrup. The method can include controlled crystallization of the sugars in the unprocessed date syrup. A portion of the unprocessed syrup can be used to produce a seed batch. The seed batch can be made by allowing the unprocessed date syrup to crystallize. The seed batch can then be mixed with an amount of unprocessed syrup in appropriate proportions to provide a mixture. The mixture can be maintained for a period of one to seven days at a temperature ranging from about -20° C. to about 15° C. to provide the set-date syrup.

**5 Claims, No Drawings**

