
International Standard



7224

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Equipment for vine cultivation and wine making — Mash pumps — Methods of test

Matériel viti-vinicole — Pompes à vendange — Méthodes d'essai

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Foreword

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Draft International Standards adopted by the technical committees are circulated to the member bodies for approval before their acceptance as International Standards by the ISO Council.

International Standard ISO 7224 was developed by Technical Committee ISO/TC 23, *Tractors and machinery for agriculture and forestry*, and was circulated to the member bodies in April 1982.

It has been approved by the member bodies of the following countries:

Australia	Iran	Portugal
Austria	Iraq	Romania
Czechoslovakia	Italy	South Africa, Rep. of
Egypt, Arab Rep. of	Korea, Dem. P. Rep. of	Spain
France	Korea, Rep. of	Switzerland
Germany, F.R.	Mexico	Turkey
India	New Zealand	USSR

No member body expressed disapproval of the document.

Equipment for vine cultivation and wine making — Mash pumps — Methods of test

0 Introduction

The main operations characterizing a mash pump are:

- feeding-in the grapes;
- transfer of grapes through a pipe line to a fermentation tank or a juice separator or a press, placed at varying intervals and heights;
- possible placing under inert gas.

These pumps are driven by motors, usually electric, the entire motor-pump forming a moto-pump group.

The pumps can be fed with:

- whole grapes;
- crushed grapes;
- destalked grapes;
- crushed and destalked grapes;
- drained grapes;
- heated grapes.
- etc.

1 Scope and field of application

This International Standard specifies the technological test as regards mash pumps.

2 References

ISO 565, *Test sieves — Woven metal wire cloth and perforated plate and electroformed sheets — Nominal sizes of openings.*¹⁾

ISO 3835/2, *Equipment for vine cultivation and wine making — Vocabulary — Part 2.*

3 Definitions

In addition to the definitions given in ISO 3835/2, the following definitions apply:

3.1 yield: Ratio at constant load of grapes pumped to the time for a given distance and transfer profile.

3.2 pumping height of the pump: Difference in height between the intake and outlet for a given distance and profile.

3.3 power of the moto-pump group: Maximum power absorbed by the motor driving the pump.

3.4 overall evaluation: Assessment, from the load supplied, of the physico-chemical state of the must, the berries, the stalks, the skin, the pips as well as mean flow and energy consumption.

3.5 energy consumption: Quantity of energy per unit of mass of the load applied.

4 Principle

Determination of the technological characteristics of the different pumps, used for the grape transfer, both from a qualitative and quantitative point of view, using a reference pump for comparison.

5 Apparatus

5.1 Mechanical apparatus

One shall find the following in the cellar where the tests are being carried out:

5.1.1 Reference pump, which shall be a rotary elliptic piston pump as described in annex A, with an approximate capacity of 30 t of grapes per hour (30 t/h) at a delivery pressure of 1 bar²⁾.

1) At present at the stage of draft. (Revision of ISO 565-1972.)

2) 1 bar = 100 kPa