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**Concentrated date juice —  
Specifications and test methods**

*Jus de dattes concentré — Spécifications et méthodes d'essai*

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## Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see [www.iso.org/directives](http://www.iso.org/directives)).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see [www.iso.org/patents](http://www.iso.org/patents)).

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For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT), see [www.iso.org/iso/foreword.html](http://www.iso.org/iso/foreword.html).

This document was prepared by Technical Committee ISO/TC 34, *Food products*, Subcommittee SC 3, *Fruits and vegetables and their derived products*. [ISO 24673:2021](https://standards.iteh.ai/catalog/standards/sist/c650d4c8-15ae-4972-a78b-38c891d073/di-24673-2021)

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at [www.iso.org/members.html](http://www.iso.org/members.html).

## Introduction

*Phoenix dactylifera*, commonly known as date or date palm, is a flowering plant species in the palm family, cultivated for its edible sweet fruit. The species is widely cultivated across Northern Africa, the Middle East and South Asia, and is naturalized in many tropical and subtropical regions worldwide.

One of the most important date products is concentrated date juice, which is used as a sweetener in relevant industries. Date juice concentrate is a sweet-tasting syrup derived from the date fruit. Their sugars offer a better natural alternative to other types of sweeteners. It is one of the best ways of ensuring that you have a constant supply of dates since it is self-preserving. A great combination of nutritional benefits makes it one of the best substitutes for white sugar, for instance. The food processing industry is becoming increasingly reliant on the juice concentrate as a taste enhancer. It is used in different foods including ice cream, jams, jellies and soft drinks. The juice can also be added to desserts, tea and coffee.

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# Concentrated date juice — Specifications and test methods

## 1 Scope

This document specifies the requirements and test methods for concentrated date juice.

## 2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 750, *Fruit and vegetable products — Determination of titratable acidity*

ISO 1842, *Fruit and vegetable products — Determination of pH*

ISO 2173, *Fruit and vegetable products — Determination of soluble solids — Refractometric method*

ISO 5522, *Fruits, vegetables and derived products — Determination of total sulphur dioxide content*

ISO 7466, *Fruit and vegetable products — Determination of 5-hydroxymethylfurfural (5-HMF) content*

EN 1131, *Fruit and vegetable juices - Determination of the relative density*

EN 1133, *Fruit and vegetable juices - Determination of the formol number*

EN 1135, *Fruit and vegetable juices - Determination of ash*

EN 1140, *Fruit and vegetable juices - Enzymatic determination of D-glucose and D-fructose content - NADPH spectrometric method*

EN 12146, *Fruit and vegetable juices - Enzymatic determination of sucrose content - NADP spectrometric method*

## 3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- ISO Online browsing platform: available at <https://www.iso.org/obp>
- IEC Electropedia: available at <http://www.electropedia.org/>

### 3.1

#### concentrated date juice

unfermented product, preserved exclusively by physical means, which is capable of fermenting after reconstitution

Note 1 to entry: Water is removed from the product until the product has a soluble date solids content of not less than 20 % mass fraction, from the unfermented but fermentable date juice.

Note 2 to entry: It may be turbid or clear. The concentrated date juice may be clarified by clarifying aid and filter (see CODEX STAN 192-201).

## 4 Specifications

**Table 1 — Physicochemical and sensorial specifications**

Specification	Limit	Test method
Brix	70 ± 2 at 20 °C (g/100 g)	ISO 2173
acidity	0,5 (g/100 g)	ISO 750
ash	1,5 to 3 (g/100 g)	EN 1135
pH	4 to 4,5	ISO 1842
density	1,35 ± 0,05 at 20 °C (g/mm <sup>3</sup> )	EN 1131
SO <sub>2</sub>	< 20 ppm <sup>a</sup> (mg/l)	ISO 5522
sucrose	< 5 (g/100 g)	EN 12146
fructose/glucose	0,5 to 1,5 (g/100 g)	EN 1140
formalin number	> 30 (ml/100 ml)	EN 1133
hydroxy methyl furfural	< 10 ppm <sup>a</sup> (mg/kg)	ISO 7466
foreign materials	absence	—
Sensorial test		
appearance	clear, viscose liquid	—
taste	typical, off flavours free	—
colour	colourless, yellow	—
<sup>a</sup> ppm = parts per million.		

## 5 Test methods

The concentrated date juice shall be tested for conformity to the requirements given in this document and to the test methods given in [Table 1](#).

## 6 Packaging and labelling

### 6.1 Packaging

The products shall be packaged in clean, food grade packaging material that is protected from contaminants. The packaging materials and process shall not contaminate the products, which can otherwise affect their technological, nutritional or sensory quality.

### 6.2 Labelling

The following particulars shall be marked or labelled on each container and case:

- the name of the material, and the trademark or brand name, if any;
- the name and address of the manufacturer or packer;
- the batch or code number;
- the net mass, or gross mass (according to the request of the importing country);
- the producers;
- the expiry date;
- any other marking required by the purchaser, such as year of harvest and packing date (if it is known).



## Bibliography

- [1] CODEX STAN 192-201, *General Standard for Food Additives*

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